

167 FERC ¶ 61,052
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Cheryl A. LaFleur, Richard Glick,
and Bernard L. McNamee.

Port Arthur LNG, LLC
PALNG Common Facilities Company, LLC

Docket No. CP17-20-000

Port Arthur Pipeline, LLC

Docket Nos. CP17-21-000
CP17-21-001
CP18-7-000

ORDER GRANTING AUTHORIZATIONS UNDER SECTIONS 3 AND 7 OF THE
NATURAL GAS ACT

(Issued April 18, 2019)

1. On November 29, 2016, in Docket No. CP17-20-000, Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC (collectively, Port Arthur LNG) filed an application for authorization under section 3 of the Natural Gas Act (NGA)¹ and Part 153 of the Commission's regulations² to site, construct, and operate new facilities for the export of liquefied natural gas (LNG) in the vicinity of Port Arthur, Texas (Liquefaction Project).
2. On the same day, Port Arthur Pipeline, LLC (Port Arthur Pipeline) filed an application in Docket No. CP17-21-000, under NGA section 7(c)³ and Parts 157⁴ and 284⁵ of the Commission's regulations, for a certificate of public convenience and necessity to construct and operate a new natural gas pipeline system designed to transport

¹ 15 U.S.C. § 717b (2012).

² 18 C.F.R. pt. 153 (2018).

³ 15 U.S.C. § 717f (2012).

⁴ 18 C.F.R. pt. 157 (2018).

⁵ 18 C.F.R. pt. 284 (2018).

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up to 2,000,000 million British thermal units (MMBtu) of natural gas per day from interconnections in Cameron Parish, Louisiana, and Orange and Jefferson Counties, Texas, to the Liquefaction Project (Texas Connector Project).

3. On October 16, 2017, Port Arthur Pipeline filed an application in Docket No. CP18-7-000, under NGA section 7(c)⁶ and Parts 157⁷ and 284⁸ of the Commission's regulations, for a certificate of public convenience and necessity to construct and operate an additional new natural gas pipeline system designed to transport up to 2,000,000 MMBtu of natural gas per day originating in Eunice Parish, Louisiana, to serve as another source of feed gas for the Liquefaction Project (Louisiana Connector Project).

4. On November 7, 2017, Port Arthur Pipeline filed an amendment to the Texas Connector Project application in Docket No. CP17-21-001 which updated and revised Port Arthur Pipeline's *pro forma* tariff and initial rates as a result of the Louisiana Connector Project (Amendment Application).

5. Port Arthur Pipeline also requests blanket certificates under Part 284, Subpart G of the Commission's regulations to provide open-access transportation service, and under Part 157, Subpart F of the Commission's regulations to perform certain routine construction activities and operations, for the Louisiana Connector and Texas Connector projects.

6. For the reasons discussed in this order, we will authorize Port Arthur LNG's proposal under section 3 to site, construct, and operate the Liquefaction Project. We will also authorize Port Arthur Pipeline's requested authorizations under section 7(c) of the NGA, and Parts 157 and 284 of the Commission's regulations, to construct and operate the Louisiana Connector and Texas Connector projects. These authorizations are subject to the conditions discussed herein.

I. Background

7. Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC, and Port Arthur Pipeline, LLC are limited liability companies organized under the laws of the state of Delaware, and are wholly-owned subsidiaries of Port Arthur LNG Holdings, LLC, which is wholly-owned subsidiary of Sempra Global, which is a wholly-owned subsidiary of Sempra Energy. Upon the commencement of operations proposed in its

⁶ 15 U.S.C. § 717f.

⁷ 18 C.F.R. pt. 157.

⁸ 18 C.F.R. pt. 284.

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application, Port Arthur Pipeline will become a natural gas company within the meaning of section 2(6) of the NGA,⁹ and will be subject to the Commission's jurisdiction. As its operations will not be in interstate commerce, Port Arthur LNG will not be a "natural gas company" as defined in the NGA, although it will be subject to the Commission's jurisdiction under NGA section 3.

II. Proposals

A. Liquefaction Project (Docket No. CP17-20-000)

8. The Liquefaction Project would be located at the same site as Port Arthur LNG, L.P.'s proposed import terminal.¹⁰ As proposed, the Liquefaction Project would consist of two liquefaction trains with a total production capacity of approximately 13.5 million metric tons per annum (MTPA) of LNG (each train capable of producing up to 6.73 MTPA). Port Arthur LNG also proposes to construct and operate feed gas treatment facilities; three LNG storage tanks, each with a net working capacity of approximately 160,000 cubic meters; a marine facility consisting of two berths for LNG vessels with a capacity of up to 266,000 cubic meters of LNG and capable of loading one LNG vessel per day; onsite, gas-turbine generators with a generating capacity of 240 megawatts; and appurtenant facilities.

9. Port Arthur LNG received authorization from the U.S. Department of Energy, Office of Fossil Energy (DOE/FE) in August, 2015, to export annually up to 517 billion cubic feet (Bcf) of natural gas in the form of LNG to countries with which the United States has a Free Trade Agreement (FTA), for a term of 25 years.¹¹ In addition, Port Arthur LNG currently has pending before the DOE/FE an application to export LNG to

⁹ 15 U.S.C. § 717a(6) (2012).

¹⁰ In 2006, the Commission, under section 3 of the NGA, authorized Port Arthur LNG, L.P. to site, construct, and operate an LNG import terminal near the City of Port Arthur, in Jefferson County, Texas. *Port Arthur LNG, L.P.* 115 FERC ¶ 61,344 (2006). In the same order, the Commission issued Port Arthur Pipeline, L.P. a certificate of public convenience and necessity pursuant to section 7(c) of the NGA and Part 157 of the Commission's regulations to construct and operate natural gas pipelines from the outlet of the proposed LNG terminal. Since neither applicant had begun construction of the authorized facilities within the time frame required, the Commission vacated the authorizations in September, 2011. *Port Arthur LNG, L.P. and Port Arthur Pipeline, L.P.*, 136 FERC ¶ 61,196 (2011).

¹¹ *Port Arthur LNG, LLC*, FE Docket No. 15-53-LNG, Order No. 3698 (Filed August 20, 2015).

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other nations with which the United States permits such trade, but has not entered into an FTA providing for the national treatment of trade in natural gas.¹²

B. Louisiana Connector and Texas Connector Projects (Docket No. CP18-7-000, and Docket Nos. CP17-21-000 & CP17-21-001)

10. Port Arthur Pipeline proposes to construct a new interstate natural gas pipeline system to transport up to a total of 4,000,000 MMBtu per day of natural gas to serve as feed gas for the Liquefaction Project. The Port Arthur Pipeline system would comprise two non-integrated pipelines: the Louisiana Connector Project and the Texas Connector Project.

1. Facilities

Louisiana Connector Project (Docket No. CP18-7-000)

11. The 130.9-mile-long Louisiana Connector Project would transport up to 2,000,000 MMBtu per day of natural gas from interconnections in Louisiana and Texas to the Liquefaction Project, where it would be liquefied for export to foreign markets. Specifically, the Louisiana Connector Project would consist of:

1. 130.9 miles of 42-inch-diameter pipeline extending from the Liquefaction Project north to interconnections with the facilities of:
 - Centana Intrastate Pipeline, LP;
 - Texas Eastern Transmission, LP;
 - Tennessee Gas Pipeline Company, L.L.C.;
 - Market Hub Partners Holding, LLC;
 - Pine Prairie Energy Center, LLC;
 - Texas Gas Transmission, LLC;
 - ANR Pipeline Company; and
 - Columbia Gulf Transmission, LLC;

¹² See application pending before DOE/FE in Docket No. 15-96-LNG (Filed June 15, 2015).

2. a new 89,900 horsepower (hp) compressor station consisting of four gas-driven turbines rated at 22,475 hp each located at milepost (MP) 96.2 in Allen Parish, Louisiana; and
 3. appurtenant facilities, including pig launcher/receiver facilities located at MP 0, 63.4, 96.2, and 130.9.
12. The estimated cost of the Louisiana Connector Project facilities is approximately \$1.2 billion.¹³

Texas Connector Project (CP17-21-000 and CP17-21-001)

13. The 34.2-mile-long Texas Connector Project would transport up to 2,000,000 MMBtu/d of natural gas from interconnections in Louisiana and Texas to the Liquefaction Project, where it would be liquefied for export to foreign markets. Specifically, the Texas Connector Project would consist of:

1. two segments of 42-inch-diameter pipe:
 - The 7.6-mile-long southern segment, extending from the Liquefaction Project south to interconnections with the facilities of the Natural Gas Pipeline Company of America and Kinder Morgan Louisiana Pipeline Company in Cameron Parish, Louisiana; and
 - The 26.6-mile-long northern segment extending from the Liquefaction Project north to interconnections with the facilities of Houston Pipeline Company, Texas Eastern Transmission, and Florida Gas Transmission Company, as well as underground storage facilities in Jefferson County, Texas;
2. approximately 4.65 miles of lateral pipeline of various diameters;
3. two new compressor stations, one each for the northern and southern segments. The northern compressor station, 50,052 hp total, would consist of three natural gas-driven turbine compressors rated at 16,684 hp each; the southern compressor station, 15,000 hp total, would consist of three electric-driven centrifugal compressors rated at 5,000 hp each; and
4. appurtenant facilities.

¹³ Louisiana Connector Project Application, Exhibit K.

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The estimated cost of the Texas Connector Project is approximately \$825.7 million.¹⁴

2. Open Season and Proposed Services

14. Port Arthur Pipeline states that it held a binding open season from August 21 through September 1, 2017, for service on the Louisiana Connector and Texas Connector projects. In response to the open season, Port Arthur Pipeline states that Port Arthur LNG entered into a 20-year precedent agreement for 100 percent of both the Louisiana Connector and Texas Connector projects' capacity at negotiated rates. Based upon this level of commitment, Port Arthur Pipeline provided Port Arthur LNG "Foundation Shipper" status, which provides certain benefits including the option to elect unilateral extensions of the contract term and a contractual right of first refusal.¹⁵

15. Port Arthur Pipeline requests approval of its *pro forma* tariff, as revised in its amended application in Docket No. CP 17-21-001. Port Arthur Pipeline proposes to provide firm and interruptible transportation service on the Louisiana Connector and Texas Connector projects under new Rate Schedules FT and IT, respectively. Port Arthur Pipeline also proposes to provide Enhanced Hourly Firm transportation service¹⁶ under Rate Schedule EHFT, firm and interruptible storage service under Rate Schedules FSS and ISS, respectively, Parking and Lending service under Rate Schedule P&L, and load management service under rate schedule LMS. Port Arthur Pipeline also proposes a fuel retainage percentage for service on the Louisiana Connector and Texas Connector projects.

3. Blanket Certificates

16. Port Arthur Pipeline requests a blanket certificate of public convenience and necessity pursuant to Part 284, Subpart G of the Commission's regulations authorizing Port Arthur Pipeline to provide transportation service to customers requesting and

¹⁴ Amendment Application, Exhibit K.

¹⁵ See Port Arthur Pipeline's November 7, 2017 Amendment to the Texas Connector Project Application, at 12-13 (Amendment Application), Louisiana Connector Project Application at 33. Port Arthur Pipeline states that it is not requesting advance approval of any potentially non-conforming provisions in this certificate proceeding.

¹⁶ "Enhanced Hourly Firm Transportation Service" enables a shipper to receive 1/21 of their daily scheduled quantity of gas per hour. See Amendment Application at 10.

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qualifying for transportation service under its proposed FERC Gas Tariff, with pre-granted abandonment authorization.¹⁷

17. Port Arthur Pipeline requests a blanket certificate of public convenience and necessity pursuant to Part 157, Subpart F of the Commission's regulations authorizing certain future facility construction, operation, and abandonment.¹⁸

III. Notice, Interventions, and Comments

18. Notice of Port Arthur LNG's application for the Liquefaction Project in Docket No. CP17-20-000, and Port Arthur Pipeline's application for the Texas Connector Project in Docket No. CP17-21-000, was published in the *Federal Register* on December 20, 2016, with comments, interventions, and protests due on January 3, 2017.¹⁹ Notice of Port Arthur Pipeline's application for the Louisiana Connector Project in Docket No. CP18-7-000 was published in the *Federal Register* on November 3, 2017, with comments, interventions, and protests due on November 20, 2017.²⁰ Notice of Port Arthur Pipeline's amendment to the Texas Connector Project application in Docket No. CP17-21-001 was published in the *Federal Register* on December 6, 2017, with comments, interventions, and protests due on December 21, 2017.²¹

19. Golden Pass Products, LLC and Golden Pass Pipeline, LLC (collectively, Golden Pass) filed a timely motion to intervene in the Liquefaction Project, Louisiana Connector Project, and Texas Connector Project proceedings. Golden Pass received authorization to construct, own and operate an LNG export terminal located approximately two miles from the proposed Liquefaction Project, as well as an interstate natural gas pipeline system located in Calcasieu Parish, Louisiana, and Jefferson and Orange Counties, Texas.²²

20. Driftwood Pipeline LLC and Driftwood LNG LLC (collectively, Driftwood) filed a timely motion to intervene in the Louisiana Connector proceeding. Concurrently with this order, Driftwood received authorization to construct an LNG export facility in

¹⁷ 18 C.F.R. § 284.221 (2018).

¹⁸ *Id.* § 157.204 (2018).

¹⁹ 81 Fed. Reg. 92,809.

²⁰ 82 Fed. Reg. 51,233.

²¹ 82 Fed. Reg. 57,593.

²² *Golden Pass Products, LLC*, 157 FERC ¶ 61,222 (2016).

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Calcasieu Parish, Louisiana, as well as a 96-mile-long interstate natural gas pipeline system that would transport natural gas to Driftwood's proposed LNG terminal, certain segments of which will be collocated with the Louisiana Connector Project.²³

21. Sabine Pass LNG, L.P., and Sabine Pass Liquefaction, LLC (collectively, Sabine Pass), and Cheniere Creole Trail Pipeline, L.P. (Creole Trail), filed a timely motion to intervene in the Liquefaction Project, Louisiana Connector Project, and Texas Connector Project proceedings. Sabine Pass owns and operates the existing Sabine Pass Liquefaction Terminal²⁴ located in Cameron Parish, Louisiana, and have an application pending before the Commission to add an additional liquefaction berth to their liquefaction terminal.²⁵ Creole Trail owns and operates the Creole Trail Pipeline,²⁶ an interstate pipeline system located in Beauregard and Cameron Parishes, Louisiana, designed to transport gas to the Sabine Pass Liquefaction Project.

22. In addition, a local landowner, Douglas Pedigo, filed a timely motion to intervene and comments in the Texas Connector Project proceeding, and the Coshatta Tribe of Louisiana (Coshatta Tribe) filed a timely motion to intervene in the Louisiana Connector Project proceeding. Timely, unopposed motions to intervene are automatically granted pursuant to Rule 214 of the Commission's Rules of Practice and Procedure.²⁷

23. Several comments in support of the Liquefaction Project, Texas Connector Project, and Louisiana Connector Project were filed. The Coshatta Tribe of Louisiana commented on the potential of the Louisiana Connector Project to impact tribal lands.

IV. Discussion

A. Liquefaction Project (Docket No. CP17-20-000)

24. Because the proposed LNG terminal facilities will be used to export natural gas to foreign countries, the construction and operation of the proposed facilities and site of

²³ *Driftwood LNG, LLC*, 167 FERC ¶ 61,054 (2019).

²⁴ *Sabine Pass Liquefaction, LLC*, 139 FERC ¶ 61,039 (2012).

²⁵ For more information on Sabine Pass' proposal, see Sabine Pass' application filed in Docket No. CP19-11-000.

²⁶ *Cheniere Creole Trail Pipeline, L.P.*, 142 FERC ¶ 61,137 (2013), *reh'g denied Cheniere Creole Trail Pipeline, L.P.*, 145 FERC ¶ 61,074 (2013).

²⁷ 18 C.F.R. § 385.214 (2018).

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their location require approval by the Commission under section 3 of the NGA.²⁸ While section 3 provides that an application for the exportation or importation of natural gas 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 terms and conditions as the Commission may find necessary or appropriate.”²⁹ NGA section 3(a) also provides that for good cause shown, the Commission may make supplemental orders as it may find “necessary or appropriate.”³⁰

25. DOE/FE, pursuant to its authority under NGA section 3, has issued Port Arthur LNG authorization to export up to 1.91 billion cubic feet per day (Bcf/d), or approximately 10 million metric tons per annum (MTPA), of domestically-produced natural gas by vessel to all FTA nations from the proposed Liquefaction Project in Port Arthur, Texas, for a term of 25 years.³¹ DOE/FE’s initial order approving Port Arthur LNG’s export volumes states that “[i]n light of DOE’s statutory obligation to grant this Application without modification or delay, there is no need for DOE/FE to review other arguments asserted by Port Arthur LNG in support of the Application.”³²

²⁸ The regulatory functions of section 3 were transferred to the Secretary of Energy in 1977 pursuant to Section 301(b) of the Department of Energy Organization Act, Pub. L. No. 95-91, 42 U.S.C. § 7101 *et. seq.* In reference to regulating the imports or exports of natural gas, the Secretary subsequently delegated to the Commission the authority to approve or disapprove the construction and operation of natural gas import and export facilities and the site at which such facilities shall be located. The most recent delegation is in DOE Delegation Order No. 00-004.00A, effective May 16, 2006. Applications for authorization to import or export natural gas must be submitted to DOE. The Commission does not authorize importation or exportation of the commodity itself.

²⁹ 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).

³⁰ 15 U.S.C. § 717b(a) (2012).

³¹ DOE/FE Order No. 3698-A at 4.

³² DOE/FE Order No. 3698 at 5. Section 3(c) provides that the exportation and importation of natural gas to and from countries with which there is in effect a Free Trade Agreement “shall be deemed to be consistent with the public interest applications for

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26. We have reviewed Port Arthur LNG's application to determine if the siting, construction, and operation of its Liquefaction Project as proposed would not be consistent with the public interest.³³ The proposed Liquefaction Project is to be located entirely on lands owned by Port Arthur LNG. Further, the final Environmental Impact Statement (EIS) prepared for the proposed projects finds that most of the direct environmental impacts of the proposed facilities are expected to be minor.³⁴ All adverse impacts from construction and operation of the facilities will be reduced to less than significant levels if the projects are constructed and operated in accordance with applicable laws and regulation and the environmental mitigation measures recommended in the final EIS and adopted by this order.³⁵ The final EIS also concludes that reasonably foreseeable cumulative impacts from operation of the Liquefaction Project will not be significant.³⁶

27. In accordance with the Memorandum of Understanding signed on August 31, 2018, by the Commission and PHMSA,³⁷ PHMSA undertook a review of the proposed facility's ability to comply with the federal safety standards contained in Part 193, Subpart B, of Title 49 of the Code of Federal Regulations.³⁸ On December 20, 2018, PHMSA issued a Letter of Determination (LOD) indicating Port Arthur LNG has demonstrated that the siting of its proposed LNG facilities comply with those federal safety standards. If the proposed Liquefaction Project is subsequently modified so that it

such importation and exportation shall be granted without modification or delay.”
15 U.S.C. § 717b(c) (2012).

³³ 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.”).

³⁴ See final EIS at 4-326.

³⁵ *Id.* at ES-10.

³⁶ *Id.* at ES-9.

³⁷ FERC, *Memorandum of Understanding Between the Department of Transportation and the Federal Energy Regulatory Commission Regarding Liquefied Natural Gas Transportation Facilities* (Aug. 31, 2018), <https://www.ferc.gov/legal/mou/2018/FERC-PHMSA-MOU.pdf>.

³⁸ 49 C.F.R. pt. 193, Subpart B (2018).

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differs from the details provided in the documentation submitted to PHMSA, further review would be conducted by PHMSA.

28. Port Arthur LNG is proposing to operate its Liquefaction Project under the terms and conditions mutually agreed to by its customers and will solely bear the responsibility for the recovery of any costs associated with construction and operation of the project. Accordingly, Port Arthur LNG's proposal does not trigger NGA section 3(e)(4).³⁹

29. In view of the above, we find that Port Arthur LNG's proposal is not inconsistent with the public interest. Therefore, we will grant Port Arthur LNG's application for authorization under section 3 of the NGA to site, construct, and operate its proposed LNG terminal facilities.

B. Pipeline Projects

30. Because the Louisiana Connector and Texas Connector projects' proposed pipeline facilities will be used to transport natural gas in interstate commerce subject to the jurisdiction of the Commission, the construction and operation of the facilities are subject to the requirements of subsections (c) and (e) of section 7 of the NGA.⁴⁰

1. Application of the Certificate Policy Statement

31. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new construction.⁴¹ In the Certificate Policy Statement, the Commission established 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.

³⁹ 15 U.S.C. § 717b(e)(4) (2012) (governing orders for LNG terminals offering open access service).

⁴⁰ 15 U.S.C. §§ 717f(c) and 717f(e) (2012).

⁴¹ *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *clarified*, 90 FERC ¶ 61,128, *further clarified*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

32. 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 the 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, and landowners and communities affected by the route of a 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 then proceed to consider the environmental analysis where other interests are addressed.

33. As noted above, the threshold requirement for pipelines proposing new interstate gas pipeline facilities is that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. As Port Arthur Pipeline is a new company, it has no existing customers. As such, there is no potential for subsidization of the Louisiana Connector or Texas Connector projects' facilities by existing customers, or the degradation of service to existing customers as a result of the projects. Thus, we find that the Louisiana Connector and Texas Connector projects meet the threshold no-subsidy requirement of the Certificate Policy Statement.

34. The proposed Louisiana Connector and Texas Connector projects' facilities are designed to transport gas for liquefaction and export at Port Arthur LNG's Liquefaction Project. No other pipelines, or their captive customers have filed adverse comments regarding the Louisiana Connector or Texas Connector projects. Thus, we find that the Louisiana Connector and Texas Connector projects will not adversely affect other pipelines and their captive customers.

35. We also find that the Louisiana Connector and Texas Connector projects will have minimal adverse impacts on landowners and communities. Of the approximately 34.2 miles of pipeline that would be installed as part of the Texas Connector Project, nearly 53 percent, or 18.29 miles, is proposed to be co-located on existing pipeline right-of-way.⁴² In addition, Port Arthur Pipeline states that approximately 95.6 miles, or 73 percent of the approximately 131 miles of pipeline that would be installed as part of Louisiana Connector projects, will be co-located along existing pipeline or electric transmission utility rights-of-way.⁴³

⁴² See Texas Connector Project Application, Resource Report 1, Table 1.1-4.

⁴³ See Louisiana Connector Project Application at 6.

36. In view of the considerations above, we find that Port Arthur Pipeline has demonstrated a need for the Louisiana Connector and Texas Connector projects, and that the benefits each project would provide outweigh their adverse effects on existing customers, other pipelines and their captive customers, landowners, and surrounding communities. Therefore, 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 Louisiana Connector and Texas Connector projects, as conditioned in this order.

2. Blanket Certificates

37. Port Arthur Pipeline requests a Part 284, Subpart G blanket certificate in order to provide open-access transportation services. Under a Part 284 blanket certificate, Port Arthur Pipeline will not require individual authorizations to provide transportation services to particular customers. Port Arthur Pipeline filed a *pro forma* Part 284 tariff to provide open-access transportation services. Since a Part 284 blanket certificate is required for Port Arthur Pipeline to participate in the Commission's open-access regulatory regime, we will grant Port Arthur Pipeline a Part 284 blanket certificate, subject to the conditions imposed herein.

38. Port Arthur Pipeline has also applied for a Part 157, Subpart F blanket certificate. The Part 157 blanket certificate gives an interstate pipeline NGA section 7 authority to automatically, or after prior notice, perform a restricted number of routine activities related to the construction, acquisition, abandonment, and replacement and operation of existing pipeline facilities provided the activities comply with constraints on costs and environmental impacts.⁴⁴ Because the Commission has previously determined through a rulemaking that these blanket-certificate eligible activities are in the public convenience and necessity,⁴⁵ it is the Commission's practice to grant new natural gas companies a Part 157 blanket certificate if requested.⁴⁶ Accordingly, we will issue Port Arthur Pipeline the requested blanket construction certificate under Part 157 of the Commission's regulations, subject to the conditions imposed herein.

⁴⁴ 18 C.F.R. § 157.203 (2018).

⁴⁵ *Revisions to the Blanket Certificate Regulations and Clarification Regarding Rates*, Order No. 686, 117 FERC ¶ 61,074, at P 9 (2006).

⁴⁶ *C.f. Rover Pipeline LLC*, 161 FERC ¶ 61,244, at P 13 (2017) (denying a request for a blanket certificate where the company's actions had eroded the Commission's confidence it would comply with all the requirements of the blanket certificate program, including the environmental requirements.).

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3. Rates

a. Initial Recourse Rates

39. Port Arthur Pipeline proposes to establish separate zone rates for the Louisiana Connector and Texas Connector facilities because of the non-integrated nature of the two pipeline systems. Port Arthur Pipeline estimates that the total capital cost of construction for the Louisiana Connector and Texas Connector projects' facilities will be \$825,683,539⁴⁷ and \$1,207,584,005,⁴⁸ respectively. Port Arthur Pipeline initially proposed a \$146,140,823 cost of service for the Texas Connector Project and a \$206,800,419 cost of service for the Louisiana Connector Project, utilizing a capital structure of 60 percent debt and 40 percent equity, a cost of debt of 5.7 percent, a return on equity of 14.00 percent, a federal tax rate of 35 percent, and a depreciation rate of 2.00 percent.⁴⁹

40. In a February 6, 2018 response to a staff data request, (February 6 Data Response) Port Arthur Pipeline provided adjusted costs of service and recalculated its initial incremental recourse rates to reflect changes in the federal tax code, as per the Tax Cuts and Jobs Act of 2017,⁵⁰ which became effective January 2018. Due to the changes to the federal tax code, the cost of service for the Texas Connector Project was reduced to \$135,042,816, and the cost of service for the Louisiana Connector Project was reduced to \$188,555,221, with correspondingly lower calculated initial charges for firm and interruptible services.⁵¹ As Port Arthur Pipeline's calculations in its February 6 Data Response reflect the federal tax code that will be in effect when the project goes into service, the Commission will use the revised costs of service for the purpose of establishing the initial recourse rates, to the extent Port Arthur Pipeline demonstrates that it is entitled to an income tax allowance, as further discussed below.

41. For the Texas Connector Project, Port Arthur Pipeline proposes an initial maximum monthly recourse reservation charge of \$5.7059 per Dth, and an initial usage

⁴⁷ Amendment Application, Exhibit K.

⁴⁸ See Louisiana Connector Project Application, Exhibit K.

⁴⁹ Amendment Application, Exhibits O and P; Louisiana Connector Application, Exhibits O and P.

⁵⁰ Pub. L. No. 115-97, 131 Stat. 2054 (Dec. 22, 2017).

⁵¹ See Exhibit P, Part I of Port Arthur Pipeline's Data Response.

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charge of \$0.0033 per Dth, for firm transportation service under Rate Schedule FT.⁵² Port Arthur Pipeline developed its proposed FT reservation charge using first-year fixed costs of \$133,519,072, and annual reservation billing determinants of 23,400,000 Dth.⁵³ Port Arthur Pipeline states that its proposed usage charge reflects variable costs of \$1,523,744 and billing determinants of 467,200,000 Dth, based on an 80 percent load factor of the Texas Connector Project's annual design throughput. Although Port Arthur Pipeline states that the billing determinants are based on an 80 percent load factor of the Texas Connector Project's annual design throughput (daily design capacity of 2,000,000 Dth, times 365, times 80 percent), Port Arthur Pipeline's proposed billing determinants do not equal a load factor of 80 percent, but instead approximately 64 percent.⁵⁴

42. For the Louisiana Connector Project, Port Arthur Pipeline proposes an initial maximum monthly recourse reservation charge of \$7.8244 per Dth, and an initial usage charge of \$0.0013 per Dth for firm transportation service under Rate Schedule FT.⁵⁵ Port Arthur Pipeline developed its proposed FT reservation charge for the Louisiana Connector Project using first-year fixed costs of \$187,710,599, and annual reservation billing determinants of 23,990,400 Dth.⁵⁶ The proposed usage charge reflects variable costs of \$844,622 and billing determinants of 656,737,200 Dth, based on a 90 percent load factor of the Louisiana Connector Project's annual design throughput.⁵⁷

43. Under Rate Schedule EHTF, Port Arthur Pipeline proposes an initial monthly reservation charge of \$6.5210 per Dth for service on the Texas Connector Project facilities and a monthly reservation charge of \$8.9422 per Dth for service on the Louisiana Connector Project facilities.⁵⁸ As noted above, Rate Schedule EHFT provides a shipper the right to take its daily scheduled quantity ratably over a 21-hour period rather

⁵² *Id.*

⁵³ *Id.* Port Arthur did not use the daily design capacity of the Texas Connector Project (2,000,000 Dth) in calculating the proposed reservation charge. Instead, its calculation is based on 23,400,000 Dth in annual billing determinants, which is approximately 97.5 percent of the project's 24,000,000 Dth annualized design capacity. *See* Amended Exhibit P, Part 1, Page 2.

⁵⁴ *Id.*

⁵⁵ *See* Exhibit P, Part I, Page 1 of Port Arthur Pipeline's Data Response.

⁵⁶ *Id.*, Page 2.

⁵⁷ *Id.*

⁵⁸ *Id.*

than a 24-hour period. Port Arthur Pipeline does not anticipate having any initial customers under Rate Schedule EHFT and does not allocate costs to the service. Instead, Port Arthur Pipeline applies the factor of 1.1429 (24 divided by 21) to each zone FT rate to calculate a rate that accounts for the costs related to the additional capacity needed to provide service under Rate Schedule EHFT.

44. Port Arthur Pipeline also proposes rates for Interruptible Transportation (IT) service, Parking and Lending (P&L) service, and Authorized Overrun Service (AOS), derived from a 100 percent load factor rate of the respective zone's FT reservation and usage charges.

45. While the Commission generally finds Port Arthur Pipeline's proposed cost of service and initial rates for the Louisiana Connector and Texas Connector projects acceptable, the Commission will require Port Arthur Pipeline to recalculate its rates based on revised billing determinants for its reservation charges. After reviewing Port Arthur Pipeline's workpapers, the Commission finds that Port Arthur Pipeline has not based its billing determinants on 100 percent of the design capacity of the pipelines. The Commission has a long-standing policy of basing initial rates on the design-capacity of the pipeline.⁵⁹ This approach ensures that a pipeline constructing facilities is placed at risk for underutilization of the facilities if it does not contract with customers for the full capacity of the pipeline.⁶⁰ Port Arthur Pipeline states that the design capacities for the Louisiana Connector and Texas Connector projects are each 2,000,000 MMBtu, and thus Port Arthur Pipeline is directed to design its reservation charges based on this capacity. In addition, Port Arthur Pipeline is directed to clarify the billing determinants used to establish the usage charges for the Louisiana Connector and Texas Connector projects. Subject to the discussion herein, the Commission finds Port Arthur Pipeline's proposed costs of service and initial rates for the Louisiana Connector and Texas Connector projects reasonable.

4. Federal Income Tax Allowance

46. Consistent with the D.C. Circuit's holding in *United Airlines, Inc. v FERC*,⁶¹ the Commission has held that a double recovery of income tax costs results from granting a Master Limited Partnership (MLP) a separate income tax allowance and a pre-tax return

⁵⁹ *Ruby Pipeline, L.L.C.*, 128 FERC ¶ 61,224 (2009), *order on reh'g* 131 FERC ¶ 61,007 (2010).

⁶⁰ *See Cameron Interstate Pipeline, LLC*, 160 FERC ¶ 61,009, at P 11 (2017).

⁶¹ 827 F.3d 122, 134, 136 (D.C. Cir. 2016) (*United Airlines*).

(continued ...)

on equity.⁶² Accordingly, the Commission has established a policy that MLPs are generally not permitted to recover an income tax allowance in their cost of service. For those pass-through business forms that are not MLPs, the Commission continues to consider how to resolve the double recovery concern raised by *United Airlines*.⁶³ However, the Commission has clarified that a natural gas company organized as a pass-through entity, all of whose income or losses are consolidated on the federal income tax return of its corporate parent, is considered to be subject to the federal corporate income tax, and is thus eligible for a tax allowance.⁶⁴ For all other pass-through entities claiming an income tax allowance, parties should fully address the double-recovery concern raised by the court in *United Airlines*,⁶⁵ including the pass-through entities' ownership structure, where any income tax liability is incurred in that ownership structure, and whether those income tax liabilities are reflected in the return on equity.

⁶² *SFPP, L.P.*, Opinion No. 511-C, 162 FERC ¶ 61,228, at PP 21-30 (2018); *Enable Mississippi River Transmission, LLC*, 164 FERC ¶ 61,075, at PP 34-35 (2018) (*Enable*); see also *Inquiry Regarding the Commission's Policy for Recovery of Income Tax Costs*, 162 FERC ¶ 61,227 (Revised Policy Statement) (providing guidance that an MLP may not recover an income tax allowance), *order on reh'g*, 164 FERC ¶ 61,030 (2018).

⁶³ Revised Policy Statement, 162 FERC ¶ 61,227 at PP 3, 45; *Trailblazer Pipeline Co., LLC*, 164 FERC ¶ 61,074, at PP 30-31 (2018) (*Trailblazer*).

⁶⁴ See *Enable*, 164 FERC ¶ 61,075 at PP 34-35; *BP West Coast Products, LLC v. FERC*, 374 F.3d 1263, at 1289 (D.C. Cir. 2004) (disallowing an income tax allowance for an MLP's corporate unitholders, while explaining that an income tax allowance is appropriate in the cost of service of a pass-through subsidiary of a corporation "when such a subsidiary does not itself incur a tax liability but generates one that might appear on a consolidated return of the corporate group."). See also *Interstate and Intrastate Natural Gas Pipelines; Rate Changes Relating to Federal Income Tax Rate*, Order No. 849, 164 FERC ¶ 61,031 at P 3 (2018) (clarifying that for purposes of the FERC Form No. 501-G and limited section 4 filings contemplated by the final rule "a natural gas company organized as a pass-through entity all of whose income or losses are consolidated on the federal income tax return of its corporate parent is considered to be subject to the federal corporate income tax, and is thus eligible for a tax allowance.").

⁶⁵ Revised Policy Statement, 162 FERC ¶ 61,227 at PP 3, 45; *Trailblazer*, 164 FERC ¶ 61,074 at P 31.

47. Here, Port Arthur Pipeline represents that it is a wholly-owned subsidiary of Sempra Energy, effective November 29, 2016.⁶⁶ To the extent that Port Arthur Pipeline can demonstrate in its compliance filing to place its initial rates in-service that all of its income or losses are consolidated on the federal income tax return of its corporate parent, then Port Arthur Pipeline is permitted an income tax allowance on a stand-alone basis.⁶⁷ Consistent with the discussion above, if Port Arthur Pipeline cannot make such a showing, then Port Arthur Pipeline must provide other evidence to address the double-recovery concern raised by the court in *United Airlines*.⁶⁸ To the extent Port Arthur Pipeline does not make such a demonstration, the tariff records it files setting forth the initial rates for service must reflect rates recalculated to reflect removal of the proposed tax allowance and accumulated deferred income tax from its cost of service. If Port Arthur Pipeline fails to remove the proposed income tax allowance and accumulated deferred income taxes from the initial rates, the filing will be rejected as not being in compliance with this order and Port Arthur Pipeline will have to refile those records with the appropriate rates and receive Commission approval prior to going into service.

5. Allowance for Funds Used During Construction

48. Port Arthur Pipeline, a new pipeline company, proposes to calculate its Allowance for Funds Used During Construction (AFUDC) based on its proposed debt and equity capital structure. This approach is consistent with the accounting guidance we have given other newly created companies.⁶⁹ Consistent with Commission precedent, Port Arthur Pipeline is required to capitalize the actual costs of borrowed and other funds used for construction purposes, not to exceed the amount of debt and equity AFUDC that would be capitalized based on the overall rate of return approved. This will ensure that the amounts included in AFUDC are properly capitalized in this project, consistent with the Commission's requirements for newly created companies approved in other cases.

⁶⁶ Texas Connector Application, Exhibit D.

⁶⁷ See *City of Charlottesville, Virginia, v. FERC*, 774 F.2d 1205 (1985) (describing and affirming the Commission's policy with regard to the recognition of income taxes for a pipeline that is part of a consolidated corporate income tax filing).

⁶⁸ 827 F.3d at 134-136. See also Revised Policy Statement, 162 FERC ¶ 61,227 at P 45.

⁶⁹ See, e.g., *Tiger Pipeline, LLC*, 131 FERC ¶ 61,010, at P 80 (2010); *Cheniere Creole Trail Pipeline, L.P.*, 115 FERC ¶ 61,331, at PP 41-43 (2006), *Port Arthur Pipeline, L.P.*, 115 FERC ¶ 61,344 at P 57.

(continued ...)

6. Fuel Rates

49. Port Arthur Pipeline is proposing an in-kind system fuel retention percentage with an annual tracker mechanism. Port Arthur Pipeline states that it will make an annual filing to true up any differences between (i) the quantity of gas retained through the fuel retention charge, and (ii) actual fuel consumed and volumes of gas lost and unaccounted for (LAUF) on its system. Port Arthur Pipeline proposes an initial fuel percentage of 0.98 percent for the Texas Connector Project⁷⁰ and 1.2 percent for the Louisiana Connector Project.⁷¹ These percentages are designed to recover actual quantities used in compression, as well as LAUF volumes for each project or rate zone. The Commission accepts Port Arthur Pipeline's proposed initial fuel retainage percentages. The proposed annual tracker mechanism is addressed below.

7. Service under Rate Schedules FSS, ISS, and LMS

50. Port Arthur Pipeline does not propose to construct storage capacity as part of its system, but states that it will interconnect with off-system underground natural gas storage facilities. Port Arthur Pipeline's certificate application includes service proposals that would require the use of off-system storage capacity for firm storage service under Rate Schedule FSS, interruptible storage service under Rate Schedule ISS, and a load management service under Rate Schedule LMS. Moreover, section 13.43 of Port Arthur Pipeline's *pro forma* General Terms and Conditions (GT&C) (Off System Capacity) would permit Port Arthur Pipeline to acquire, through transportation agreements, off-system capacity rights, for operational reasons or to render service for its shippers within a zone, under its approved tariff and rates. Section 13.43 of the GT&C states that when off-system capacity is not required for operational reasons or to meet firm service commitments, Port Arthur Pipeline will offer the off-system capacity to shippers on a primary firm basis within the zone. Finally, section 13.43 of the GT&C states that Port Arthur Pipeline is not precluded from seeking case specific authorization for the utilization of off-system capacity by Port Arthur Pipeline for other purposes, nor does it preclude Port Arthur Pipeline from releasing any capacity it holds on off-system pipeline companies.

51. Port Arthur Pipeline has not proposed rates for Rate Schedules FSS and ISS. Port Arthur Pipeline asserts that its proposed LMS maximum monthly "reservation" rate of

⁷⁰ Texas Connector Project Application at 21.

⁷¹ Louisiana Connector Project Application at 22.

\$1.50 per Dth is the maximum it believes it can charge in the market area, and is lower than its proposed Rate Schedule P&L monthly “reservation” rate of \$0.2065 per Dth.⁷²

52. Port Arthur Pipeline has not developed rates for FSS and ISS services, and its maximum monthly market-based “reservation” rate for LMS service is unsupported. Thus, we reject Port Arthur Pipeline’s proposed Rate Schedules FSS, ISS, and LMS and direct Port Arthur Pipeline to delete these rate schedules and any references thereto from its tariff.

53. Moreover, we note that the Commission’s regulations set forth requirements for cost pass-through mechanisms.⁷³ Port Arthur Pipeline has not proposed a tariff-based cost recovery mechanism that would meet the requirements of section 154.403 of the Commission’s regulations for passing through off-system costs to its customers. This rejection is without prejudice to Port Arthur Pipeline filing a rate and tariff proposal for Rate Schedule FSS, ISS and LMS services that is consistent with Commission precedent and regulations. The filing should include a detailed narrative explanation of how Port Arthur Pipeline intends to recover cost-based rates associated with its use of off-system capacity, as well as workpapers in Excel format showing all formulas underlying its rate derivations. Moreover, if Port Arthur Pipeline seeks to pass through to its customers’ market-based rates charged by off-system storage providers, it must provide a study showing that it is not able to exercise market power.

8. Pipeline Safety and Greenhouse Gas Costs

54. Port Arthur Pipeline proposes tracking mechanisms for cost increases due to any new pipeline safety or greenhouse gas regulations issued after Port Arthur Pipeline’s initial rates are approved. Section 13.29.3 of the GT&C states that Port Arthur Pipeline shall file annually to revise a Transmission Pipeline Safety Costs and Greenhouse Gas Costs Surcharge for each zone on or before September 30 to become effective November 1.

55. Port Arthur Pipeline’s proposed Transmission Pipeline Safety Costs and Greenhouse Gas Costs Surcharge closely resembles modernization trackers that the Commission addressed in its policy statement *Cost Recovery Mechanisms for Modernization of Natural Gas Facilities*.⁷⁴ In the Cost Recovery Policy Statement, the

⁷² See Texas Connector Project Application at 21; Louisiana Connector Project Application at 22.

⁷³ 18 C.F.R. § 154.403 (2018).

⁷⁴ 151 FERC ¶ 61,047, *clarification denied*, 152 FERC ¶ 61,046 (2015) (*Cost Recovery Policy Statement*).

Commission adopted five guiding principles as the standards a pipeline would need to satisfy for the Commission to approve a surcharge such as the one proposed by Port Arthur:

1. the pipeline's existing rates must have been reviewed through an NGA general section 4 rate proceeding, a cost and revenue study, or through a collaborative effort between the pipeline and its customers;
2. the costs eligible for recovery through the surcharge must generally be limited to one-time capital costs incurred to modify the pipeline's existing system to comply with safety or environmental regulations or other federal or state government agencies, or costs shown to be necessary for safe, reliable, and/or efficient operation of the pipeline;
3. the pipeline must design any proposed surcharge in a manner that will protect the pipeline's captive customers from cost shifts due to the surcharge;
4. the pipeline must include some method to allow a periodic review of whether the surcharge and the pipeline's base rates remain just and reasonable; and
5. the pipeline must work collaboratively with shippers to seek shipper support for any surcharge proposal.⁷⁵

56. Port Arthur Pipeline has not demonstrated that its proposal meets the standards laid out in the Cost Recovery Policy Statement. Port Arthur Pipeline's proposal does not offer support for the surcharge from shippers, nor does it offer a method to allow for a periodic review of whether the surcharge and the pipeline's base rates remain just and reasonable. Furthermore, the Commission finds it is speculative to anticipate what types of costs Port Arthur Pipeline may be subject to under federal, state or local legislation, whether such costs should be recoverable, and, if recoverable, the manner in which they should be recovered. This action is without prejudice to Port Arthur Pipeline filing a proposal in the future if it actually incurs such costs or in compliance with the Cost Recovery Policy Statement.⁷⁶ Consistent with this determination, Port Arthur Pipeline is directed to delete references to the Transmission Pipeline Safety Costs and Greenhouse Gas Costs Surcharge from its tariff.

⁷⁵ Cost Recovery Policy Statement, 151 FERC ¶ 61,047 at P 31.

⁷⁶ *Sierrita Gas Pipeline, LLC*, 147 FERC ¶ 61,192, at P 48 (2014).

(continued ...)

9. Three Year Filing Requirement

57. Consistent with Commission precedent, Port Arthur Pipeline is required to file a cost and revenue study no later than three months after its first three years of actual operation to justify its existing cost-based firm and interruptible recourse rates.⁷⁷ In this filing, the projected units of service should be no lower than those upon which Port Arthur Pipeline's approved initial rates are based. The filing must include a cost and revenue study in the form specified in section 154.313 of the Commission's regulations to update cost of service data.⁷⁸ Port Arthur Pipeline's cost and revenue study should be filed through the eTariff portal using a Type of Filing Code 580. In addition, Port Arthur Pipeline is advised to include as part of the eFiling description, a reference to Docket Nos. CP17-21-000, CP17-21-001, and CP18-7-000 and the cost and revenue study.⁷⁹ After reviewing the data, the Commission will determine whether to exercise its authority under NGA section 5 to investigate whether the rates remain just and reasonable. In the alternative, in lieu of this filing, Port Arthur Pipeline may make an NGA general section 4 rate filing to propose alternative rates to be effective no later than three years after the in-service date for its proposed facilities.

10. Negotiated Rate Requirements

58. Port Arthur Pipeline proposes to provide service on the Louisiana Connector and Texas Connector projects to the project shipper under negotiated rate agreements. Port Arthur Pipeline must file either its negotiated rate agreement or tariff records setting forth the essential terms of the agreements in accordance with the Commission's Alternative Rate Policy Statement⁸⁰ and negotiated rate policies.⁸¹ Port Arthur Pipeline must file the

⁷⁷ See *Bison Pipeline, LLC*, 131 FERC ¶ 61,013, at P 29 (2010) (*Bison*); *Ruby Pipeline, LLC*, 128 FERC ¶ 61,224 at P 57; *MarkWest Pioneer, L.L.C.*, 125 FERC ¶ 61,165, at P 34 (2008).

⁷⁸ 18 C.F.R. § 154.313 (2018).

⁷⁹ *Electronic Tariff Filings*, 130 FERC ¶ 61,047, at P 17 (2010).

⁸⁰ *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines; Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076 (1996); *clarification granted*, 74 FERC ¶ 61,194 (1996), *order on reh'g*, 75 FERC ¶ 61,024 (1996).

⁸¹ *Natural Gas Pipelines Negotiated Rate Policies and Practices; Modification of Negotiated Rate Policy*, 104 FERC ¶ 61,134 (2003), *order on reh'g and clarification*,

(continued ...)

negotiated rate agreements or tariff records at least 30 days, but not more than 60 days, before the proposed effective date for such rates.⁸²

11. Pro Forma Rate Updates

59. Port Arthur Pipeline requests waiver of any Commission regulations necessary to allow it to revise its proposed rates prior to the in-service date of the project to reflect actual cost information.⁸³ Port Arthur Pipeline's request for a waiver is denied.

60. However, Port Arthur Pipeline may propose to modify its initial rates to reflect updated cost and rate information by filing an amendment to this certificate proceeding, but any changes to initial rates can only take place prior to the project being placed into service. Thus, Port Arthur Pipeline should file any such amendment application, complete with all necessary supporting information, no later than 60 days prior to its anticipated in-service date to afford the Commission time to review and act upon its request. If Port Arthur Pipeline chooses to place its project into service before the Commission has acted on any amendment request, it will have to file an NGA section 4⁸⁴ rate case in order to change the rates approved in this order.

12. Pro Forma Tariff

a. Reservation of Capacity for Future Expansions

61. Section 13.4.1 of the GT&C (Open Season for Generally Available Capacity) provides in part:

(a) Pipeline will allocate firm pipeline capacity in accordance with this Section 13.4. To the extent Pipeline has available unsubscribed capacity for which there are no pending requests, Pipeline reserves the right, but shall not be obligated, to reserve such capacity for open seasons to be held

114 FERC ¶ 61,042, *reh'g dismissed and clarification denied*, 114 FERC ¶ 61,304 (2006).

⁸² Pipelines are required to file any service agreement containing non-conforming provisions and to disclose and identify any transportation term or agreement in a precedent agreement that survives the execution of the service agreement. 18 C.F.R. § 154.112(b) (2018).

⁸³ Louisiana Connector Application at 36.

⁸⁴ 15 U.S.C. § 717c(d) (2012).

(continued ...)

within the next six (6) Months for the purpose of limiting or avoiding a future expansion.

62. This paragraph is the only reference in Port Arthur Pipeline's tariff to reserving capacity for future expansions. While the Commission permits such reservations of capacity, Commission policy requires the tariff include several conditions to ensure that "reserved capacity is offered in a not unduly discriminatory manner."⁸⁵ As laid out in greater detail in *Iroquois Gas Transmission System*, these conditions require Port Arthur Pipeline to:

1. post all available capacity so that all shippers may bid on it;
2. delineate that all capacity may only be reserved for a one-year period from the date posted;
3. provide detailed information in the posting of the reserved capacity;
4. solicit turnback capacity as a part of the process, to assist parties in determining the correct size of any expansion project; and
5. include solicitation procedures to ensure that excess and turnback capacity is posted.

Port Arthur Pipeline is directed to revise its tariff to include such provisions, consistent with Commission precedent.⁸⁶

b. Right of First Refusal and Net Present Value Standard

63. Section of the 13.4.3 of the GT&C (Net Present Value Standard) provides in part that Port Arthur Pipeline shall award capacity for bids received during an open season to shippers whose bids it has determined to have the highest net present value (NPV). Section of the 13.4.3 of the GT&C describes NPV as

the discounted cash flow of incremental revenues per dekatherm to Pipeline produced, lost or affected by the requests for service and shall be based upon such factors as the term, quantity, date on which the requested service is requested to commence, *and other factors determined to be relevant by Pipeline.* (Emphasis added.)

⁸⁵ See, e.g., *Iroquois Gas Transmission System*, 100 FERC ¶ 61,279 (2002).

⁸⁶ *Id.* PP 5-10.

64. With respect to bids for capacity subject to a right of first refusal, section 13.4.2(c) of the GT&C provides:

If Pipeline is willing to accept a bid, Pipeline shall, no later than fifteen (15) Days after the close of the bidding period, notify Shipper of the bid having the highest Net Present Value (“NPV”). Shipper shall have ten (10) Days after receiving notice to notify Pipeline as to whether it will match the bid having the highest NPV *and longest term*. If the Shipper elects to exercise its Right of First Refusal to match the bid with the highest NPV it must execute a new Service Agreement containing the terms of that bid, which new Service Agreement shall succeed the prior agreement following its expiration; provided, however, that Shipper shall not be required to pay any rate higher than the maximum applicable rate. (Emphasis added.)

65. The emphasized language in section 13.4.2(c) of the GT&C is not consistent with the Commission’s policy that, in the context of the right of first refusal (ROFR) bidding process, “shippers may bid whichever combination of rate and term best represents the value they place on the capacity.”⁸⁷ The Commission further finds that the phrase “and other factors determined to be relevant by Pipeline” in section 13.4.3 of the GT&C is overbroad and lacks clarity regarding how the NPV should be calculated. Accordingly, Port Arthur Pipeline is directed to delete the phrases “and the longest term” from section 13.4.2(c) of the GT&C and “and other factors determined to be relevant by the pipeline” from section 13.4.3 of the GT&C.

c. ROFR Notification

66. The Commission has held that both a shipper and the pipeline have the right to initiate the ROFR process through issuance of a notification to one another.⁸⁸ However, section 13.4.2 of the GT&C expressly grants this right only to the pipeline, stating in part, “if Pipeline provides written notice to Shipper to terminate any Long Term Service Agreement for firm transportation at the maximum tariff rate, Shipper will have a right of first refusal to retain such firm capacity by complying with the bidding procedures in this Section 13.4.” Port Arthur Pipeline is directed to revise section 13.4.2 of the GT&C to be consistent with the Commission’s ROFR notification policy.

⁸⁷ *Atlantic Coast Pipeline, LLC*, 161 FERC ¶ 61,042, at P 156 (2017) (citing *Transcontinental Gas Pipe Line Corp.*, 105 FERC ¶ 61,365, at P 20 (2003)).

⁸⁸ *Texas Eastern Transmission, LP*, 102 FERC ¶ 61,262, at PP 26-28 (2003).

(continued ...)

d. ROFR Bid Matching

67. Under the Commission's policy, a ROFR shipper is permitted to match the best third-party bid for all or only a volumetric portion of the open season capacity.⁸⁹ However, section 13.4.2(c) of the GT&C provides, in part:

If the Shipper elects to exercise its Right of First Refusal to match the bid with the highest NPV it must execute a new Service Agreement *containing the terms of that bid*, which new Service Agreement shall succeed the prior agreement following its expiration(Emphasis added.)

68. The emphasized language could be interpreted as inconsistent with the shipper's right to match bids for only a portion of its expiring capacity, and that the ROFR shipper does not have a right of contract reduction. Therefore, Port Arthur Pipeline is directed to clarify section 13.4.2 of the GT&C to provide that a shipper may notify Port Arthur Pipeline of its intent to match the best offer(s) for all or a volumetric portion of its capacity.

e. Posting ROFR Capacity

69. Section 13.4.2(a) of the GT&C provides that Port Arthur Pipeline "shall post the capacity [subject to ROFR rights] for bidding on its Internet Web Site no later than one-hundred and eighty (180) Days prior to the expiration of the current Service Agreement." The phrase "no later than" implies that Port Arthur Pipeline and a shipper may negotiate a deadline by which the ROFR notice must be provided under section 13.4.2(a) of the GT&C. While the Commission has permitted the negotiation of the ROFR notice deadline, the Commission also requires a stated outer limit on how far in advance of the end of the contract the ROFR process may begin.⁹⁰ This outer limit permits the ROFR process to take place relatively close to the time the contract terminates so that existing shippers, as well as prospective shippers, are provided a timely opportunity to assess the value of capacity.⁹¹ It is unclear whether the phrase "no later than" is intended to authorize negotiation of the ROFR notice deadline, which must be implemented on a not unduly discriminatory basis, and/or whether it is intended to function as a "not earlier

⁸⁹ *Mountain Valley Pipeline, LLC*, 161 FERC ¶ 61,043, at P 113 (2017); *see also Dominion Trans., Inc.* 111 FERC ¶ 61,135, at PP 18-22 (2005).

⁹⁰ *Gulf South Pipeline Company, LP*, 115 FERC ¶ 61,301, at PP 11-13 (2006).

⁹¹ *Id.*

than” outer limit on the ROFR prior notice.⁹² Port Arthur Pipeline is required to clarify and support its proposed notice date consistent with this discussion and Commission precedent.⁹³

f. Operational Balancing Agreements

70. Section 13.7.1 of the GT&C (Operational Balancing Agreements) provides in relevant part that “[p]ipeline may enter into [Operational Balancing Agreements (OBAs)] with interstate, intrastate pipelines, or LNG terminals that operate natural gas facilities that directly interconnect with Pipeline’s system (hereinafter called “OBA Party”),” and lists five conditions under which Port Arthur Pipeline would have no obligation to negotiate and execute OBAs with any OBA Party.

71. North American Energy Standards Board (NAESB) Wholesale Gas Quadrant (WGQ) Version 3.0 Flowing Gas Related Standard 2.3.29 provides that “[a]t a minimum, [pipeline] should enter into [OBAs] at all pipeline-to-pipeline (interstate and intrastate) interconnects.” Further, the Commission’s regulations provide that “[a] pipeline must enter into [OBAs] at all points of interconnection between its system and the system of another interstate or intrastate pipeline.”⁹⁴ Accordingly, Port Arthur Pipeline is directed to revise its tariff to comply with NAESB WGQ Version 3.0 Flowing Gas Related Standard 2.3.29 and section 284.12(b)(2)(i) of the Commission’s regulations, and delete the above-mentioned conditions under which Port Arthur Pipeline would not be obligated to negotiate and execute OBAs with any OBA Party.

72. Section 13.7.1(a) of the GT&C states in part:

For the purpose of minimizing operational conflicts between various pipeline facilities with respect to the delivery of gas to and from Pipeline’s facilities, *Pipeline may enter* into OBAs with interstate, intrastate pipelines, or LNG terminals that operate natural gas facilities that directly interconnect with Pipeline’s system (herein called “OBA Party”).
(Emphasis added.)

⁹² *E.g.*, Panhandle Eastern Pipe Line Company, LP, FERC NGA Gas Tariff, Fourth Revised Vol. No. 1, [GT&C Section 7, Contracting for Service Rights, 1.0.0](#) provides that, for contracts two years or longer, notice must be provided “[n]ot earlier than 18 Months and not later than 12 Months.”

⁹³ *See, e.g., Rover Pipeline LLC*, 158 FERC ¶ 61,109, at P 135 (2017) (*Rover*).

⁹⁴ 18 C.F.R. § 284.12(b)(2)(i) (2018).

(continued ...)

73. Port Arthur Pipeline is directed to revise its tariff to conform with Commission policy and NAESB WGQ Standard 2.3.29 which requires “[a]t minimum...” pipelines to “enter into Operational Balancing Agreements at all pipeline-to-pipeline (interstate and intrastate) interconnects.”⁹⁵

g. Multiple Penalties for the Same Infraction

74. Sections 13.7.9 (Scheduling Penalties) and 13.10.4(b) (Curtailed and Penalties) of the GT&C allow penalties to be assessed in addition to any other applicable charges and penalties. Commission policy prohibits multiple penalties from being assessed for the same infraction.⁹⁶ Therefore, these sections should be revised to be consistent with Commission Policy. We also direct Port Arthur Pipeline to revise paragraph 5.2.4 of Rate Schedule FT quoted below to ensure that a shipper is not assessed both an operational flow order (OFO) penalty and an Excess Hourly Take Penalty for the same action:

Quantities taken on behalf of Shipper at the Delivery Point(s) in any hour in excess of 1/24 of the Shipper’s daily scheduled quantities shall be subject to the Excess Hourly Take Penalty applicable to excess hourly takes when either no OFO is in effect at the Delivery Points(s) or such an OFO is in effect.

h. Interconnecting Operator OFOs

75. Section 13.9.1 of the GT&C states in part:

Pipeline reserves and will have the right to issue Operational Flow Orders to preserve the integrity of Pipeline’s system, to prevent or respond to a force majeure event, to ensure adequate operating pressures, to have adequate supplies in the system, to assure adequate fuel and Fuel Retainage, to maintain firm services and to stabilize the operation of the system.

76. The above-quoted language in section 13.9.1 of the GT&C is consistent with the Commission’s policy that an OFO can be issued only in situations which “threaten or could threaten the safe operations or system integrity, of the transportation service provider’s system or to maintain operations required to provide efficient and reliable firm

⁹⁵ *Rover*, 158 FERC ¶ 61,109 at P 130.

⁹⁶ *Id.* P 129; *Columbia Gas Transmission Corp.*, 100 FERC ¶ 61,084, at P 201 (2002).

(continued ...)

service.”⁹⁷ Section 13.9.4 of the GT&C states that Port Arthur Pipeline may issue an OFO if a directly interconnected operator issues an OFO. This language could allow Port Arthur Pipeline to bypass the need to assess whether conditions on its own system as set forth in section 13.9.1 of the GT&C of its tariff support issuance of an OFO. Port Arthur Pipeline is directed to delete section 13.9.4 of the GT&C from its tariff.

i. Curtailment and Force Majeure

77. Section 13.10.1 of the GT&C provides in part:

Pipeline shall have the right to curtail transportation services, in whole or in part, on all or a portion of its system in an emergency situation, as determined by Pipeline in its sole judgment, or when an unexpected capacity loss occurs after Pipeline has scheduled service and Pipeline is therefore unable to perform the service that it has scheduled... . In addition, Pipeline shall have the right to interrupt or discontinue service at any time for reasons of Force Majeure *or when, in Pipeline’s sole judgment, capacity or operating conditions so require or it is desirable or necessary to make modifications or operating changes to its system.* (Emphasis added.)

78. The Commission has found that pipelines may only “curtail” scheduled service in an emergency situation or when an unexpected capacity loss occurs after the pipeline has scheduled service, and the pipeline is therefore unable to perform the service which it has scheduled.⁹⁸ As quoted above, section 13.10.1 of the GT&C gives Port Arthur Pipeline the right to curtail services under two sets of circumstances. The first set of circumstances, in underlined font, describes events that are clearly emergency situations. However, the second set of circumstances, in italicized font, could be interpreted as including both emergency and non-emergency situations. The language in italics should be revised to clearly indicate that the described circumstances must be emergencies.

79. Port Arthur Pipeline is also directed to correct a reference in section 13.10.2(b) of the GT&C that incorrectly describes the order in which it will curtail services as set forth in “this Section 13.10.2(c)” rather than “13.10.2(b)” which is the appropriate section.

80. Section 13.10.7(a) of the GT&C provides in part:

In the event Pipeline is unable to make deliveries of the quantities of gas to which Shipper has firm entitlements on any Gas Day and to which Shipper

⁹⁷ NAESB, WGQ Definition 1.2.6, v. 3.0.; *Rover*, 158 FERC ¶ 61,109 at P 127.

⁹⁸ *Ryckman Creek Resources, LLC*, 136 FERC ¶ 61,061, at P 68 (2011); *MarkWest Pioneer, L.L.C.*, 125 FERC ¶ 61,165 at P 52.

has nominated for delivery from a Primary Receipt Point to a Primary Delivery Point under a firm Rate Schedule, Pipeline shall provide a credit applicable to the quantities of gas that were nominated and confirmed by Shipper's supplier, but not delivered; provided, however, Pipeline shall not be relieved of the obligation to provide credits for failure to confirm a nomination for reasons within its control.

81. The Commission requires pipelines to provide reservation credits based on the amount of primary firm service the shipper nominated, which the pipeline was unable to schedule or deliver.⁹⁹ Therefore, Port Arthur Pipeline is directed to remove the requirement from section 13.10.7 of the GT&C that credits must be based only on nominated and confirmed quantities that were not delivered.

j. Operational Purchases and Sales

82. Section 13.12.11 of the GT&C states in part:

Pipeline is not providing a gas supply service under any Rate Schedule of Pipeline's Tariff. Without limiting the foregoing, Pipeline may buy and sell gas to the extent necessary to maintain system pressure and balance, to implement the cashout provisions in this Section 13.12 and to perform other functions necessary in connection with providing gas transportation service.

83. The Commission requires pipelines to include in their tariffs specific provisions addressing operational sales and purchases of gas.¹⁰⁰ These provisions include: (a) the specific circumstances in which the pipeline will perform an operational purchase or sale; (b) a statement that operational purchases or sales have a lower transportation priority than firm transportation and there will be no transportation service associated with its operational purchases or sales of gas; (c) a statement that operational sales service is unbundled from transportation service; (d) posting and bidding procedures for the sale of gas for operational purposes; and (e) a commitment to filing an annual report of sales and purchases and revenues derived from the sale of gas.¹⁰¹ The report must indicate the

⁹⁹ *SG Resources Mississippi, L.L.C.*, 153 FERC ¶ 61,364, at P 13 (2015); *CenterPoint Energy Gas Transmission Co.*, 144 FERC ¶ 61,195, at P 46 (2013).

¹⁰⁰ *Rover*, 158 FERC ¶ 61,109 at P 132; *ANR Pipeline Co.*, 110 FERC ¶ 61,069, at P 57 (2006) (*ANR*); *Colorado Interstate Gas Co.*, 107 FERC ¶ 61,312, at P 15 (2004), *order on reh'g*, 111 FERC ¶ 61,216 (2005); *Dominion Trans., Inc.*, 106 FERC ¶ 61,029, at P 17 (2004).

¹⁰¹ *ANR*, 110 FERC ¶ 61,069 at P 57.

source of gas, date of the purchase or sale volumes, purchase or sale price, costs and revenues from purchase or sale, and the disposition of the costs and revenues. Section 13.12.11 of the GT&C conforms with the first required provision; however, Port Arthur Pipeline is required to file revised tariff language that incorporates the remaining provisions required for operational sales and purchases of gas.

k. Force Majeure Definition

84. Section 13.21.1 of the GT&C, in part, defines a force majeure as “any other cause, whether of the kind herein enumerated, or otherwise, not within the control of the party claiming suspension and which by the exercise of Good Utility Practice, reasonable care and due diligence such party is unable to prevent or overcome.” The Commission has defined force majeure outages as events that are both “unexpected and uncontrollable.”¹⁰² Therefore, we direct Port Arthur Pipeline to revise this portion of section 13.21 of the GT&C accordingly.

l. Liability

85. In various sections of its tariff,¹⁰³ Port Arthur Pipeline proposes to limit its liability to damages resulting from “gross negligence or willful misconduct.” The Commission has consistently held that a simple negligence standard is appropriate for the liability and indemnification provisions of open access tariffs, as this standard prohibits pipelines from limiting their liability in a way that would immunize them from direct damages resulting from simple negligence and “gives service providers a powerful incentive to operate their systems in a reasonable and prudent manner.”¹⁰⁴ The Commission has, however, allowed pipelines to limit their liability for simple negligence to direct damages, so that they are

¹⁰² *North Baja Pipeline, LLC v. FERC*, 483 F.3d 819, 823 (D.C. Cir. 2007), *aff'd*, *North Baja Pipeline, LLC*, 109 FERC ¶ 61,159 (2004), *order on reh'g*, 111 FERC ¶ 61,101 (2005). *See also, e.g., Kinder Morgan Louisiana Pipeline LLC*, 154 FERC ¶ 61,145 at P 29 (2016); *Algonquin Gas Transmission, LLC*, 153 FERC ¶ 61,038 at P 103 (2015).

¹⁰³ *See, e.g.* sections 13.5.1, 13.10.6, 13.14.1, and 13.18 of the GT&C.

¹⁰⁴ *See, e.g., Trailblazer Pipeline Co. LLC*, 142 FERC ¶ 61,007, at P 8 (2012); *CenterPoint Energy Gas Transmission Co., LLC*, 139 FERC ¶ 61,064, at P 19 (2012); *Orbit Gas Storage, Inc.*, 126 FERC ¶ 61,095, at P 58 (2009).

only liable for indirect, consequential, incidental, or punitive damages where there is gross negligence, willful misconduct, or bad faith.¹⁰⁵

86. Port Arthur Pipeline's proposed liability standard is inconsistent with Commission policy, as it immunizes the pipeline from direct damages resulting from simple negligence. Therefore, Port Arthur Pipeline is directed to revise the liability standard in its *pro forma* tariff so as to not exclude it from liability for direct damages arising from its own simple negligence.

87. Section 13.21.5 of the GT&C provides, in part:

Shipper warrants that all upstream and downstream transportation and/or service arrangements are in place, or will be in place as of the requested effective date of service, and that it has advised the upstream and downstream operators of the Receipt Point(s) and Delivery Point(s) under Shipper's Service Agreement(s) and any quantity and quality limitations for each point as specified on Exhibits A and B attached to the effective Service Agreement(s) or elsewhere in this Tariff. Shipper agrees to indemnify and hold Pipeline harmless for refusal to transport gas hereunder in the event any upstream or downstream operator fails to receive or deliver gas as contemplated by this Tariff.

88. Section 13.21.5 of the GT&C, could be interpreted to provide that Port Arthur Pipeline would be held harmless if it refuses to transport gas in the event any upstream or downstream operator fails to receive or deliver gas, whether or not Port Arthur Pipeline is also negligent. This would be inconsistent with Commission's adoption of a comparative negligence standard that would hold the pipeline liable for its proportional share of responsibility.¹⁰⁶ The Commission has prohibited pipelines from limiting their liability in circumstances wherein the pipeline and another party have both acted negligently. Port Arthur Pipeline is directed to revise its tariff accordingly.

¹⁰⁵ See, e.g., *Bison*, 131 FERC ¶ 61,013 at P 37; *El Paso Natural Gas Co.*, 130 FERC ¶ 61,096, at PP 4-5 (2010); *ANR Pipeline Co.*, 100 FERC ¶ 61,132, at 61,505 (2002).

¹⁰⁶ *Petal Gas Storage, L.L.C.*, 124 FERC ¶ 61,082, at P 28 (2008) (citing *Koch Gateway Pipeline Co.*, 65 FERC ¶ 61,338, at 62,619 (1993)).

m. Fuel Adjustment Mechanism

89. Section 13.22.4 of the GT&C provides in part:

On or prior to April 1 of each Year, Pipeline will make a filing with the Commission to adjust the Fuel Retainage Percentage to reflect the annual calculations of the Base Fuel Retainage Percentage and the Fuel Retainage Percentage True-Up Adjustment, with such adjustment to the Fuel Retainage Percentage to become effective as of May 1 of the same Year.

90. We approve section 13.22.4 of the GT&C subject to Port Arthur Pipeline revising the section to clarify that the filing described therein refers to a limited section 4 filing under the NGA. This revision is necessary because section 13.35 of the GT&C (Reports with Respect to Tariff) describes the annual fuel adjustment filing in section 13.22 of the GT&C as a report. The language quoted above in section 13.22.4 of the GT&C could therefore be interpreted under section 13.35 of the GT&C as permitting Port Arthur Pipeline to change its fuel retention charge only through simply posting and filing such changes, rather than making a limited NGA section 4 filing that proposes and supports such changes with the opportunity for shippers to review and challenge the basis for the changes. Fuel retention charges are rates under the NGA. Posting of changed rates cannot be in lieu of any other rate change filing required by NGA section 4.¹⁰⁷ In addition, Port Arthur Pipeline is directed to delete from section 13.35 of the GT&C the reference to a “Fuel Retainage Percentage report in accordance with GT&C’s Section 13.22.”

n. Penalty Crediting

91. Section 13.25 of the GT&C provides that Port Arthur Pipeline will credit on an annual basis to non-offending customers penalty revenues net of costs assessed for “unauthorized overruns or under-deliveries, failures to abide by an OFO or curtailment order, takes in excess of scheduled quantities and other misconduct...” Section 13.25 further states that “[i]f such penalty revenue net of costs for a Year, plus any amounts carried over from prior Years, is less than \$400,000, then Port Arthur Pipeline may carry such balance of revenue forward to the next Year.”

92. Section 13.25 of the GT&C does not provide for payment of interest on net penalty revenues held by Port Arthur Pipeline. The Commission finds that Port Arthur Pipeline’s proposal not to credit interest on accumulated penalty revenue is inconsistent with the Commission’s goal in Order No. 637 to eliminate the pipelines’ financial

¹⁰⁷ See *ANR Pipeline Co.*, 139 FERC ¶ 61,238, at P 157 (2012) (rejecting a proposed posting-only fuel rate proposal).

(continued ...)

incentive to retain penalty revenues.¹⁰⁸ Consistent with Commission policy,¹⁰⁹ Port Arthur Pipeline must revise its tariff to provide that it will credit the penalty revenues including the interest that it has accrued to shippers in a manner consistent with Commission regulations.¹¹⁰

o. Interruptible Transportation Revenue Sharing

93. Section 13.26 of the GT&C (Interruptible Transportation and Storage, Load Management and Authorized Overrun Service Revenue Sharing) provides that the pipeline will credit revenues under Rate Schedules IT, P&L, and AOS (among others):

to each of Pipeline's firm transportation and storage service Shippers (including a firm Shipper that pays a Negotiated Rate to the extent negotiated by Pipeline and Shipper on a not unduly discriminatory basis) based on the Shipper's pro rata share of total MDTQs and MDWQs in all of the Pipeline's firm transportation and storage Service Agreements.

94. The Commission's long-standing policy regarding new interruptible services requires either a 100 percent credit of the interruptible revenues, net of variable costs, to maximum rate firm and interruptible customers or an allocation of costs and volumes to these services.¹¹¹ Port Arthur Pipeline has chosen the crediting option. However, Port Arthur Pipeline does not propose to provide credits to maximum rate interruptible customers, and although proposing to credit interruptible revenues on a yearly basis, does

¹⁰⁸ *Regulation of Short-Term Natural Gas Transportation Services and Regulation of Interstate Natural Gas Transportation Services*, Order No. 637, FERC Stats. & Regs. ¶ 31,091 (cross-referenced at 90 FERC ¶ 61,109), *clarified*, Order No. 637-A, FERC Stats. & Regs. ¶ 31,099 (cross-referenced at 91 FERC ¶ 61,169), *reh'g denied*, Order No. 637-B, 92 FERC ¶ 61,062 (2000), *aff'd in part and remanded in part sub nom. Interstate Natural Gas Ass'n of America v. FERC*, 285 F.3d 18 (D.C. Cir. 2002), *order on remand*, 101 FERC ¶ 61,127 (2002), *order on reh'g*, 106 FERC ¶ 61,088 (2004), *aff'd sub nom. American Gas Ass'n v. FERC*, 428 F.3d 255 (D.C. Cir. 2005).

¹⁰⁹ *See, e.g. Elba Express Co., L.L.C.*, 119 FERC ¶ 61,015, at P 42 (2007); *Algonquin Gas Trans. Co.*, 98 FERC ¶ 61,211, at 61,788-89 (2002); *Natural Gas Pipeline Co. of America*, 101 FERC ¶ 61,200, at P 97 (2002).

¹¹⁰ 18 C.F.R. § 154.501(d) (2018).

¹¹¹ *See, e.g., National Grid LNG LLC*, 165 FERC ¶ 61,031, at P 29 (2018); *Creole Trail LNG, L.P.*, 115 FERC ¶ 61,331, at P 27 (2006); *Entrega Gas Pipeline Inc.*, 112 FERC ¶ 61,177, at P 51 (2005).

(continued ...)

not propose to pay interest on these funds that it may retain for up to twelve (12) months. The Commission requires Port Arthur Pipeline to pay interest on the accumulated balances consistent with Commission regulations,¹¹² and to include maximum rate interruptible customers in its revenue crediting proposal.

95. Moreover, with regard to permitting negotiated rate shippers to receive such credits, the Commission has held that a pipeline may agree to provide shippers paying negotiated rates with credits after eligible recourse rate shippers have been credited with 100 percent of interruptible revenues net of variable costs.¹¹³ Negotiated rate shippers may receive such credits as a component of an individually negotiated rate rather than by virtue of the Commission's policy on interruptible revenue crediting. Accordingly, as provisions of a negotiated rate, such credits are required to be reported in a negotiated rate tariff filing. Therefore, we direct Port Arthur Pipeline to remove from section 13.26 of the GT&C provisions referring to the eligibility of negotiated rate shippers to receive interruptible revenue credits.

p. NAESB Standards

96. Port Arthur Pipeline reflects tariff provisions in section 13.38 of the GT&C (NAESB) implementing the NAESB WGQ Version 3.0 business practice standards that the Commission incorporates by reference in its regulations.¹¹⁴ In the time since Port Arthur Pipeline filed its proposed tariff in this proceeding, the Commission adopted the new NAESB WGQ Version 3.1 business practice standards.¹¹⁵ Thus, we direct Port Arthur Pipeline to file revised tariff records, no less than 60 days prior to its in-service date, implementing the NAESB WGQ Version 3.1 business practice standards. Further, Port Arthur Pipeline is directed to revise its tariff accordingly to:

1. include standard 0.2.5 in a section titled "Definitions:" under the heading "Additional Standards: – General:" in section 13.8 of the GT&C;

¹¹² 18 C.F.R. § 154.501(d) (2018).

¹¹³ *Wyoming Interstate Co., Ltd.*, 121 FERC ¶ 61,135, at P 9 (2007).

¹¹⁴ 18 C.F.R. § 284.12(a) (2018).

¹¹⁵ *Standards for Business Practices of Interstate Natural Gas Pipelines*, Order No. 587-Y, 83 Fed. Reg. 62,242 (Dec. 3, 2018), 165 FERC ¶ 61,109 (2018). Under Order No. 587-Y, interstate natural gas pipelines are required to file compliance filings with the Commission by April 1, 2019, and are required to comply with the Version 3.1 standards incorporated by reference in this rule on and after August 1, 2019.

2. remove standard 0.2.5 from section titled “Gas/Electric Operational Communications:” in section 13.8 of the GT&C; and
3. remove standard 5.3.73 from section titled “Standards Incorporated by Reference:” in section 13.8 of the GT&C, as the text of the standard is already included in section 13.11.9 of the GT&C (Capacity Release - Requests to Purchase Capacity).

q. Off-system Capacity

97. Section 13.43 of the GT&C (Off-System Capacity) provides:

Pipeline may enter into a transportation agreement(s) with other interstate and intrastate pipeline companies to acquire transportation or storage capacity or rights (“off-system capacity”). In the event that Pipeline acquires off-system capacity, Pipeline will use such capacity for operational reasons or to render service for its Shippers within a Zone. In the event that Pipeline uses off-system capacity to render service for its Shippers, it will only render service to the Shippers within the Zone on the acquired capacity pursuant to this Tariff and subject to Pipeline’s approved rates, as such tariff and approved rates may change from time to time. For purposes of transactions entered into subject to this GT&C Section 13.43, the “Shipper-Must-Have-Title” requirement is waived. When off-system capacity is not required for operational reasons or to meet firm service commitments, Pipeline will offer the off-system capacity to Shippers on a primary firm basis within the Zone. This GT&C Section 13.43 does not preclude Pipeline from seeking case specific authorization for the utilization of off-system capacity by Pipeline for other purposes, nor does it preclude Pipeline from releasing any capacity it holds on off-system pipeline companies.

98. We find this language to be consistent with the Commission’s *Texas Eastern* policy concerning the acquisition of upstream capacity by interstate pipelines.¹¹⁶ Therefore, we will grant a generic waiver of the “shipper must hold title” policy for any such transportation that the pipeline subsequently provides.

¹¹⁶ *Texas Eastern Transmission Corp.*, 93 FERC ¶ 61,273 (2000), *reh’g denied*, 94 FERC ¶ 61,139 (2001).

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V. Environmental Analysis

99. To satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA),¹¹⁷ Commission staff evaluated the potential environmental impacts of the proposed projects in an EIS. The U.S. Army Corps of Engineers (USACE), Galveston District, U.S. Coast Guard, U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), and DOE participated as cooperating agencies in the preparation of the EIS. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposals and participate in the NEPA analysis.

100. Commission staff issued the draft EIS on September 28, 2018, which addressed the issues raised during the scoping period and up to the point of publication. Notice of the draft EIS was published in the *Federal Register* on October 5, 2018,¹¹⁸ establishing a 45-day public comment period ending on November 19, 2018. The *Notice of Availability of the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project* was mailed to the environmental mailing list for the projects. Commission staff held three public comment sessions between October 16 and 18, 2018, to receive comments on the draft EIS.¹¹⁹ A total of 17 people commented at the sessions. In addition, 17 parties submitted a total of 22 letters in response to the draft EIS. In addition, on November 30, 2018, Port Arthur LNG and Port Arthur Pipeline filed responses to several comments on the draft EIS. The transcripts of the public comment sessions and all written comments on the draft EIS are part of the public record for the projects.

101. On January 31, 2019, Commission staff issued the final EIS for the projects, and a public notice of the availability of the final EIS was published in the *Federal Register* on February 6, 2019,¹²⁰ and mailed to the environmental mailing list for the projects.¹²¹ The final EIS addresses geology; soils; water resources; wetlands; vegetation; wildlife and aquatic resources; threatened, endangered, and other special status species; land use,

¹¹⁷ 42 U.S.C. §§ 4321 *et seq.* (2012). *See also* the Commission's NEPA-implementing regulations at Title 18 of the C.F.R., Part 380.

¹¹⁸ 83 Fed. Reg. 50,362.

¹¹⁹ Commission staff held the public comment sessions in Kinder and Sulfur, Louisiana, and Port Arthur, Texas.

¹²⁰ 84 Fed. Reg. 2221.

¹²¹ The distribution list is provided in Appendix A of the final EIS.

recreation, and visual resources; socioeconomics; cultural resources; air quality and noise; safety; cumulative impacts; alternatives; and all substantive comments received on the draft EIS. The final EIS concludes that construction and operation of the projects will result in some adverse environmental impacts, but impacts will be reduced to less-than-significant levels with the implementation of Port Arthur Pipeline and Port Arthur LNG's proposed, and Commission staff's recommended, mitigation measures which are included as conditions in the appendix to this order, as discussed below. No adverse comments concerning the final EIS have been filed. Resource areas addressed in the final EIS are addressed below.

1. Geology

102. The overall effect of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project on topography and geology would be minor. Geologic impacts would be limited to construction activities and would include disturbance of slopes within the work areas.¹²² However, some hazards such as severe flooding, storm surges, high winds, erosion along the shoreline and docking facilities, and potential site access interruptions could affect the Liquefaction Project during operation.¹²³ Port Arthur LNG has incorporated structural and mechanical elements into the design of the liquefaction facilities.¹²⁴ Further, Port Arthur LNG would construct a storm surge barrier of improved soil and structural clay to a top elevation of 20 feet.¹²⁵ Port Arthur LNG would also monitor foundations and other critical facilities to ensure they are maintained within acceptable limits.¹²⁶ Along the pipelines, Port Arthur Pipeline would implement buoyancy control measures such as concrete-coated piping, anchors, or aggregate-filled saddle bags to weigh the pipe in wet areas, and would periodically monitor the pipeline right-of-way during operation to aid in identification of subsidence-related conditions that may require maintenance.¹²⁷ Port Arthur LNG and Port Arthur Pipeline do not anticipate that any blasting will be required during construction of the projects.¹²⁸ Based on Port

¹²² Final EIS at 5-1.

¹²³ Final EIS at 5-1.

¹²⁴ Final EIS at 5-1.

¹²⁵ Final EIS at 5-3.

¹²⁶ Final EIS at 4-6.

¹²⁷ Final EIS at 5-2.

¹²⁸ Final EIS at 5-2.

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Arthur LNG's and Port Arthur Pipeline's proposed mitigation and design criteria, and Commission staff's recommended mitigation measures, included in the appendix to this order, the final EIS concludes that the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project will not significantly impact or be impacted by geological conditions in the area.

2. Soils

103. Construction of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project could affect soil resources by increasing the potential for erosion, compaction, mixing of topsoil, and rutting.¹²⁹ The Liquefaction Project site and dredge disposal areas contain clay and peat soils prone to compaction.¹³⁰ In order to increase the load bearing capacity of soils along the heavy haul road, an engineered grout would be added to the subsoil that would permanently alter the physical characteristics of 7.5 acres of soils at the liquefaction facilities.¹³¹ Operation of the compressor stations and other aboveground facilities along the pipelines for the Louisiana Connector and Texas Connector projects would permanently affect 105.7 acres of prime farmland but would not result in a significant reduction of usable prime farmland soils in the area.¹³² In addition to the earthen berm, about 4.4 million cubic yards of fill would be used on the remainder of the liquefaction facilities site. Port Arthur LNG would further armor the Port Arthur Canal adjacent to the site by means of riprap or other erosion prevention measures, and would develop a Shoreline Protection Report to address potential shoreline erosion that may occur during operations in the shoreline zone.¹³³

104. In response to the EPA's June 30, 2016 comments on Port Arthur LNG's draft resource reports 1 and 10,, Port Arthur LNG committed to resampling sediments at the landward component of the marine offloading facility prior to dredging and disposal. Environmental Condition 17 in the appendix to this order requires Port Arthur LNG to provide the EPA, USACE, Texas Commission on Environmental Quality, and Texas Railroad Commission with this final soil and sediment analysis from the area within the ship canal at the marine berth, construction dock, material offloading facility, and landward component of the material offloading facility for review. This condition also

¹²⁹ Final EIS at 5-2.

¹³⁰ Final EIS at 5-2.

¹³¹ Final EIS at 5-3.

¹³² Final EIS at 5-2.

¹³³ Final EIS at 5-3.

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requires Port Arthur LNG to file its consultation with these agencies with the Commission.

3. Water

105. Potential impacts on groundwater resources are anticipated to be minor and temporary. Most construction activities associated with the liquefaction and pipeline facilities would involve shallow, temporary, and localized excavation, with the exception of concrete and steel piles for LNG vessel loading facilities and LNG tanks. Piles required for the LNG storage tanks and LNG ship loading and berthing areas would be driven to a depth no lower than 160 feet and are not expected to have direct impacts on the underlying aquifer.¹³⁴ During construction of the Louisiana Connector and Texas Connector projects, shallow groundwater could be encountered within the first 3 feet below grade within Jefferson and Orange Counties, Texas and in Cameron, Calcasieu, and Beauregard Parishes, Louisiana, and should Port Arthur Pipeline need to pump water from a pipeline trench, it would be pumped through filter bags prior to discharge.¹³⁵ No drinking water wells or identified springs are within 150 feet of the Liquefaction Project. There are no known groundwater withdrawal wells, drinking water wells, designated well head protection areas, or springs within 150 feet of the Texas Connector Project in Texas and Louisiana. There are 16 known groundwater withdrawal or drinking water wells within 150 feet of the Louisiana Connector Project in Louisiana, and none in Texas.¹³⁶

106. Construction of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project would impact bodies of water, including lakes, canals, rivers and streams. To minimize and mitigate impacts on surface waters and aquatic resources Port Arthur LNG proposed to utilize dry excavation methods, install a 30-inch-diameter pipeline to safely transport dredge material to the dredge disposal area, and install a shoreline protection system to prevent post-construction erosion.¹³⁷ Port Arthur Pipeline would implement its Environmental Plan (including the Commission's *Upland Erosion Control, Revegetation & Maintenance Plan* [Plan] and *Wetland and Waterbody Construction and Mitigation Procedures* [Procedures]) to minimize erosion and sedimentation resulting from the construction of the Louisiana Connector and Texas Connector projects. Port Arthur Pipeline proposes to utilize the horizontal directional drill (HDD) crossing method at 46 waterbody crossings for the Louisiana Connector

¹³⁴ Final EIS at 5-4.

¹³⁵ Final EIS at 5-4.

¹³⁶ Final EIS at 5-3 – 5-4.

¹³⁷ Final EIS at 5-4 – 5-5.

(continued ...)

Project, and at 24 crossings for the Texas Connector Project, in order to avoid impacts on surface water resources.¹³⁸ In compliance with the Commission's Procedures, and prior to construction, Port Arthur Pipeline would provide Commission staff with finalized detailed plans for each HDD crossing and prepare final contingency plans in the event an HDD crossing is unsuccessful.¹³⁹ Therefore, the final EIS concludes that impacts on water resources will be adequately minimized and are not significant.

4. Wetlands

107. Construction of the Liquefaction Project would affect a total of 1,661.9 acres of wetlands, of which 724.0 acres would be permanently filled. Port Arthur LNG would offset impacts on USACE jurisdictional wetlands through mitigation measures included in its project Compensatory Mitigation Plan. The mitigation measures include the beneficial reuse of over 7.8 million cubic yards of dredge material excavated from the ship berthing area and Pioneer Dock. The beneficial reuse of this material would create about 1,268.8 acres of coastal marsh wetland. Port Arthur LNG's wetland mitigation would include adhering to the measures in the Commission's Procedures, as well as Port Arthur LNG's Compensatory Mitigation Plan.

108. Construction and operation of the Texas Connector Project and Louisiana Connector Project would affect about 238.1 acres and 636.9 acres of wetlands, respectively, of which 66.8 acres and 244.1 acres, respectively, would be permanently disturbed during operation of the projects. Port Arthur Pipeline would implement the mitigation measures outlined in its project-specific Environmental Plan (including the Commission's Procedures), and will be required to comply with any mitigation measures identified in the USACE permit conditions for the pipeline projects.

109. With the implementation of Port Arthur LNG's and Port Arthur Pipeline's Project-specific plans, Port Arthur LNG's proposed beneficial use of dredge material to restore emergent wetlands, the proposed mitigation measures discussed in the final EIS, the final EIS concludes that impacts on wetland resources will be adequately minimized and are not significant.

5. Vegetation

110. Construction and operation of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project would affect a total of 1,206.5 acres and 5,767.0 acres of forested and open land vegetation types, respectively. About 845.3 acres

¹³⁸ Final EIS at 5-6.

¹³⁹ Final EIS at 5-6.

(continued ...)

of vegetation would be cleared during construction of the Liquefaction Project, and 808.0 acres would be permanently converted to industrial use associated with operation of the Liquefaction Project. Additionally, 151.0 acres of open water would be created for operation of the Liquefaction Project.¹⁴⁰ Port Arthur LNG would deposit some of its dredged material at the J.D. Murphree wildlife management area (WMA) where it would be used to create coastal marshland, and revegetate other impacted areas of the WMA.¹⁴¹ As a result of Port Arthur LNG's proposed mitigation measures, including development of its wetland Compensatory Mitigation Plan and the beneficial reuse of dredge materials at J.D. Murphree WMA, the final EIS concludes that impacts on vegetation from construction and operation of the Liquefaction Project will be permanent but minor.

111. Construction of the Louisiana Connector and Texas Connector projects would disturb a total of 482.8 acres and 2,044.1 acres of vegetated land, respectively, including open and forested upland and wetland areas. Impacts on vegetation associated with installation of the pipelines would primarily be caused by vegetation clearing within the construction right-of-way and associated additional temporary work space. About 184.4 acres of upland forest would be permanently affected along the pipeline routes. Except for the 410.0 acres within the permanent right-of-way that would be crossed by HDD, vegetation would be cleared from the entire working right-of-way.¹⁴²

112. No vegetation communities of special concern would be impacted by the Liquefaction Project or the Texas Connector Project; however, portions of the Louisiana Connector Project's route crosses a Coastal Prairie community, and a stand of western acidic longleaf pine savannah/flatwoods.¹⁴³ Port Arthur Pipeline's Environmental Plan would facilitate the restoration of the Coastal Prairie community upon completion of construction.¹⁴⁴ In addition, impacts on the western acidic longleaf pine savannah/flatwoods would be minor, as the stand is already disturbed by existing silviculture management, and Port Arthur Pipeline proposes to use an existing logging road to access the area, further reducing impacts.¹⁴⁵ Port Arthur Pipeline would also use its Environmental Plan to minimize the spread of invasive aquatic species, and implement

¹⁴⁰ Final EIS at 5-8.

¹⁴¹ Final EIS at 5-9.

¹⁴² Final EIS at 5-9.

¹⁴³ Final EIS at 5-9.

¹⁴⁴ Final EIS at 4-77.

¹⁴⁵ Final EIS at 4-78.

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measures in the Commission's Plan and Procedures to evaluate the success of revegetation efforts.¹⁴⁶ Therefore, based on the minor nature of the impacts on vegetation, and Port Arthur LNG and Port Arthur Pipeline's proposed efforts to further mitigate these impacts, the final EIS concludes that the projects will not have a significant impact on vegetation.

6. Wildlife

113. In total, approximately 7,828.1 acres of wildlife habitat would be affected by construction of the Liquefaction Project, and the Louisiana Connector and Texas Connector projects. While 6,003.1 acres would be affected during operations of the projects, the majority of these impacts would occur at the dredge disposal areas. Overall, the greatest impacts would be on open wetland habitat, followed by open upland and forested upland habitats, which are discussed above. Due to existing industrial activity in the area, wildlife in the vicinity of the Liquefaction Project is anticipated to be acclimated to the impacts of construction and operations, particularly impacts associated with noise and artificial light.¹⁴⁷ However, Port Arthur LNG proposes several additional measures including directing lighting downward during construction, use of nesting inhibitors to discourage nesting of migratory birds near the Liquefaction Project, and utilizing ground flares instead of elevated flares during operation, to further minimize impacts on migratory birds.¹⁴⁸

114. Construction of the Louisiana Connector and Texas Connector projects would affect 2,526.5 acres of vegetated wildlife habitat, with the greatest impact on open upland habitat, and operation would permanently convert 816.3 acres of wildlife habitat.¹⁴⁹ Most impacts on wildlife would be limited to the duration of construction for the Louisiana Connector and Texas Connector projects, and abundant habitat is available for wildlife in the vicinity. Port Arthur Pipeline proposes to conduct surveys for bald eagle nests prior to construction, and to modify the construction schedule in the event a nest is located. Port Arthur Pipeline would implement its project-specific Environmental Plan to further

¹⁴⁶ Final EIS at 5-10.

¹⁴⁷ Final EIS at 4-86.

¹⁴⁸ Final EIS at 5-10 – 5-11.

¹⁴⁹ Final EIS at 5-10.

(continued ...)

minimize impacts.¹⁵⁰ Therefore, the final EIS determined that impacts on wildlife from construction and operation of the projects will not be significant.

7. Aquatic Resources

115. Impacts on aquatic resources from construction and operation of the Liquefaction Project include increased turbidity and sediment suspension, increased in-water noise, increased vessel traffic, and alteration of light regimes.¹⁵¹ Port Arthur LNG proposes to minimize turbidity and sediment suspension by commencing construction from the landward side, working its way into the Port Arthur Canal, and would use hydraulic dredging techniques to retain much of the entrained sediment.¹⁵² Port Arthur LNG would also implement construction techniques that minimize noise effects on aquatic species, including pre-drilling pile holes, the use of a vibratory hammer, bubble curtains/cofferdams, and gradually increasing the power and frequency of pile driving over a period of time, which would allow sensitive aquatic species to depart the area before harmful underwater sound pressures are created by the vibratory hammers. Impacts from increased ship traffic due to the Liquefaction Project would be mitigated by installation of rip-rap to reduce shoreline erosion, as well as implementation of existing U.S. Coast Guard ballast water requirements, among other mandatory federal requirements.¹⁵³

116. Potential impacts on aquatic resources related to construction and operation of the Louisiana Connector and Texas Connector projects would be associated with increased erosion and sedimentation due to open-cut waterbody crossings, inadvertent release of drilling mud during HDD crossings, physical or chemical water alterations from hydrostatic testing, entrainment from water appropriation for hydrostatic testing, and any inadvertent spills of hazardous materials. Port Arthur Pipeline would implement the measures outlined in its Environmental Plan to minimize impacts on waterbodies and aquatic resources during pipeline construction, including reducing workspace areas near waterbodies, establishing buffers to prevent stormwater run-off from entering waterbodies, and installing erosion control devices, as well as minimizing response time and ensure appropriate cleanup actions are taken in the event of a spill.¹⁵⁴ Port Arthur Pipeline would also implement its HDD Contingency Plan to minimize impacts in the

¹⁵⁰ Final EIS at 5-11.

¹⁵¹ Final EIS at 5-12.

¹⁵² Final EIS at 5-11.

¹⁵³ Final EIS at 5-12.

¹⁵⁴ Final EIS at 5-12 – 5-13

(continued ...)

case of an inadvertent return of drilling mud. Once construction is complete, streambeds and banks would be restored to their preconstruction conditions and contours to the maximum extent practicable, which would aid in preventing erosion and minimize long-term impacts on aquatic resources.¹⁵⁵

117. Construction and operation of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project would also result in temporary and permanent impacts on essential fish habitat (EFH). Construction and operation of the Liquefaction Project would affect 3.2 acres of estuarine water column and estuarine mud/soft bottom EFH, which would result in temporary and permanent impacts. However, the Liquefaction Project would create 68.3 acres of additional open water habitat for aquatic species and EFH-managed species by dredging the berthing area and material offloading facility, resulting in a net increase of estuarine mud/soft bottom and estuarine water column EFH.¹⁵⁶

118. Construction of the Texas Connector Project would temporarily impact 1.2 acres, 8.4 acres, and 0.8 acre of estuarine emergent marsh EFH, respectively.¹⁵⁷ Construction of the Louisiana Connector Project would temporarily affect 1,534.7 acres of EFH, including 131.7 acres of estuarine emergent marsh EFH and 1,403.0 acres of estuarine water column and mud/soft bottom EFH. Permanent access roads required for the operation would permanently affect 1.7 acres of EFH, 1.2 acres of estuarine emergent marsh, and 0.5 acre of estuarine water column and estuarine mud/soft bottom.¹⁵⁸ Port Arthur LNG and Port Arthur Pipeline coordinated with the National Marine Fisheries Service (NMFS) on potential impacts on EFH. In an email to Commission staff on October 5, 2018, NMFS ultimately determined that “with the use of avoidance and minimization construction techniques as well as the wetlands restoration activities, the project would result in temporary and minimal impacts to EFH. Therefore, the EFH consultation required by the Magnuson-Stevens Fishery Conservation and Management Act is concluded and no further coordination with the NMFS is required.”¹⁵⁹

119. Due to the proposed HDD crossings at over 50 locations to avoid impacts on waterbodies, Port Arthur Pipeline’s proposal to limit construction workspace and

¹⁵⁵ Final EIS at 5-14.

¹⁵⁶ Final EIS at 5-14.

¹⁵⁷ Final EIS at 5-14.

¹⁵⁸ Final EIS at 5-14 – 5-15.

¹⁵⁹ Final EIS at 5-15.

(continued ...)

duration at the waterbody crossings, and implementation of the proposed mitigation measures, the final EIS concludes that the projects would have minor and localized impacts on aquatic resources, including EFH.

8. Threatened, Endangered, and Other Special Status Species

120. According to the U.S. Fish and Wildlife Service (FWS) and NMFS, 26 federally listed or proposed species may occur in the counties and parishes impacted by the projects.¹⁶⁰ Commission staff determined that the projects would have no effect or not be likely to adversely effect 25 of the 26 listed or proposed species.¹⁶¹ The remaining species, the eastern black rail (type of bird), was proposed for listing by the FWS in the *Federal Register* on October 9, 2018.¹⁶² As required by section 7 of the Endangered Species Act of 1978, Commission staff requested that FWS and NMFS accept the information in the draft EIS as the Biological Assessment for the projects. On August 29, 2018, NMFS provided concurrence for the species under its jurisdiction.¹⁶³ The final EIS reports that consultation with FWS is ongoing for the American chaffseed, and may be required for the eastern black rail. Environmental Condition 19 in the appendix to this order requires completion of Endangered Species Act consultation before construction may begin.

9. Land Use, Recreation, and Visual Resources

121. Construction of the projects would temporarily affect a total of 10,612.0 acres of land. Of this, approximately 2,660 acres would be allowed to revert to the existing land use type after the completion of construction, and approximately 7,953 acres would be permanently affected by the projects' operation. The projects' construction would temporarily affect a total of approximately 521 acres of agricultural land, and approximately 176 acres would be included in permanent right-of-way.¹⁶⁴ The EIS states that agricultural land located within the pipeline permanent rights-of-way would be

¹⁶⁰ Final EIS at 5-15.

¹⁶¹ Final EIS at 5-15.

¹⁶² *Federal Register*, 83 Fed. Reg. 50,610 (2018).

¹⁶³ Final EIS at 4-131.

¹⁶⁴ Final EIS at 5-17.

(continued ...)

restored to previous use approximately one growing season after the completion of construction.¹⁶⁵

122. The Louisiana Connector and Texas Connector Project's construction workspaces would be located within 50 feet of 24 and 11 residential structures, respectively; the Liquefaction Project's construction workspace is not within 50 feet of any residential structures.¹⁶⁶ The draft EIS and final EIS included site-specific plans for residential structures within 25 feet of the construction workspaces. No comments were received from landowners regarding these site-specific plans.

123. Construction of the projects would occur near several recreation areas, including the J.D. Murphree WMA, Round Lake, Keith Lake, and private hunting grounds.¹⁶⁷ Generally speaking, however, impacts on recreation areas would be temporary and limited to the duration of construction – which would extend from several days to several weeks depending on the area of construction.¹⁶⁸

124. The Liquefaction Project includes many aboveground structures that could result in a visual resource impact, including three LNG storage tanks that would be approximately 256 feet tall, liquefaction trains, and additional infrastructure, most of which would require lighting. The Liquefaction Project would be sited along the Port Arthur Canal, which would create a strong vertical visual contrast across a relatively flat existing landscape.¹⁶⁹ The ship berths, offloading facilities, and utility buildings would also alter the existing viewshed. The storage tanks and liquefaction facilities would not be screened and would result in permanent visual impacts on views from the eastern edge of the nearby J.D. Murphree WMA. Impacts on views for those traveling on State Highway 87 and State Highway 82, visiting Pleasure Island or the Port Arthur Canal, boaters in the waterway, and viewers from a variety of recreational locations would be relatively minor due to existing industrial facilities surrounding and northeast of the project area.¹⁷⁰ Port Arthur LNG would restrict any permanent lighting needed for the Liquefaction Project terminal facilities to the property boundaries and direct the

¹⁶⁵ Final EIS at 5-17.

¹⁶⁶ Final EIS at 5-16.

¹⁶⁷ Final EIS at 5-17.

¹⁶⁸ Final EIS at 5-17.

¹⁶⁹ Final EIS at ES-7.

¹⁷⁰ Final EIS at ES-7.

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permanent lighting downward towards these sites.¹⁷¹ The EIS concluded that because of the existing commercial, industrial, and developed nature of the area, including the existing Golden Pass liquefaction terminal within 3 miles of the proposed Liquefaction Project, impacts from facility siting and its lighting will be consistent with the area. The final EIS therefore concludes that land use, recreation, and visual resource impacts associated with the projects would be minor.

10. Socioeconomics

125. As stated in the EIS, construction of the projects would result in minor positive socioeconomic impacts from employment, and not have a significant adverse impact on local populations, employment, provision of community services, or property values.¹⁷² Additionally, there would not be any disproportionately high or adverse environmental and human health impacts on low-income and minority populations.¹⁷³ Construction of the projects would result in minor, temporary impacts on local transportation infrastructure and traffic. Environmental Condition 23 in the appendix to this order requires Port Arthur LNG to file a Transportation Plan to outline how it would manage access to and from the Liquefaction Project construction site by personnel, equipment, and deliveries on a daily basis.

11. Cultural Resources

126. Commission staff is currently in the process of complying with section 106 of the National Historic Preservation Act for all projects.¹⁷⁴ Therefore, Environmental Condition 25 requires section 106 consultation be completed for all Project elements before Port Arthur LNG and Port Arthur Pipeline may commence construction. In addition, Commission staff, as well as staff from Port Arthur Pipeline have met with the Coushatta Tribe of Louisiana to address their concerns over the Louisiana Connector Project's potential impacts on cultural resources.¹⁷⁵ On November 15, 2018, the Coushatta Tribe filed a letter concurring with a determination that no historic properties would be affected by the Louisiana Connector Project; and Commission staff, Port Arthur

¹⁷¹ Final EIS at ES-7.

¹⁷² Final EIS at 5-19 – 5-21.

¹⁷³ Final EIS at 5-21.

¹⁷⁴ Final EIS at 5-23.

¹⁷⁵ Final EIS at 5-23 – 5-24.

(continued ...)

Pipeline, and the Coushatta Tribe continue to work together to address the Tribe's cultural resource concerns.

12. Air Quality and Noise

127. Construction emissions for the Liquefaction Project are estimated for approximately 60 months. Construction emissions would not be a permanent source, and, therefore, not have a long-term effect on air quality in the area.¹⁷⁶ Most construction-related emissions from the Louisiana Connector and Texas Connector projects would be temporary and localized and would dissipate with time and distance from areas of active construction. Further, construction emissions along the pipelines would subside once construction is complete.¹⁷⁷

128. Long-term impacts on air quality would result from operation of the Liquefaction Project facilities and the pipeline compressor stations. Port Arthur LNG and Port Arthur Pipeline would minimize potential impacts on air quality caused by operation of the liquefaction facilities and compressor stations by adhering to applicable federal and state regulations and installing best available control technology to minimize emissions.¹⁷⁸ Therefore, with the mitigation measures that Port Arthur LNG and Port Arthur Pipeline have proposed, the final EIS concludes that there would be no regionally significant impacts on air quality.¹⁷⁹

129. Noise would be generated during construction of the projects. Noise levels would be highest in the immediate vicinity of construction activities and would diminish with distance from the work area.¹⁸⁰ These impacts would be localized and temporary. Construction would generally not affect nighttime noise levels as it would be limited to 7 a.m. to 10 p.m., except for pile driving, HDD activities, and specific construction activities such as tie-ins and hydrostatic testing.¹⁸¹ For construction of the Liquefaction Project, the City of Port Arthur's noise standard for the noise sensitive areas (NSA) in residential areas would limit project-generated noise to no greater than 57 A-weighted decibels

¹⁷⁶ Final EIS at 5-22 – 5-23.

¹⁷⁷ Final EIS at 4-239.

¹⁷⁸ Final EIS at ES-7.

¹⁷⁹ Final EIS at ES-7.

¹⁸⁰ Final EIS at 4-248.

¹⁸¹ Final EIS at 4-248.

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(dBA) during the day (7 a.m. to 10 p.m.) and 52 dBA at night (10 p.m. to 7 a.m.); however, construction-related noise is exempt from this standard provided that such activities do not take place during nighttime hours.¹⁸²

130. During construction of the Louisiana Connector and Texas Connector projects, use of the HDD method would result in minor impacts on NSAs in the vicinity of the drilling equipment. Therefore, Environmental Condition 26 in the appendix to this order requires Port Arthur Pipeline, prior to the use of HDDs at locations where HDD-related noise could exceed Commission sound level criteria at NSAs, to file HDD noise mitigation plans.

131. Operation of the Liquefaction Project and the Texas Connector Project's South Compressor Station (located near the Liquefaction Project) would generate sound levels throughout the life of the projects, but the increase in noise levels would be below the "barely detectable" noise level increase of 3 dBA, and would be below the FERC limit standard of a day-night sound level (L_{dn}) of 55 dBA, resulting in only minor impacts on the nearest NSA.¹⁸³ Further, Environmental Condition 27 requires Port Arthur LNG to file a full-load noise survey no later than 60 days after each liquefaction train is put in service for the first and second liquefaction trains. Environmental Condition 27 also requires that if noise levels attributable to operation of the Liquefaction Project and South Compressor Station exceed the FERC limit of 55 dBA L_{dn} , Port Arthur LNG must reduce the facilities' noise contribution to result in a noise level that is no higher than the FERC standard. Environmental Condition 28 also requires Port Arthur LNG to file a full-load noise survey no later than 60 days after placing all the Liquefaction Project facilities and South Compressor Station in service.

132. Sound levels would increase during operation of the Texas Connector Project's North Compressor Station, the Louisiana Connector Project's compressor station, and the meter stations associated with the pipeline projects, which would occur for the life of the Louisiana Connector and Texas Connector projects. To reduce noise impacts, Port Arthur Pipeline would implement mitigation measures such as the use of acoustically treated compressor enclosures, silencers on the exhaust outlet and air intake, and acoustically treated wall and roof fan openings.¹⁸⁴ Based on Commission staff's noise analysis as reported in the final EIS, the predicted noise levels attributable to operation of the Texas Connector Project's North Compressor Station, the Louisiana Connector Project's compressor station, and the meter stations would be less than 55 dBA L_{dn} at all

¹⁸² Final EIS at 4-248 – 4-249.

¹⁸³ Final EIS at 4-249 at 5-24.

¹⁸⁴ Final EIS at 5-24.

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nearby NSAs.¹⁸⁵ To ensure that noise levels would be below 55 dBA L_{dn}, Environmental Condition 29 requires Port Arthur Pipeline to file noise surveys during full-load operations and, if the noise levels exceed the FERC standard, that Port Arthur Pipeline install additional noise controls to meet the FERC standard within 1 year of the in-service date. The final EIS concludes that any increase in noise levels during construction and operation of the Liquefaction Project, Louisiana Connector Project, and Texas Connector Project would be minor and not result in significant impacts.

13. Reliability and Safety

133. Commission staff conducted a preliminary engineering and technical review of the Liquefaction Project, including potential external impacts based on the site location. Based on this review, the final EIS recommends a number of mitigation measures for implementation prior to initial site preparation, prior to construction of final design, prior to commissioning, prior to introduction of hazardous fluids, prior to commencement of service, and throughout life of the facility, to enhance the reliability and safety of the facility. These recommendations have been adopted as mandatory conditions in the appendix to this order. On September 11, 2015, the U.S. Coast Guard issued a Letter of Recommendation to the Commission indicating the Sabine Neches River Ship Channel would be considered suitable for accommodating the type and frequency of LNG marine traffic associated with the Liquefaction Project. If the LNG Facility is authorized and constructed, the facility would be subject to the USCG's inspection and enforcement program to ensure compliance with the requirements of 33 CFR 105 and 33 CFR 127. Based on Commission staff's external impact analysis and preliminary evaluation of the engineering design, and with the incorporation of these recommended mitigation measures and oversight, the final EIS concludes that the Liquefaction Project's design would include acceptable layers of protection or safeguards that would reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public.

134. Further, as noted above,¹⁸⁶ PHMSA determined that the siting of the proposed LNG facilities complies with the federal safety standards governing the location, design, construction, operation, and maintenance of LNG facilities. The PHMSA LOD summarizes PHMSA's evaluation of the hazard modeling results and endpoints used to establish exclusion zones, as well as its review of Port Arthur LNG's evaluation of potential incidents and safety measures that could have a bearing on the safety of plant personnel and the surrounding public.

¹⁸⁵ *Id.* at 4-249.

¹⁸⁶ *See supra* at P 26.

(continued ...)

135. Port Arthur Pipeline must design, construct, operate, and maintain its proposed pipelines and aboveground facilities in accordance with the DOT Minimum Federal Safety Standards.¹⁸⁷ These regulations, which are intended to protect the public and to prevent natural gas facility accidents and failures, include specifications for material selection and qualification, minimum design requirements, and protection of pipelines from corrosion. Accordingly, the final EIS concludes that Port Arthur Pipeline's compliance with the DOT's safety standards will ensure that Port Arthur Pipeline's construction and operation of the facilities would not have a significant impact on public safety.¹⁸⁸

14. Greenhouse Gas Emissions

136. With respect to impacts from GHGs, the final EIS discusses the direct GHG impacts from construction and operation of the projects, the climate change impacts in the region,¹⁸⁹ and the regulatory structure for GHGs under the Clean Air Act.¹⁹⁰

137. The final EIS estimated that operation of the Liquefaction Project and the Louisiana Connector and Texas Connector project's compressor stations may result in emissions of up to 4,722,648 metric tons per year of carbon dioxide equivalent (CO₂e).¹⁹¹ To provide context to the direct GHG estimate, according to the national net CO₂e emissions estimate in the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks* (EPA 2018), 5.8 billion metric tons of CO₂e were emitted at the national level in 2016 (inclusive of CO₂e sources and sinks). The direct and indirect operational emissions of the LNG terminal could potentially increase CO₂e emissions based on the 2016 levels by

¹⁸⁷ 49 C.F.R. § 192 (2018).

¹⁸⁸ Final EIS at 4-312.

¹⁸⁹ Final EIS at 4-360 – 4-362.

¹⁹⁰ Final EIS at 4-228 and 4-231.

¹⁹¹ Final EIS at Tables 4.11.1-7. CO₂e emissions in the final EIS are expressed in short tons, which have been converted to metric tons in this Order so the emissions may be viewed in context with the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks*.

(continued ...)

approximately 0.08 percent at the national level.¹⁹² Currently, there are no national targets to use as benchmarks for comparison.¹⁹³

138. The Final EIS included a qualitative discussion that addressed various effects of climate change.¹⁹⁴ The Final EIS acknowledges that the quantified GHG emissions from the construction and operation of the project will contribute incrementally to climate change.¹⁹⁵ Further, the Commission has previously concluded it could not determine a project's incremental physical impacts on the environment caused by GHG emissions.¹⁹⁶ The Commission has also previously concluded it could not determine whether a project's contribution to climate change would be significant.¹⁹⁷

15. Cumulative Impacts

139. The final EIS considered the cumulative impacts of the projects with other projects or actions within the geographic and temporal scope of the projects.¹⁹⁸ The types of other projects evaluated in the final EIS that could potentially contribute to cumulative impacts on a range of environmental resources include existing LNG terminals and future liquefaction projects, oil and gas facilities, other industrial facilities, utility and transportation projects, commercial and residential developments, and government facilities/activities.¹⁹⁹ The final EIS concludes that the project's contribution to cumulative impacts on resources affected by the projects would not be significant, and

¹⁹² EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2016* (2018), https://www.epa.gov/sites/production/files/2018-1/documents/2018_complete_report.pdf.

¹⁹³ The national emissions reduction targets expressed in the EPA's Clean Power Plan and the Paris climate accord are pending repeal and withdrawal, respectively.

¹⁹⁴ Final EIS at 4-360 – 4-362.

¹⁹⁵ Final EIS at 4-361.

¹⁹⁶ *Dominion Transmission, Inc.*, 163 FERC ¶ 61,128, at PP 67-70 (2018) (LaFleur, Comm'r, *dissenting in part*; Glick, Comm'r, *dissenting in part*).

¹⁹⁷ *Id.*

¹⁹⁸ Final EIS at 4-324.

¹⁹⁹ Final EIS at 5-25.

(continued ...)

that the potential cumulative impacts of the projects and the other projects considered would be minor or insignificant.²⁰⁰

16. Alternatives

140. The EIS assessed the No-Action Alternative, 20 new LNG or LNG terminal expansion system alternatives, 3 site alternatives, and various facility configuration alternatives for the Liquefaction Project that could achieve the Liquefaction Project's objectives. In addition, three pipeline route alternatives were considered. Alternatives were evaluated and compared to the projects to determine whether the alternatives were technically and economically feasible and practical; and offer a significant environmental advantage over the proposed projects. The final EIS concludes that the alternatives proposed did not offer a significant environmental advantage and found that the proposed projects, as modified by Commission staff's recommended mitigation measures, which are attached as conditions to the appendix to this order, was the preferred alternative.²⁰¹

17. Environmental Analysis Conclusion

141. We have reviewed the information and analysis contained in the final EIS regarding potential environmental effects of the projects, as well as other information in the record. We are adopting the environmental recommendations in the final EIS and include them as conditions in the appendix to this order. Compliance with the environmental conditions appended to our orders is integral to ensuring that the environmental impacts of approved projects are consistent with those anticipated by our environmental analyses. Thus, Commission staff carefully reviews all information submitted. Commission staff will only issue a construction notice to proceed with an activity when satisfied that the applicant has complied with all applicable conditions. We also note that the Commission has the authority to take whatever steps are necessary to ensure the protection of environmental resources during construction and operation of the projects, including authority to impose any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the order, as well as the avoidance or mitigation of unforeseen adverse environmental impacts resulting from project construction and operation.

142. We agree with the conclusions presented in the final EIS and find that the projects, if constructed and operated as described in the final EIS, is an environmentally acceptable action. Further, for the reasons discussed throughout the order, as stated above, we find that the Liquefaction Project is not inconsistent with the public convenience and

²⁰⁰ Final EIS at ES-9.

²⁰¹ Final EIS at ES-9 – ES-10.

necessity, and that the Louisiana Connector and Texas Connector projects are in the public convenience and necessity.

143. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this authorization and Certificate. The Commission encourages cooperation between jurisdictional companies and local authorities. However, this 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.²⁰²

VI. Conclusion

144. At a hearing held on April 18, 2019, the Commission on its own motion received and made a part of the record in this proceeding all evidence, including the application, and exhibits thereto, and all comments, and upon consideration of the record,

The Commission orders:

(A) In Docket No. CP17-20-000, Port Arthur LNG is authorized under section 3 of the NGA to site, construct, and operate the proposed project located in Port Arthur, Texas, as described and conditioned herein, and as fully described in Port Arthur LNG's application and subsequent filings, including any commitments made therein, and subject to the environmental conditions contained in the appendix of this order.

(B) Port Arthur LNG's proposed project shall be constructed and made available for service within five years of the date of this order.

(C) In Docket Nos. CP17-21-000, CP17-21-001, and CP18-7-000, a certificate of public convenience and necessity is issued to Port Arthur Pipeline authorizing it to construct and operate the Texas and Louisiana Connector projects, as described and conditioned herein, and as more fully described in the applications and subsequent filings by the application, including any commitments made therein.

²⁰² See 15 U.S.C. § 717r(d) (state or federal agency's failure to act on a permit considered to be inconsistent with Federal law); see also *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 310 (1988) (state regulation that interferes with FERC's regulatory authority over the transportation of natural gas is preempted) and *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 245 (D.C. Cir. 2013) (noting that state and local regulation is preempted by the NGA to the extent it conflicts with federal regulation, or would delay the construction and operation of facilities approved by the Commission).

(D) The certificate authority issued in Ordering Paragraph (C) is conditioned on:

- a. Port Arthur Pipeline's completing the authorized construction of the proposed facilities and making them available for service within five years of the date of this order pursuant to section 157.20(b) of the Commission's regulations;
- b. Port Arthur Pipeline's compliance with all applicable Commission regulations, including, but not limited to, Parts 154, 157, and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the Commission's regulations;
- c. Port Arthur Pipeline's compliance with the environmental conditions in the appendix to this order, and
- d. Port Arthur Pipeline filing a written statement affirming that it has executed firm contracts for the capacity levels and terms of service represented in signed precedent agreements, prior to commencing construction.

(E) A blanket construction certificate is issued to Port Arthur Pipeline under Subpart F of Part 157 of the Commission's regulations.

(F) A blanket transportation certificate is issued to Port Arthur Pipeline under Subpart G of Part 284 of the Commission's regulations.

(G) Port Arthur Pipeline's initial rates and tariff are approved, as conditioned and modified in this order.

(H) Port Arthur Pipeline shall file actual tariff records that comply with the requirements contained in the body of this order not less than 60 days prior to the commencement of interstate service consistent with Part 154 of the Commission's regulations.

(I) No later than three months after the end of its first three years of actual operation, as discussed herein, Port Arthur Pipeline must make a filing to justify its existing cost-based firm and interruptible recourse rates. Port Arthur Pipeline's cost and revenue study should be filed through the eTariff portal using a Type of Filing Code 580. In addition, Port Arthur Pipeline is advised to include as part of the eFiling description, a

reference to Docket Nos. CP17-21-000, CP17-21-001, and CP18-7-000, and to the cost and revenue study.²⁰³

(J) Port Arthur LNG and Port Arthur Pipeline shall notify the Commission's environmental staff by telephone, e-mail, and/or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Port Arthur LNG or Port Arthur Pipeline. Port Arthur LNG and Port Arthur Pipeline shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

By the Commission. Commissioner LaFleur is concurring with a separate statement attached.
Commissioner Glick is dissenting with a separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

²⁰³ *Electronic Tariff Filings*, 130 FERC ¶ 61,047 at P 17.

Appendix A
Environmental Conditions

As recommended in the final environmental impact statement and otherwise amended herein, this authorization includes the following conditions:

1. Port Arthur LNG and Port Arthur Pipeline shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the final environmental impact statement (EIS), unless modified by the Order. Port Arthur LNG and Port Arthur Pipeline 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 Liquefaction Project, the Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of life, health, property, and the environment during construction and operation of the project. This authority shall allow:
 - a. the modification of conditions of the Order;
 - b. stop-work authority and authority to cease operation; and
 - c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project construction and operation.
3. For the pipeline facilities, the Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are

necessary to ensure the protection of environmental resources during construction and operation of the projects. This authority shall allow:

- a. the modification of conditions of the Order;
 - b. stop-work authority and authority to cease operation; and
 - c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project construction and operation.
4. **Prior to any construction**, Port Arthur LNG and Port Arthur Pipeline shall file affirmative statements with the Secretary, certified by a senior company official, that all company personnel, Environmental Inspectors (EI), 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.
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**, Port Arthur LNG and Port Arthur Pipeline 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.
- Port Arthur Pipeline's exercise of eminent domain authority granted under Natural Gas Act (NGA) section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Port Arthur Pipeline's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipelines 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. Port Arthur LNG and Port Arthur Pipeline 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; staging areas; pipe storage yards; new access roads; and other areas that will 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 will 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. Each area 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 Commission's *Upland Erosion Control, Revegetation & 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 authorization and before construction begins**, Port Arthur LNG and Port Arthur Pipeline shall each file Implementation Plans with the Secretary for review and written approval by the Director of OEP. Port Arthur LNG and Port Arthur Pipeline must file revisions to their plans as schedules change. The plans shall identify:

- a. how Port Arthur LNG and Port Arthur Pipeline 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 Port Arthur LNG and Port Arthur Pipeline 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 how Port Arthur LNG and Port Arthur Pipeline will ensure that sufficient personnel are available to implement the environmental mitigation;

- d. the number of 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 Port Arthur LNG and Port Arthur Pipeline will give to all personnel involved with construction and restoration (initial and refresher training as the projects progress and personnel change), with the opportunity for OEP staff to participate in the training session(s);
 - f. the company personnel (if known) and specific portion of the Port Arthur LNG's and Port Arthur Pipeline's organization having responsibility for compliance;
 - g. the procedures (including use of contract penalties) Port Arthur LNG and Port Arthur Pipeline 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. Port Arthur LNG and Port Arthur Pipeline shall employ a team of EIs, including at least one EI for the Liquefaction Project, and at least one EI per construction spread for the pipeline facilities. The EI(s) 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) 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 or the Coushatta Tribe of Louisiana for Tribal Trust Lands; and

- f. responsible for maintaining status reports.
9. Beginning with the filing of their respective Implementation Plans, Port Arthur LNG and Port Arthur Pipeline shall each file updated status reports with the Secretary on a **monthly** basis for the Liquefaction Project and **weekly** basis for the Louisiana Connector and Texas Connector projects until all construction and restoration activities are complete. Problems of a significant magnitude shall be reported to the FERC **within 24 hours**. 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 Port Arthur LNG's and Port Arthur Pipeline's efforts to obtain the necessary federal authorizations;
 - b. the construction status of Liquefaction Facilities and each spread of the Louisiana Connector and Texas Connector projects, 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, contractor nonconformance/deficiency logs, 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 and remedial actions implemented in response to all instances of noncompliance, nonconformance, or deficiency;
 - e. the effectiveness of all corrective and remedial 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 Port Arthur LNG and Port Arthur Pipeline from other federal, state, local, or tribal permitting agencies concerning instances of noncompliance, and the Port Arthur LNG's and Port Arthur Pipeline's responses.
10. Port Arthur LNG and Port Arthur Pipeline must receive written authorization from the Director of OEP **before commencing construction of any project facilities**. To obtain such authorization, Port Arthur LNG and Port Arthur Pipeline shall file

with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

11. Port Arthur 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. Port Arthur LNG must receive written authorization from the Director of OEP **before placing the Liquefaction Project facilities into service**. Such authorization will only be granted following a determination that the facilities have been constructed in accordance with the FERC approval, can be expected to operate safely as designed, and the rehabilitation and restoration of the area affected by the Liquefaction Project facilities are proceeding satisfactorily.
13. Port Arthur Pipeline must receive written authorization from the Director of OEP **before placing the Texas Connector and/or the Louisiana Connector projects into service**. Such authorization will only be granted following a determination that the rehabilitation and restoration of the right-of-way and other areas affected by the Louisiana Connector and Texas Connector projects are proceeding satisfactorily.
14. **Within 30 days of placing the authorized facilities in service**, Port Arthur LNG and Port Arthur Pipeline 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 in the Order Port Arthur LNG and Port Arthur Pipeline 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.
15. **Prior to construction of the projects**, Port Arthur LNG and Port Arthur Pipeline each shall file with the Secretary, for review and written approval by the Director of OEP, a project-specific plan for construction near known abandoned oil and gas wells. This plan shall identify actions to be taken if any unidentified oil or gas wells are discovered during construction and discuss how Port Arthur LNG or Port Arthur Pipeline will maintain the integrity of any plugged wells. (*section 4.1.2*)
16. **Prior to construction of the compressor stations associated with the Louisiana Connector and Texas Connector projects**, Port Arthur Pipeline shall file with the

Secretary the results of geotechnical studies for the compressor stations, including any recommended mitigation measures Port Arthur Pipeline will adopt as part of the final engineering design. (*section 4.1.3.1*)

17. **Prior to construction of the Liquefaction Project**, Port Arthur LNG shall provide the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers (USACE), Texas Commission on Environmental Quality, and Texas Railroad Commission with the soil and sediment analysis conducted at the area within the ship canal at the marine berth, construction dock, material offloading facility, and landward component of the material offloading facility for review. Port Arthur LNG shall file the conclusions of the agency reviews with the Secretary along with documentation of its consultations with these agencies including any measures Port Arthur LNG will need to adopt if the analysis discovers previously unknown contamination. (*section 4.2.1.6*)
18. **Prior to construction of the Louisiana Connector and Texas Connector projects**, Port Arthur Pipeline shall file with the Secretary, for review and approval by the Director of OEP, the anticipated volume and source of water to be used for dust control. (*section 4.3.2.2*)
19. **Port Arthur LNG and Port Arthur Pipeline shall not begin construction of the projects until:**
 - a. all outstanding biological surveys are completed;
 - b. the FERC staff complete any necessary Endangered Species Act section 7 consultation, including conference for the eastern black rail, with the U.S. Fish and Wildlife Service;
 - c. Port Arthur LNG and Port Arthur Pipeline have received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin. (*section 4.7.3*)
20. **Prior to construction of the Louisiana Connector Project**, Port Arthur Pipeline shall conduct surveys for the American chaffseed on the remaining no-access parcels with potential habitat. If the American chaffseed is found, Port Arthur Pipeline shall incorporate methods to avoid impacts on the American chaffseed. Port Arthur Pipeline shall file with the Secretary and the U.S. Fish and Wildlife Service (Louisiana office) both the survey results and Port Arthur Pipeline's proposed avoidance methods. (*section 4.7.3.5*)
21. **Prior to construction of the Liquefaction Project**, Port Arthur LNG shall file with the Secretary documentation of concurrence from the USACE and Texas General

Land Office that the Liquefaction Project is consistent with the Coastal Zone Management Act. (*section 4.8.9.1*)

22. **Prior to construction of the Louisiana Connector and Texas Connector projects**, Port Arthur Pipeline shall file with the Secretary documentation of concurrence from the USACE, Texas General Land Office, and Louisiana Office of Coastal Management that the Texas Connector Project and Louisiana Connector Project are consistent with the Coastal Zone Management Act. (*section 4.8.9.2*)
23. **Prior to construction of the Liquefaction Project**, Port Arthur LNG shall file with the Secretary its Transportation Plan for the Liquefaction Project, for review and written approval by the Director of OEP. The plan shall include personnel training; permitting requirements; consultations conducted with local and state agencies; and how access to/from the work site by personnel, equipment, and materials will be managed on a daily basis throughout construction. (*section 4.9.6.1*)
24. **Prior to construction of the Louisiana Connector Project in Louisiana**, Port Arthur Pipeline shall file with the Secretary, for review and written approval by the Director of OEP, a revised *Unanticipated Discoveries Plan* that clarifies that Tribal Historic Preservation Office construction recommencement authorization is only applicable to Coushatta Tribe of Louisiana tribal trust lands. (*section 4.10.2*)
25. Port Arthur LNG and Port Arthur Pipeline shall **not begin** construction of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads **associated with the projects until**:
 - a. Port Arthur LNG files with the Secretary, the outstanding information for Dredge Disposal Area 8, and the Texas State Historic Preservation Office's (SHPO) comments on the information;
 - b. Port Arthur LNG files any required survey report for Dredge Disposal Area 8, and the Texas SHPO's comments on the report;
 - c. Port Arthur Pipeline files with the Secretary all outstanding survey reports, evaluation reports, special studies, and any required avoidance/treatment plans, and the Texas and Louisiana SHPOs' and the Coushatta Tribe of Louisiana Tribal Historic Preservation Office's comments (as applicable) on these;
 - d. the Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties will be adversely affected; and
 - e. the FERC staff reviews and the Director of OEP approves the cultural resources reports, studies, and plans, and notifies Port Arthur LNG and Port Arthur Pipeline in writing that treatment plans/mitigation measures

(including archaeological data recovery) may be implemented and/or construction may proceed.

All materials filed with the Commission containing **location, character, and ownership information** about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering “**CUI//PRIV – DO NOT RELEASE.**”(sections 4.10.4.1. and 4.10.4.2)

26. **Prior to construction of horizontal directional drills (HDD) at mileposts (MP) 19.6 and 20.3 along the Texas Connector Project’s Northern Pipeline; MP 0.5 along the GTS Lateral; MP 0.8 along the FGT Lateral; and MPs 38.7, 40.5, 42.5, 47.9, 48.5, 56.8, 60.2, 79.4, 91.1, 96.9, 110.1, and 110.3 along the Louisiana Connector Project** where HDD-related noise could exceed the Commission’s sound level criterion at the closest noise-sensitive area (NSA), Port Arthur Pipeline shall file with the Secretary, for review and written approval by the Director of OEP, an HDD noise mitigation plan to reduce the projected noise level attributable to the proposed drilling operations at nearby NSAs. During drilling operations, Port Arthur Pipeline shall implement the approved plan, monitor noise levels, and make all reasonable efforts to restrict the noise attributable to the drilling operations to no more than a day-night sound level (L_{dn}) of 55 decibels on the A-weighted scale (dBA) at the NSAs or 10 dBA above background where nighttime ambient noise is above 55 dBA L_{dn} . (section 4.11.2.3)
27. Port Arthur LNG shall file a full power load noise survey with the Secretary **no later than 60 days** after placing each Liquefaction Project train in service. If the noise attributable to the operation of the equipment at the liquefaction facilities exceeds 55 dBA L_{dn} at the nearest NSA, **within 60 days** Port Arthur LNG shall modify operation of the liquefaction facilities or install additional noise controls until a noise level below 55 dBA L_{dn} at the NSA is achieved. Port Arthur 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. (section 4.11.2.4)
28. Port Arthur LNG and Port Arthur Pipeline shall file noise surveys with the Secretary **no later than 60 days** after placing the entire Liquefaction Project facility, including the South Compressor Station associated with the Texas Connector Project, into service. If a full load condition noise survey is not possible, Port Arthur LNG and Port Arthur Pipeline shall provide an interim survey at the maximum possible horsepower load **within 60 days** of placing the Liquefaction Project facility and South Compressor Station into service and provide the full load survey **within 6 months**. If the noise attributable to operation of the equipment at the Liquefaction Project facility and South Compressor Station exceeds 55 dBA L_{dn} at the nearest NSA under interim or full horsepower load conditions, Port Arthur LNG and Port Arthur Pipeline 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. Port Arthur LNG and Port Arthur Pipeline shall confirm compliance with the above requirement by filing an additional noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*section 4.11.2.4*)

29. Port Arthur Pipeline shall file a noise survey with the Secretary **no later than 60 days** after placing the Texas Connector Project North Compressor Station and Louisiana Connector Project's compressor station in service. If a full load condition noise survey is not possible, Port Arthur Pipeline shall instead file an interim survey at the maximum possible horsepower load and file the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at any station under interim or full horsepower load exceeds 55 dBA L_{dn} at any nearby NSA, Port Arthur Pipeline 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. Port Arthur Pipeline shall confirm compliance with the 55 dBA L_{dn} requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*section 4.11.2.4*)
30. **Prior to construction of final design**, Port Arthur LNG shall file with the Secretary the following information, stamped and sealed by the professional engineer-of-record, registered in Texas:
- a. site preparation drawings and specifications;
 - b. LNG terminal structures and foundation design drawings and calculations (including prefabricated and field constructed structures);
 - c. seismic specifications for procured equipment; and
 - d. quality control procedures to be used for civil/structural design and construction.

In addition, Port Arthur LNG shall file, in its Implementation Plan, the schedule for producing this information. (*section 4.12.6*)

31. **Prior to commencement of service**, Port Arthur LNG shall file with the Secretary a monitoring and maintenance plan, stamped and sealed by the professional engineer-of-record registered in Texas, for the perimeter levee which ensures the crest elevation relative to mean sea level will be maintained for the life of the facility considering berm settlement, subsidence, and sea level rise. (*section 4.12.6*)

Conditions 32 through 126 shall apply to the Port Arthur Liquefaction Project. Information pertaining to these specific conditions below shall be filed with the Secretary for review and written approval by the Director of OEP, or the Director's designee, within the timeframe indicated by each condition. Specific engineering, vulnerability, or

detailed design information meeting the criteria specified in Order No. 833 (Docket No. RM16-15-000), including security information, shall be submitted as critical energy infrastructure information pursuant to 18 C.F.R. 388.113. See *Critical Electric Infrastructure Security and Amending Critical Energy Infrastructure Information*, Order No. 833, 81 Fed. Reg. 93,732 (December 21, 2016), FERC Stats. & Regs. 31,389 (2016). Information pertaining to items such as offsite emergency response, procedures for public notification and evacuation, and construction and operating reporting requirements will be subject to public disclosure. All information shall be filed **a minimum of 30 days** before approval to proceed is requested.

32. **Prior to initial site preparation**, Port Arthur LNG shall file an overall project schedule, which includes the proposed stages of the commissioning plan. (*section 4.12.6*)
33. **Prior to initial site preparation**, Port Arthur LNG shall file quality assurance and quality control procedures for construction activities. (*section 4.12.6*)
34. **Prior to initial site preparation**, Port Arthur LNG shall file procedures for controlling access during construction. (*section 4.12.6*)
35. **Prior to initial site preparation**, Port Arthur LNG shall develop an emergency response plan (ERP) (including evacuation) and coordinate procedures with the U.S. Coast Guard; state, county, and local emergency planning groups; fire departments; state and local law enforcement; and appropriate federal agencies. This plan shall include at a minimum:
 - a. designated contacts with state and local emergency response agencies;
 - b. scalable procedures for the prompt notification of appropriate local officials and emergency response agencies based on the level and severity of potential incidents;
 - c. procedures for notifying residents and recreational users within areas of potential hazard;
 - d. evacuation routes/methods for residents and public use areas that are within any transient hazard areas along the route of the LNG marine transit;
 - e. locations of permanent sirens and other warning devices; and
 - f. an “emergency coordinator” on each LNG carrier to activate sirens and other warning devices.

Port Arthur LNG shall notify the FERC staff of all planning meetings in advance and shall report progress on the development of its ERP at **3-month intervals**.
(*section 4.12.6*)

36. **Prior to initial site preparation**, Port Arthur LNG shall file a Cost-Sharing Plan identifying the mechanisms for funding all Project-specific security/emergency management costs that will be imposed on state and local agencies. This comprehensive plan shall include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base. Port Arthur LNG shall notify FERC staff of all planning meetings in advance and shall report progress on the development of its Cost Sharing Plan at **3-month intervals**. (*section 4.12.6*)
37. **Prior to construction of final design**, Port Arthur LNG shall file change logs that list and explain any changes made from the front-end-engineering-design (FEED) provided in Port Arthur LNG's application and filings. A list of all changes with an explanation for the design alteration shall be filed and all changes shall be clearly indicated on all diagrams and drawings. (*section 4.12.6*)
38. **Prior to construction of final design**, Port Arthur LNG shall file information/revisions pertaining to Port Arthur LNG's response numbers 9, 11, 18, 19, 24, 28, 29, 30-33, 34, 36-41, 43-46, 54-55 of its January 29, 2018 filing and 52 and 57 of its February 7, 2018 filing, which indicated features to be included or considered in the final design. (*section 4.12.6*)
39. **Prior to construction of final design**, Port Arthur LNG shall file a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems. (*section 4.12.6*)
40. **Prior to construction of final design**, Port Arthur LNG shall file three-dimensional plant drawings to confirm plant layout for maintenance, access, egress, and congestion. (*section 4.12.6*)
41. **Prior to construction of final design**, Port Arthur LNG shall file drawings of the storage tank piping support structure and support of horizontal piping at grade including pump columns, relief valves, pipe penetrations, instrumentation, and appurtenances. (*section 4.12.6*)
42. **Prior to construction of final design**, Port Arthur LNG shall file a complete specification and drawings of the proposed LNG tank design and installation. (*section 4.12.6*)

43. **Prior to construction of final design**, Port Arthur LNG shall file an up-to-date equipment list, process and mechanical data sheets, and specifications. The specifications shall include:
- a. building specifications (control buildings, electrical buildings, compressor buildings, storage buildings, pressurized buildings, ventilated buildings, blast resistant buildings);
 - b. mechanical specifications (piping, valve, insulation, rotating equipment, heat exchanger, storage tank and vessel, other specialized equipment);
 - c. electrical and instrumentation specifications (power system specifications, control system specifications, Safety Instrumented Systems (SIS) specifications, cable specifications, other electrical and instrumentation specifications); and
 - d. security and fire safety specifications (security, passive protection, hazard detection, hazard control, firewater). (*section 4.12.6*)
44. **Prior to construction of final design**, Port Arthur LNG shall file a list of all codes and standards and the final specification document number where they are referenced. (*section 4.12.6*)
45. **Prior to construction of final design**, Port Arthur LNG shall file up-to-date process flow diagrams (PFDs) and piping and instrument diagrams (P&IDs), including vendor P&IDs. The PFDs shall include heat and material balances. The P&IDs shall include the following information:
- a. equipment tag number, name, size, duty, capacity, and design conditions;
 - b. equipment insulation type and thickness;
 - c. storage tank pipe penetration size and 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. (*section 4.12.6*)

46. **Prior to construction of final design**, Port Arthur LNG shall file P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect subsequently constructed facilities with the operational facilities. *(section 4.12.6)*
47. **Prior to construction of final design**, Port Arthur LNG shall file a car seal philosophy and a list of all car-sealed and locked valves consistent with the P&IDs. *(section 4.12.6)*
48. **Prior to construction of final design**, the engineering, procurement, and construction contractor shall verify that the recommendations from the FEED Hazard Identification are complete and consistent with the requirements of the final design as determined by the engineering, procurement, and construction contractor. *(section 4.12.6)*
49. **Prior to construction of final design**, Port Arthur LNG shall file a hazard and operability review review prior to issuing the P&IDs for construction. A copy of the review, a list of the recommendations, and actions taken on the recommendations shall be filed. *(section 4.12.6)*
50. **Prior to construction of final design**, Port Arthur LNG shall file the safe operating limits (upper and lower), alarm and shutdown set points for all instrumentation (i.e., temperature, pressures, flows, and compositions). *(section 4.12.6)*
51. **Prior to construction of final design**, Port Arthur LNG shall file cause-and-effect matrices for the process instrumentation, fire and gas detection system, and emergency shutdown (ESD) system for review and approval. The cause-and-effect matrices shall include alarms and shutdown functions, details of the voting and shutdown logic, and set points. *(section 4.12.6)*
52. **Prior to construction of final design**, Port Arthur LNG shall file an evaluation of ESD valve closure times. The evaluation shall account for the time to detect an upset or hazardous condition, notify plant personnel, and close the ESD valve. *(section 4.12.6)*
53. **Prior to construction of final design**, Port Arthur LNG shall file an evaluation of dynamic pressure surge effects from valve opening and closure times and pump operations. *(section 4.12.6)*
54. **Prior to construction of final design**, Port Arthur LNG shall demonstrate that hazardous fluid piping and piping nipples 2 inches or less in diameter are designed to withstand external loads, including vibrational loads in the vicinity of rotating equipment and operator live loads in areas accessible by operators. *(section 4.12.6)*

55. **Prior to construction of final design**, Port Arthur LNG shall specify that all drains from high pressure hazardous fluid systems are equipped with double isolation and bleed valves. (*section 4.12.6*)
56. **Prior to construction of final design**, Port Arthur LNG shall file electrical area classification drawings. (*section 4.12.6*)
57. **Prior to construction of final design**, Port Arthur LNG shall file 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 National Fire Protection Association (NFPA) 59A (2001). (*section 4.12.6*)
58. **Prior to construction of final design**, Port Arthur LNG shall file details of 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, alarm the hazardous condition, and shut down the appropriate systems. (*section 4.12.6*)
59. **Prior to construction of final design**, Port Arthur LNG shall include layout and design specifications of the pig trap, inlet separation and liquid disposal, inlet/send-out meter station, and pressure control. (*section 4.12.6*)
60. **Prior to construction of final design**, Port Arthur LNG shall specify that piping and equipment that may be cooled with liquid nitrogen will be designed for liquid nitrogen temperatures, with regard to allowable movement and stresses. (*section 4.12.6*)
61. **Prior to construction of final design**, Port Arthur LNG shall include LNG tank fill flow measurement with high flow alarm. (*section 4.12.6*)
62. **Prior to construction of final design**, Port Arthur LNG shall include boil-off gas flow, tank density profile, and temperature profile measurement for each tank. (*section 4.12.6*)
63. **Prior to construction of final design**, Port Arthur LNG shall file the structural analysis of the LNG storage tank and outer concrete impoundment wall to demonstrate they are designed to withstand all loads and combinations. (*section 4.12.6*)
64. **Prior to construction of final design**, Port Arthur LNG shall file an analysis of the structural integrity of the outer containment of the full containment storage tanks when exposed to a roof tank top fire or adjacent tank top fire. (*section 4.12.6*)

65. **Prior to construction of final design**, Port Arthur LNG shall file the sizing basis and capacity for the final design of the flares and/or vent stacks as well as the pressure and vacuum relief valves for major process equipment, vessels, and storage tanks. *(section 4.12.6)*
66. **Prior to construction of final design**, Port Arthur LNG shall file detailed cooldown plans showing the piping flow, valve alignment, and instruments used to monitor the initial cooldown and filling of the LNG storage tanks. *(section 4.12.6)*
67. **Prior to construction of final design**, Port Arthur LNG shall file detailed procedures for import of LNG during the initial cooldown of the LNG storage tanks including detailed P&IDs with flow paths and valve alignment showing the position of valves and lockout/tagout devices. *(section 4.12.6)*
68. **Prior to construction of final design**, Port Arthur LNG shall file an evaluation on the need to install fixed toxic gas detection to detect hydrogen sulfide (H₂S) releases from loss of containment from the acid gas piping system and potential release points (i.e., vents, relief valves, vent stacks, and thermal oxidizer stack). *(section 4.12.6)*
69. **Prior to construction of final design**, Port Arthur LNG shall file process simulation results for the deethanizer, depropanizer depressurized conditions to ensure the associated deethanizer, depropanizer, reboiler, piping, and other associated equipment are adequately designed for settle out and upset conditions to prevent brittle fracture of piping and associated equipment. *(section 4.12.6)*
70. **Prior to construction of final design**, Port Arthur LNG shall file an evaluation assessing the minimum design metal temperature and material of construction needed for the deethanizer, depropanizer, reboiler and piping during upset/settleout conditions. *(section 4.12.6)*
71. **Prior to construction of final design**, Port Arthur LNG shall include provisions to maintain stability and pressure of the regenerator in the event that the H₂S scavenger or thermal oxidizer are unavailable (e.g., change out, maintenance, startup, etc.). *(section 4.12.6)*
72. **Prior to construction of final design**, Port Arthur LNG shall include a thermal relief valve between the propane shutoff valves (XV-30687 and XV0-30686) to protect piping. *(section 4.12.6)*
73. **Prior to construction of final design**, Port Arthur LNG shall include a thermal relief valve between the ethane shutoff valves (XV0-30729 and XV0-30731) to protect piping. *(section 4.12.6)*

74. **Prior to construction of final design,** Port Arthur LNG shall include provisions to prevent cryogenic fluids accumulated in the dry flare knockout drum from reaching the wet flare knockout drum, which are connected by the dry flare knockout drum drain line to the blow case purge to the wet flare knockout drum. *(section 4.12.6)*
75. **Prior to construction of final design,** Port Arthur LNG shall include details of the flare knockout drum heater and detailed procedures for draining flare knockout drums to a safe location. *(section 4.12.6)*
76. **Prior to construction of final design,** Port Arthur LNG shall file detailed calculations for the flow rate of the jockey pumps accounting for flow rate losses due to leaks or when drain valves are opened to ensure that system losses do not exceed the specified design flow rate of the jockey firewater pumps. *(section 4.12.6)*
77. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of the need to install pressure relieving protection for flammable liquid piping segments (i.e., refrigerants, liquid hydrocarbons, condensate products) that can be isolated by valves. *(section 4.12.6)*
78. **Prior to construction of final design,** Port Arthur LNG shall specify that all ESD valves will be equipped with open and closed position switches connected to the Distributed Control System (DCS)/SIS. *(section 4.12.6)*
79. **Prior to construction of final design,** Port Arthur LNG shall file a drawing showing the location of the ESD buttons. Emergency shutdown buttons shall be easily accessible, conspicuously labeled, and located in an area which will be accessible during an emergency. *(section 4.12.6)*
80. **Prior to construction of final design,** Port Arthur LNG shall file drawings and specifications for vehicle barriers at each facility entrance for access control. *(section 4.12.6)*
81. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of the need to install turning lanes to minimize the risk of hazardous material truck and other vehicle incidents entering and exiting the facility from State Highway 87. *(section 4.12.6)*
82. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of the need for installing internal road vehicle protections (e.g., guard rails, barriers, and bollards) to protect transfer piping, pumps, and compressors, etc. and to ensure that they are located away from roadway or protected from inadvertent damage from vehicles. *(section 4.12.6)*
83. **Prior to construction of final design,** Port Arthur LNG shall file a projectile analysis for review and approval to demonstrate that the outer concrete

impoundment wall of a full-containment LNG tank could withstand windborne projectiles. The analysis shall detail the projectile speeds and characteristics and method used to determine penetration or perforation depths. (*section 4.12.6*)

84. **Prior to construction of final design**, Port Arthur LNG shall file security camera, intrusion detection, and lighting drawings. The security camera drawings shall show the location, areas covered, and features of the camera (fixed, tilt/pan/zoom, motion detection alerts, low light, mounting height, etc.) to verify camera coverage of the entire perimeter with redundancies for cameras interior to the facility to enable rapid monitoring of the LNG plant. The intrusion detection drawings shall show or note the location of the intrusion detection to verify it covers the entire perimeter of the LNG plant. The lighting drawings shall show the location, elevation, type of light fixture, and lux levels of the lighting system. (*section 4.12.6*)
85. **Prior to construction of final design**, Port Arthur LNG shall file the details of the ESD system, including whether a plant-wide ESD button with proper sequencing and reliability will be installed or whether another system will be installed that is demonstrated through a human reliability analysis to provide a means to quickly and reliably shutdown the entire plant. (*section 4.12.6*)
86. **Prior to construction of final design**, Port Arthur LNG shall file an updated fire protection evaluation of the proposed facilities. A copy of the evaluation, a list of recommendations and supporting justifications, and actions taken on the recommendations shall be filed. (*section 4.12.6*)
87. **Prior to construction of final design**, Port Arthur LNG shall file spill containment system drawings with dimensions and slopes of curbing, trenches, impoundments, and capacity calculations considering any foundations and equipment within impoundments, as well as the sizing and design of the down-comer that will transfer spills from the tank top to the ground-level impoundment system. The spill containment drawings shall show containment for all hazardous fluids from the largest flow from a single line for 10 minutes or from the largest vessel or otherwise demonstrate spill containment will not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill. (*section 4.12.6*)
88. **Prior to construction of final design**, Port Arthur LNG shall specify the material of construction for the curbed areas, trenches, and impoundments as insulated concrete or otherwise demonstrate insulated concrete will not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill. (*section 4.12.6*)
89. **Prior to construction of final design**, Port Arthur LNG shall file an analysis of the localized hazards to operators from a potential liquid nitrogen release and shall also

provide spill containment and low oxygen detectors to mitigate liquid nitrogen releases. (*section 4.12.6*)

90. **Prior to construction of final design**, Port Arthur LNG shall file complete drawings and a list of the hazard detection equipment. The drawings shall clearly show the location and elevation of all detection equipment and demonstrate potential releases resulting in an offsite impact could be detected by at least two detectors to allow for shutdown in less than 10 minutes. The list shall include the instrument tag number, type and location, alarm indication locations, and shutdown functions of the hazard detection equipment. (*section 4.12.6*)
91. **Prior to construction of final design**, Port Arthur LNG shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of the hazard detectors when determining the lower flammable limit set points for methane, propane, butane, ethane, and condensate. (*section 4.12.6*)
92. **Prior to construction of final design**, Port Arthur LNG shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of hazard detectors when determining the set points for toxic components such as aqueous ammonia, natural gas liquids and H₂S. (*section 4.12.6*)
93. **Prior to construction of final design**, Port Arthur LNG shall file a technical review of facility design that:
 - a. identifies all combustion/ventilation air intake equipment and the distances to any possible flammable gas or toxic release; and
 - b. demonstrates that these areas are adequately covered by hazard detection devices and indicates how these devices will isolate or shutdown any combustion or heating ventilation and air conditioning equipment whose continued operation could add to or sustain an emergency. (*section 4.12.6*)
94. **Prior to construction of the final design**, Port Arthur LNG shall file a building siting assessment to ensure plant buildings that are occupied or critical to the safety of the LNG plant are adequately protected from potential hazards involving fires and vapor cloud explosions. (*section 4.12.6*)
95. **Prior to construction of final design**, Port Arthur LNG shall file a drawing that includes smoke detection in occupied buildings. (*section 4.12.6*)
96. **Prior to construction of final design**, Port Arthur LNG shall file a drawing that includes hazard detection suitable to detect high temperatures and smoldering combustion products in electrical buildings and control room buildings. (*section 4.12.6*)

97. **Prior to construction of final design**, Port Arthur LNG shall file a drawing that includes clean agent systems in the electrical switchgear and instrumentation buildings. (*section 4.12.6*)
98. **Prior to construction of final design**, Port Arthur LNG shall file facility plan drawings and a list of the fixed and wheeled dry-chemical, hand-held fire extinguishers, and other hazard control equipment. Plan drawings shall clearly show the location by tag number and elevation of all fixed, wheeled, and hand-held extinguishers and demonstrate travel distances are along normal paths of access and egress and in compliance with NFPA 10, 15, and 17. 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. (*section 4.12.6*)
99. **Prior to construction of final design**, Port Arthur LNG shall file facility plan drawings showing the proposed location of the firewater and any foam systems. Plan drawings shall clearly show the location of firewater and foam piping, post indicator valves, and the location and area covered by, each monitor, hydrant, hose, water curtain, deluge system, foam system, water-mist system, and sprinkler. The drawings shall demonstrate that each process area, fire zone, or other sections of piping with several users can be isolated with post indicator valves and that firewater coverage is provided by at least two monitors or hydrants with sufficient firewater flow to cool exposed surfaces subjected to a fire. Drawings shall also include piping and instrumentation diagrams of the firewater and foam systems. (*section 4.12.6*)
100. **Prior to construction of final design**, Port Arthur LNG shall file detailed calculations to confirm that the final fire water volumes will be accounted for when evaluating the capacity of the impoundment system during a spill and fire scenario. (*section 4.12.6*)
101. **Prior to construction of final design**, Port Arthur LNG shall specify that the firewater flow test meter is equipped with a transmitter and that a pressure transmitter is installed upstream of the flow transmitter. The flow transmitter and pressure transmitter shall be connected to the DCS and recorded. (*section 4.12.6*)
102. **Prior to construction of final design**, Port Arthur LNG shall specify that the firewater pump shelter is designed with a removable roof for maintenance access to the firewater pumps. (*section 4.12.6*)
103. **Prior to construction of final design**, Port Arthur LNG shall file calculations for the firewater spray systems sized to provide cooling for mitigation of boiling-liquid-expanding-vapor explosions. (*section 4.12.6*)

104. **Prior to construction of final design**, Port Arthur LNG shall file a design that accounts for the fire water required for foam generation in calculating the total fire water required for 2 hours of supply. (*section 4.12.6*)
105. **Prior to construction of final design**, Port Arthur LNG shall file drawings and specifications for the structural passive protection systems to protect equipment and supports from cryogenic releases. (*section 4.12.6*)
106. **Prior to construction of final design**, Port Arthur LNG shall file a detailed quantitative analysis to demonstrate that adequate thermal mitigation will be provided for each significant component within the 4,000 BTU/ft²-hr zone from an impoundment, or provide an analysis that evaluates the consequences of pressure vessel bursts and boiling liquid expanding vapor explosions. Trucks at the truck transfer station shall be included in the analysis. Passive mitigation shall be supported by calculations for the thickness limiting temperature rise and active mitigation shall be justified with calculations demonstrating flow rates and durations of any cooling water to mitigate the heat absorbed by the vessel. (*section 4.12.6*)
107. **Prior to construction of final design**, Port Arthur LNG shall file an evaluation of the voting logic and voting degradation for hazard detectors. (*section 4.12.6*)
108. **Prior to commissioning**, Port Arthur LNG shall file 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. Port Arthur LNG shall file documentation certifying that each of these milestones has been completed before authorization to commence the next phase of commissioning and startup will be issued. (*section 4.12.6*)
109. **Prior to commissioning**, Port Arthur LNG shall file detailed plans and procedures for: testing the integrity of onsite mechanical installation; functional tests; introduction of hazardous fluids; operational tests; and placing the equipment into service. (*section 4.12.6*)
110. **Prior to commissioning**, Port Arthur LNG shall file 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, and shall provide justification if not using an inert or non-flammable gas for clean-out, dry-out, purging, and tightness testing. (*section 4.12.6*)
111. **Prior to commissioning**, Port Arthur LNG shall file the procedures for pressure/leak tests which address the requirements of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code section VIII, and

- ASME B31.3. The procedures shall include a line list of pneumatic and hydrostatic test pressures. (*section 4.12.6*)
112. **Prior to commissioning**, Port Arthur LNG shall file the operation and maintenance procedures and manuals, as well as safety procedures, hot work procedures and permits, abnormal operating conditions reporting procedures, simultaneous operations procedures, and management of change procedures and forms. (*section 4.12.6*)
 113. **Prior to commissioning**, Port Arthur LNG shall tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves. (*section 4.12.6*)
 114. **Prior to commissioning**, Port Arthur LNG shall file a plan to maintain a detailed training log to demonstrate that operating staff has completed the required training. (*section 4.12.6*)
 115. **Prior to commissioning**, Port Arthur LNG shall equip the LNG storage tank and adjacent piping and supports with permanent settlement monitors to allow personnel to observe and record the relative settlement between the LNG storage tank and adjacent piping. The settlement record shall be reported in the **semi-annual** operational reports. (*section 4.12.6*)
 116. **Prior to introduction of hazardous fluids**, Port Arthur LNG shall develop and implement an alarm management program to reduce alarm complacency and maximize the effectiveness of operator response to alarms. (*section 4.12.6*)
 117. **Prior to introduction of hazardous fluids**, Port Arthur LNG shall file results of the LNG storage tank hydrostatic test and foundation settlement results. At a minimum, foundation settlement results shall be provided thereafter **annually**. (*section 4.12.6*)
 118. **Prior to introduction of hazardous fluids**, Port Arthur LNG shall complete and document all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the DCS and SIS that demonstrates full functionality and operability of the system. (*section 4.12.6*)
 119. **Prior to introduction of hazardous fluids**, Port Arthur LNG shall complete and document 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). (*section 4.12.6*)
 120. **Prior to introduction of hazardous fluids**, Port Arthur LNG shall complete and document a pre-startup safety review to ensure that installed equipment meets the design and operating intent of the facility. The pre-startup safety review shall

include any changes since the last hazard review, operating procedures, and operator training. A copy of the review with a list of recommendations, and actions taken on each recommendation, shall be filed. (*section 4.12.6*)

121. **Port Arthur LNG shall file a request for written authorization from the Director of OEP prior to unloading or loading the first LNG commissioning cargo. After production of first LNG,** Port Arthur LNG shall file **weekly** reports on the commissioning of the proposed systems that detail the progress toward demonstrating the facilities can safely and reliably operate at or near the design production rate. The reports shall include a summary of activities, problems encountered, and remedial actions taken. The weekly reports shall also include the latest commissioning schedule, including projected and actual LNG production by each liquefaction train, LNG storage inventories in each storage tank, and the number of anticipated and actual LNG commissioning cargoes, along with the associated volumes loaded or unloaded. Further, the weekly reports shall include a status and list of all planned and completed safety and reliability tests, work authorizations, and punch list items. Problems of significant magnitude shall be reported to the FERC **within 24 hours**. (*section 4.12.6*)
122. **Prior to commencement of service,** Port Arthur LNG shall label piping with fluid service and direction of flow in the field, in addition to the pipe labeling requirements of NFPA 59A (2001). (*section 4.12.6*)
123. **Prior to commencement of service,** Port Arthur LNG shall provide plans for any preventative and predictive maintenance program that performs periodic or continuous equipment condition monitoring. (*section 4.12.6*)
124. **Prior to commencement of service,** Port Arthur LNG shall develop procedures for offsite contractors' responsibilities, restrictions, and limitations and for supervision of these contractors by Port Arthur LNG staff. (*section 4.12.6*)
125. **Prior to commencement of service,** Port Arthur LNG shall notify the FERC staff of any proposed revisions to the security plan and physical security of the plant. (*section 4.12.6*)
126. **Prior to commencement of service,** Port Arthur LNG shall file a request for written authorization from the Director of OEP. Such authorization will only be granted following a determination by the U.S. Coast Guard, under its authorities under the Ports and Waterways Safety Act, the Magnuson Act, the Maritime Transportation Security Act of 2002, and the Security and Accountability For Every Port Act, that appropriate measures to ensure the safety and security of the facility and the waterway have been put into place by Port Arthur LNG or other appropriate parties. (*section 4.12.6*)

In addition, recommendations 127 through 130 shall apply **throughout the life of the Port Arthur Liquefaction facility**.

127. 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, Port Arthur 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. (*section 4.12.6*)
128. **Semi-annual** operational reports shall be filed with the Secretary to identify changes in facility design and operating conditions; abnormal operating experiences; activities (e.g., ship arrivals, quantity and composition of imported and exported LNG, liquefied and vaporized quantities, boil off/flash gas); and plant modifications, including future plans and progress thereof. Abnormalities shall include, but not be limited to, unloading/loading/shipping problems, potential hazardous conditions from offsite 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)” shall be included in the semi-annual operational reports. Such information will provide the FERC staff with early notice of anticipated future construction/maintenance at the LNG facilities. (*section 4.12.6*)
129. In the event the temperature of any region of any secondary containment, including imbedded pipe supports, becomes less than the minimum specified operating temperature for the material, the Commission shall be notified **within 24 hours** and procedures for corrective action shall be specified. (*section 4.12.6*)
130. 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 the

FERC staff. In the event that 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 the FERC staff **within 24 hours**. This notification practice shall be incorporated into the liquefaction 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 5 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 maximum allowable operating pressure (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 from hazardous fluids transportation 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 liquefaction facility to cease operations. Following the initial company notification, the 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. (*section 4.12.6*)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Port Arthur LNG, LLC PALNG Common Facilities Company, LLC	Docket No.	CP17-20-000
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Port Arthur Pipeline, LLC	Docket Nos.	CP17-21-000 CP17-21-001 CP18-7-000
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(Issued April 18, 2019)

GLICK, Commissioner, *dissenting*:

1. I dissent from today’s order because it violates both the Natural Gas Act¹ (NGA) and the National Environmental Policy Act² (NEPA). In particular, the Commission is again refusing to consider the consequences its actions have for climate change. Neither the NGA nor NEPA permit the Commission to assume away the climate change implications of constructing and operating this liquefied natural gas (LNG) facility. Yet that is precisely what the Commission is doing today.

2. In the order authorizing Port Arthur LNG, LLC’s LNG export terminal (LNG Terminal) pursuant to section 3 of the NGA and the associated natural gas pipelines (Pipeline Projects) pursuant to section 7 of the NGA (collectively, Project), the Commission treats GHG emissions differently than all other environmental impacts. By refusing to assess the significance of the impact of the Project’s GHG emissions, even after quantifying them, the Commission not only neglects its obligation to assess the environmental impacts, but also its concomitant duty to explore possible mitigation measures to reduce any significant adverse effects. This systematic failure to consider the Project’s impacts on climate change is what allows the Commission to misleadingly state that “[a]ll [environmental] impacts . . . will be reduced to less-than-significant

¹ 15 U.S.C. §§ 717b, 717f (2012).

² National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321 *et seq.*

(continued ...)

levels”³ and, as a result, conclude that the Project satisfies the NGA’s public interest standards.⁴

I. The Commission’s Public Interest Determinations Are Not the Product of Reasoned Decisionmaking

3. The NGA’s regulation of LNG import and export facilities “implicate[s] a tangled web of regulatory processes” split between the U.S. Department of Energy (DOE) and the Commission.⁵ The NGA establishes a general presumption favoring the import and export of LNG unless there is an affirmative finding that the import or export “will not be consistent with the public interest.”⁶ Section 3 of the NGA, which governs LNG imports and exports, provides for two independent public interest determinations: one regarding the import or export of LNG itself and one regarding the facilities used for that import or export. DOE determines whether the import or export of LNG is consistent with the public interest, with transactions among free trade countries legislatively deemed to be “consistent with the public interest.”⁷ The Commission evaluates whether “an application for the siting, construction, expansion, or operation of an LNG terminal” is

³ *Port Arthur LNG, LLC*, 167 FERC ¶ 61,052, at P 101 (2019) (Certificate Order); *see also* Final Environmental Impact Statement at ES-10 (Final EIS).

⁴ Certificate Order, 167 FERC ¶ 61,052 at PP 29, 36.

⁵ *Sierra Club v. FERC*, 827 F.3d 36, 40 (D.C. Cir. 2016) (*Freeport*).

⁶ 15 U.S.C. §717b(a); *see EarthReports, Inc. v. FERC*, 828 F.3d 949, 953 (D.C. Cir. 2016) (citing *W. Va. Pub. Servs. Comm’n v. Dep’t of Energy*, 681 F.2d 847, 856 (D.C. Cir. 1982) (“NGA [section] 3, unlike [section] 7, ‘sets out a general presumption favoring such authorization.’”)). Under section 7 of the NGA, the Commission approves a proposed pipeline if it is shown to be consistent with the public interest, while under section 3, the Commission approves a proposed LNG import or export facility unless it is shown to be inconsistent with the public interest. *Compare* 15 U.S.C. § 717b(a) *with* 15 U.S.C. §717f(a), (e).

⁷ 15 U.S.C. § 717b(c). The courts have explained that, because the authority to authorize LNG exports rests with DOE, NEPA does not require the Commission to consider the upstream or downstream GHG emissions that may be indirect effects of the export itself when determining whether the related LNG export facility satisfies section 3 of the NGA. *See Freeport*, 827 F.3d at 46-47; *see also Sierra Club v. FERC*, 867 F.3d 1357, 1373 (D.C. Cir. 2017) (*Sabal Trail*) (discussing *Freeport*). NEPA still requires, however, that the Commission consider the direct GHG emissions associated with a proposed LNG export facility. *See Freeport*, 827 F.3d at 41, 46.

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consistent with the public interest.⁸ Pursuant to that authority, the Commission must approve a proposed LNG facility unless the record shows that the facility would be inconsistent with the public interest.⁹

4. As part of that determination, the Commission must examine a proposed LNG facility's impact on the environment and public safety. A facility's impact on climate change must be part of a public interest determination under the NGA.¹⁰ Nevertheless, the Commission maintains that it need not consider whether the Project's contribution to climate change is significant because it lacks a means to do so—or at least so it claims.¹¹ However, the shocking part of the Commission's rationale is what comes next. Based on this alleged inability to assess significance, the Commission concludes that the Project will have no significant environmental impact.¹² That is the equivalent of saying that an action that is known to be dangerous is actually safe because we do not know exactly how dangerous it is. That is ludicrous and it certainly does not give climate change the serious consideration it deserves and that the law demands.

5. The Commission's failure to consider the impact of the Project's GHG emissions is all-the-more glaring given the volume of emissions at issue in this proceeding. The Commission points out that the operation of the Project will directly emit 4.77 million

⁸ 15 U.S.C. § 717b(e). In 1977, Congress transferred the regulatory functions of NGA section 3 to DOE. DOE, however, subsequently delegated to the Commission authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal, while retaining the authority to determine whether the import or export of LNG to non-free trade countries is in the public interest. *See EarthReports, Inc.*, 828 F.3d at 952-53.

⁹ *See Freeport*, 827 F.3d at 40-41.

¹⁰ *See Sabal Trail*, 867 F.3d at 1373 (explaining that the Commission may “deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment”); *see also Atl. Ref. Co. v. Pub. Serv. Comm'n of N.Y.*, 360 U.S. 378, 391 (1959) (holding that the NGA requires the Commission to consider “all factors bearing on the public interest”).

¹¹ Certificate Order, 167 FERC ¶ 61,052 at P 138; *see also* Final EIS at 4-361–4-362 (explaining that “[t]here is no generally accepted methodology to estimate what extent a project's incremental contribution to [GHG] emissions would result in physical effects on the environment”).

¹² Certificate Order, 167 FERC ¶ 61,052 at P 101; Final EIS at ES-10.

(continued ...)

metric tons of GHGs annually.¹³ Given the Commission’s acknowledgment of that GHG emissions contribute to climate change,¹⁴ the decision to exclude GHG emissions from playing any role in the Commission’s public interest analysis is indefensible.

6. The implications of the Commission’s approach to evaluating the impacts of GHG emissions extend beyond any single proceeding under NGA section 3 or section 7. Taking the Commission’s approach to its logical conclusion, the Commission would approve any project regardless of the amount of GHGs emitted without ever determining the significance of their environmental impact. If the Commission’s assessment of that impact will not change no matter the volume of GHG emissions at issue, those emissions and their consequences cannot meaningfully factor into the public interest determination. Approving a project that may significantly contribute to the harms caused by climate change without meaningfully evaluating the significance of that impact or considering it as part of the public interest determination is contrary to law, arbitrary and capricious, and not the product of reasoned decisionmaking.¹⁵

II. The Commission Fails to Satisfy Its Obligations under NEPA

7. In order to evaluate the environmental consequences of the Project under NEPA, the Commission must consider the harm caused by the Project’s GHG emissions and “evaluate the ‘incremental impact’ that these emissions will have on climate change or the environment more generally.”¹⁶ As noted, the Final EIS states that the Project will directly emit 4.77 million metric tons of GHGs annually.¹⁷ Although that quantification

¹³ Certificate Order, 167 FERC ¶ 61,052 at P 137; Final EIS at Table 4.11.1-7 (Carbon dioxide emissions in the Final EIS are expressed in short tons.).

¹⁴ Final EIS at 4-360.

¹⁵ As noted, the NGA “requires the Commission to evaluate all factors bearing on the public interest,” *Atl. Ref. Co.*, 360 U.S. at 391, which *Sabal Trail* held includes a facility’s contribution to the harms caused by climate change, 867 F.3d at 1373.

¹⁶ *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1216 (9th Cir. 2008); *WildEarth Guardians v. Zinke*, No. CV 16-1724 (RC), 2019 WL 1273181, at *1 (D.D.C. Mar. 19, 2019) (explaining that the agency was required to “provide the information necessary for the public and agency decisionmakers to understand the degree to which [its] decisions at issue would contribute” to the “impacts of climate change in the state, the region, and across the country”).

¹⁷ *Supra* note 13.

(continued ...)

of the Project's GHG emissions is a necessary step toward meeting the Commission's NEPA obligations, listing the volume of emissions alone is insufficient.¹⁸

8. As an initial matter, identifying the consequences that those emissions will have for climate change is essential if NEPA is to play the disclosure and good government roles for which it was designed. The Supreme Court has explained that NEPA's purpose is to "ensure[] that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts" and to "guarantee[] that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision."¹⁹ It is hard to see how hiding the ball on a project's climate impacts is consistent with either of those purposes.

9. In addition, under NEPA, a finding of significance informs the Commission's inquiry into potential ways of mitigating environmental impacts.²⁰ The Supreme Court has held that an EIS must "contain a detailed discussion of possible mitigation measures" to address adverse environmental impacts.²¹ The Court explained that, "[w]ithout such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects" of a project, making an examination of possible mitigation measures necessary to ensure that the agency has taken a "hard look" at the environmental consequences of the action at issue.²² Consistent with this

¹⁸ See *Ctr. for Biological Diversity*, 538 F.3d at 1216 ("While the [environmental document] quantifies the expected amount of CO₂ emitted . . . , it does not evaluate the 'incremental impact' that these emissions will have on climate change or on the environment more generally"); *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 995 (9th Cir. 2004) ("A calculation of the total number of acres to be harvested in the watershed is a necessary component . . . , but it is not a sufficient description of the actual environmental effects that can be expected from logging those acres.").

¹⁹ *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 768 (2004) (citing *Robertson v. Methow Valley Citizens Coun.*, 490 U.S. 332, 349 (1989)).

²⁰ 40 C.F.R. § 1502.16 (2018) (NEPA requires an implementing agency to form a "scientific and analytic basis for the comparisons" of the environmental consequences of its action in its environmental review, which "shall include discussions of . . . [d]irect effects and their significance.").

²¹ *Robertson*, 490 U.S. at 351.

²² *Id.* at 352; see also 40 C.F.R. §§ 1508.20 (defining mitigation), 1508.25 (continued ...)

obligation, the Final EIS discusses mitigation measures to ensure that the Project's adverse environmental impacts, excluding GHG emissions, are reduced to less than significant levels.²³ For example, in order to find that the Project's impacts on wetlands are not anticipated to be significant,²⁴ the Commission relies on compensatory mitigation including the purchase of mitigation credits.²⁵ The Commission not only has the obligation to discuss mitigation of adverse environmental impacts under NEPA, but also the authority to condition certificates under section 3 and 7 of the NGA.²⁶ Once again, however, the Project's climate change impacts are treated differently. By refusing to assess significance, the Commission escapes its obligation to consider mitigation measures for the Project's GHG emissions.

10. In refusing to even assess the significance of the Project's GHG emissions during the environmental review process, the Commission relegates climate change to a negligible role, at best, in its NEPA analysis. Nothing in today's order justifies this result. The Commission argues that it cannot determine whether the Project's contribution to climate change is significant, relying on the premise that there is no "generally accepted methodology" to estimate a project's impact on climate change, either locally or nationally.²⁷ As a logical matter, the argument that there is no single standard methodology for evaluating the significance of GHG emissions does not excuse the Commission from assessing the Project's environmental impacts under NEPA. The

(including in the scope of an environmental impact statement mitigation measures).

²³ Certificate Order, 167 FERC ¶ 61,052 at PP 102, 106, 109, 112, 114, 128 (The Commission states that adverse environmental impacts to geology, water, wetlands, vegetation, wildlife, and air quality will not be significant if the Applicant implements proposed mitigation measures.).

²⁴ Final EIS at ES-6.

²⁵ *Id.*; *see also* Final EIS at 4-58–4-59 (The U.S. Army Corp of Engineers has a goal of "no net loss" for wetlands and requires compensatory mitigation for all permanent wetland loss. The Final EIS relies on multiple mitigation measures including contributed dredging materials for emergent wetlands and wetland mitigation credit purchases.).

²⁶ 15 U.S.C. § 717b(e)(3)(A); 15 U.S.C. § 717f(e); Certificate Order, 167 FERC ¶ 61,052 at P 141 ("[T]he Commission has the authority to take whatever steps are necessary to ensure the protection of environmental resources . . . , including authority to impose any additional measures deemed necessary . . .").

²⁷ Final EIS at 4-361–4-362; *see also* Certificate Order, 167 FERC ¶ 61,052 at P 138.

(continued ...)

claimed absence of a standard methodology is no justification for effectively ignoring those emissions.²⁸

11. Moreover, the argument that there is no single standard methodology for evaluating the significance of GHG emissions is a red herring. The lack of any single methodology does not prevent the Commission from adopting *a* methodology, even if others are available. The Commission has several tools to assess the harm from the Project's contribution to climate change. By measuring the long-term damage done by a ton of carbon dioxide, the Social Cost of Carbon links GHG emissions to *actual* environmental effects from climate change, thereby facilitating the necessary "hard look" at the Project's environmental impacts that NEPA requires. Especially when it comes to a global problem like climate change, a measure for translating a single project's climate change impacts into concrete and comprehensible terms plays a useful role in the NEPA process by putting the harm in terms that are readily accessible for both agency decisionmakers and the public at large. Yet, the Commission continues to ignore the Social Cost of Carbon, relying instead on deeply flawed reasoning that I have previously critiqued at length.²⁹

12. Regardless of tools or methodologies available, the Commission can use its judgement and discretion to consider all factors and determine, quantitatively or qualitatively, whether the Project's GHG emissions have a significant impact on climate change. After all, that is precisely what the Commission does in other aspects of its environmental review. For example, consider the Commission's evaluation of the Project's impact on the surrounding land. The Final EIS determines that a total of 992

²⁸ My colleague, Commissioner LaFleur, wrestled with these questions and reached a judgment on both the significance of the impact of the GHG emissions and the merits of the Project notwithstanding the lack of analysis in the Commission's order. Certificate Order, 167 FERC ¶ 61,052 (LaFleur, Comm'r, concurring at P 8). Providing additional context regarding the Project's GHG emissions and their cumulative impact is a useful first step that promotes public disclosure and informed decisionmaking. But neither that context nor a concurrence assessing the significance of the impact of the Project's GHG emissions can remedy the order's erroneous conclusion that the Commission cannot evaluate the significance of the Project's contribution to climate change or its assumption that such a contribution is insignificant. Nor can a concurrence remedy the absence of any discussion in the record of the significance of the Project's contribution to climate change.

²⁹ See, e.g., *Fla. Se. Connection, LLC*, 164 FERC ¶ 61,099 (2018) (Glick, Comm'r, dissenting).

(continued ...)

acres of vegetation and upland forest will be permanently affected by the Project,³⁰ but then concludes that the Project “will not have a significant impact on vegetation.”³¹ The Final EIS provides no “standard methodology” available to the Commission to evaluate this impact.³² Instead, the Commission uses its judgment to conduct a qualitative review to assess the Project’s impact on vegetation and conclude that the impact would not be significant based on the “minor nature of the impacts.”³³ The Commission’s refusal to exercise similar qualitative discretion and judgment when it comes to evaluating the impacts of GHG emissions is arbitrary and capricious and willfully ignorant.

13. The Commission’s refusal to seriously consider the significance of the impact of the Project’s GHG emissions is even more mystifying because NEPA “does not dictate particular decisional outcomes.”³⁴ NEPA “merely prohibits uninformed—rather than unwise—agency action.”³⁵ Taking the matter seriously—and rigorously examining a project’s impacts on climate change—does not necessarily prevent any of my colleagues from ultimately concluding that a project meets the public interest standard. Indeed, a thorough investigation of a project’s contribution to climate change would also help infrastructure developers by reducing their legal risk in the appeals that will inevitably follow. At the end of the day, no one benefits from the Commission’s refusal to consider a project’s impact on climate change.

For these reasons, I respectfully dissent.

Richard Glick
Commissioner

³⁰ Certificate Order, 167 FERC ¶ 61,052 at PP 110-111.

³¹ *Id.* P 112.

³² As compared to the Commission’s requirement for a “standard methodology” to determine the significance of the Project’s GHG emissions, as discussed in Certificate Order, 167 FERC ¶ 61,052 at P 138 (citing to *Dominion Transmission, Inc.*, 163 FERC ¶ 61,128, at PP 67-70 (2018) (LaFleur, Comm’r, dissenting in part; Glick, Comm’r, dissenting in part)).

³³ *Id.* P 112.

³⁴ *Sierra Club v. U.S. Army Corps of Engineers*, 803 F.3d 31, 37 (D.C. Cir. 2015).

³⁵ *Id.* (quoting *Robertson*, 490 U.S. at 351).

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Port Arthur LNG, LLC PALNG Common Facilities Company, LLC	Docket Nos.	CP17-20-000
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Port Arthur Pipeline, LLC		CP17-21-000 CP17-21-001 CP18-7-000
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(Issued April 18, 2019)

LaFLEUR, Commissioner, *concurring*:

1. Today's order grants authorization to Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC (collectively Port Arthur LNG) pursuant to section 3 of the Natural Gas Act (NGA),¹ to site, construct and operate a new liquefied natural gas (LNG) export terminal (Port Arthur LNG Project) in Port Arthur, Texas.² The Commission also authorizes Port Arthur Pipeline, LLC (Port Arthur Pipeline), pursuant to section 7 of the NGA,³ to construct and operate both, the Texas Connector Project to provide up to 2,000,000 dekatherms per day (Dth/day) of natural gas transportation service to the proposed export terminal and the Louisiana Connector Project to provide 2,000,000 Dth/day to the proposed export terminal. For the reasons discussed below, I concur.

2. Under section 3 of the NGA, oversight for LNG export is divided between the Commission and the U.S. Department of Energy (DOE). Specifically, it is the DOE, not the Commission, which retains the exclusive authority over the export of the natural gas as a commodity, including the responsibility to consider whether the exportation of that

¹ 15 U.S.C. § 717b (2012).

² *Port Arthur LNG, LLC*, 167 FERC ¶ 61,052 (2019) (Certificate Order).

³ 15 U.S.C. § 717f(c) (2012).

(continued ...)

gas is in the public interest.⁴ If the export will be sent to a free trade country, the NGA automatically “deems” the export “to be consistent with the public interest.”⁵

3. This framework leaves the Commission with the limited authority to approve or deny an application for the siting, construction, expansion, or operation of the LNG terminal facilities. In exercising its section 3 authority, the Commission’s responsibility includes conducting a public interest analysis to consider the technical and environmental aspects of the LNG facilities themselves. Our environmental review is governed by the National Environmental Policy Act⁶ (NEPA) which, as relevant here, requires the Commission to take a “hard look” at the potential environmental impacts that could result from the Port Arthur LNG Project, including the climate change impacts of the proposed project.

4. The U.S. Court of Appeals for the D.C. Circuit (D.C. Circuit) has made clear that the DOE, rather than the Commission, has the responsibility to assess upstream and downstream indirect GHG emission impacts of LNG exports as part of the DOE’s determination of the public interest in exporting the natural gas.⁷ However, the Commission still has the clear responsibility to disclose and consider the direct and cumulative GHG impacts of the proposed LNG export facility, and make significance determinations regarding such impacts, in order to satisfy our obligations under NEPA and section 3 of the NGA.

5. I appreciate that the Commission has disclosed in the Certificate Order the direct GHG emissions of the Port Arthur LNG Project and the Texas and Louisiana Connector pipeline projects, and has provided important context by comparing them to the national GHG emissions inventory.⁸ We have included this comparison in the past to provide

⁴ 15 U.S.C. § 717b(a)-(c) (2012).

⁵ 15 U.S.C. § 717b(c) (2012).

⁶ National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321 *et seq.*

⁷ *Sierra Club v. FERC*, 827 F.3d 36, 47 (D.C. Cir. 2016) (*Freeport*) (“[T]he Commission’s NEPA analysis did not have to address the indirect effects of the anticipated *export* of natural gas. That is because the Department of Energy, not the Commission, has the sole authority to license the export of any natural gas going through the Freeport facilities.”). *See also Sierra Club v. FERC*, 827 F.3d 59 (D.C. Cir. 2016) (*Sabine Pass*); *EarthReports, Inc. v. FERC*, 823 F.3d 949 (D.C. Cir. 2016).

⁸ Certificate Order, 167 FERC ¶ 61,052 at P 137. Final Environmental Impact Statement (EIS) at Table 4.11.1-7. The Final EIS also discloses the direct GHG emissions from the construction of the LNG terminal and the pipelines: 197,714 metric (*continued ...*)

context to the indirect emissions of pipeline projects, and the D.C. Circuit has taken note of the Commission's efforts to use available national, regional, and state emissions inventories as part of our climate change analysis.⁹

6. I recognize that the disclosure of the data, and the context provided, is only the first step to assist the Commission in determining the significance of a given rate or volume of GHG emissions as part of our climate change analysis. As a second step, NEPA requires that we analyze that information to determine whether a specific impact is, in fact, significant.¹⁰ Unfortunately, to date, the Commission has not established a framework for making a significance determination. However, the magnitude of the direct GHG emission from the Port Arthur LNG Project are substantial and certainly appear to be significant as contemplated by NEPA.

tons during the multiple years of construction. Table 4.11.1-4, 4.11.1-5 and 4.11.1-6. *See Sierra Club v. FERC*, 867 F.3d 1357 at 1374 (D.C. Cir. 2017) (*Sabal Trail*) (“Quantification would permit the agency to compare the emissions from this project to emissions from other projects, to total emissions from the state or the region, or to regional or national emissions-control goals.”)

⁹ *E.g.*, *Town of Weymouth, Mass. v. FERC*, No. 17-1135, 2018 WL 6921213 (D.C. Cir. Dec. 27, 2018)(per curiam) (speaking approvingly of the Commission's quantification of the project's expected GHG emissions, which included a comparison of the Atlantic Bridge Project against state and regional climate change goals.); *Appalachian Voices v. FERC*, No. 17-1721 (D.C. Cir. Feb. 19, 2019) (per curiam) (dismissing claims that FERC failed to adequately consider downstream climate impacts of the Mountain Valley Pipeline project by noting, among other things, that “FERC provided an estimate of the upper bound of emissions resulting from end-use combustion...”). By comparison, in *Sabal Trail*, the D.C. Circuit vacated and remanded the Commission's authorization of the Southeast Market Pipeline Project and directed the Commission to both quantify and consider the project's downstream GHG emissions or explain in more detail why it cannot do so. In response to the Court order, the Commission quantified the net, gross, and full-burn of downstream GHG emissions and compared them to the state and national GHG emissions inventories.

¹⁰ Under NEPA, when evaluating the significance of a particular impact, the Commission must consider both context and intensity. 40 C.F.R. § 1508.27(a) (2017) (Context means “that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests and the locality.”). 40 C.F.R. § 1508.27(b) (2017) (Intensity refers to “the severity of the impact”).

(continued ...)

7. I remain frustrated by the Commission's continued refusal to even consider how we might develop a framework for assessing the potential significance of GHG emissions.¹¹ While it might be easier to assess significance if we had national emissions reduction targets, like EPA's Clean Power Plan or the Paris Climate Accord,¹² to use as part of our framework, the lack of such targets does not prevent the Commission from making a significance determination in this or in any other case. In fact, the Commission makes challenging determinations on quantitative and qualitative issues in many other areas of our work.¹³

¹¹ In my concurrence on the Driftwood LNG Project, I explain that finding the GHG emissions to be significant does not mean the Commission cannot approve a proposed project. NEPA requires the Commission to disclose and consider all environmental impacts of a proposed action, but NEPA does not mandate particular results, it simply prescribes the necessary process for considering each impact. Once a significant impact has been identified then the next logical step is to think about ways to mitigate that impact. *Driftwood LNG LLC*, 167 FERC ¶ 61,054 (2019) (LaFleur, Comm'r, *concurring* at PP 9-10) (citing *KN Wattenberg Transmission LLC*, 90 FERC ¶ 61,322, at 62,083 (2000) (citing and quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989))).

¹² As noted in the Certificate Order, the EPA's Clean Power Plan and the Paris climate account are pending repeal and withdrawal, respectively. Certificate Order, 167 FERC ¶ 61,052 at P 137, nt. 194.

¹³ Many of the core areas of the Commission's work have required the development of analytical frameworks, often a combination of quantitative measurements and qualitative assessments, to fulfill the Commission's responsibilities under its broad authorizing statutes. This work regularly requires that the Commission exercise judgment, based on its expertise, precedent, and the record before it. For example, to help determine just and reasonable returns on equity (ROEs) under the Federal Power Act, Natural Gas Act, and Interstate Commerce Act, the Commission identifies a proxy group of comparably risky companies, applies a method or methods to determine a range of potentially reasonable ROEs (i.e., the zone of reasonableness), and then considers various factors to determine the just and reasonable ROE within that range. *See also*, e.g., *Promoting Transmission Investment through Pricing Reform*, Order No. 679, FERC Stats. & Regs. ¶ 31,222, *order on reh'g*, Order No. 679-A, FERC Stats. & Regs. ¶ 31,236 (2006), *order on reh'g*, 119 FERC ¶ 61,062 (2007) (establishing Commission regulations and policy for reviewing requests for transmission incentives); *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, FERC Stats. & Regs. ¶ 31,323 (2011), *order on reh'g*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh'g and clarification*, Order No. 1000-B, 141 FERC ¶ 61,044 (*continued ...*)

8. I do not believe it is beyond the capability of this Commission to determine whether a given rate or volume of GHG emissions should be considered significant. The Commission has grappled with every other identifiable and measurable environmental impact; for example, we quantify, consider, and mitigate impacts to land, water, and species, and we make determinations on whether the impacts to wetlands or mussels are significant.¹⁴ For reasons that I do not find persuasive, the Commission treats climate impacts differently than all other environmental impacts in our environmental review, and refuses to make such determinations regarding climate change impacts. Instead, the Commission summarily finds that because it cannot decide how to conduct a meaningful analysis of climate change impacts, it is not required to conduct *any* analysis of significance. I disagree.

9. With regards to cumulative impacts analysis, I appreciate that the analysis in the final EIS addresses a range of resources impacted within the identified geographic scope of the Port Arthur LNG Project. However, as I highlighted in my concurrence in

(2012), *aff'd sub nom. S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. 2014) (requiring, among other things, the development of regional cost allocation methods subject to certain general cost allocation principles); *BP Pipelines (Alaska) Inc.*, Opinion No. 544, 153 FERC ¶ 61,233 (2015) (conducting a prudence review of a significant expansion of the Trans Alaska Pipeline System). I also note that the Commission is currently actively considering a broad topic – resilience – whose scope and complexity might similarly require the development of new analytical frameworks for conducting the Commission's work.

¹⁴ In the Final EIS, the Commission made a significance determination on: geology, soils, water resources, wildlife, aquatic resources, wetlands, vegetation, wildlife resources, land use, recreation, and visual impacts, socioeconomics, air quality, noise, and reliability and safety. The Commission also determined that adverse environmental impacts to geology, water, wetlands, vegetation, wildlife, and air quality would not be significant with the proposed mitigation measures. Moreover, in making such determinations, the Commission has frequently relied solely on a qualitative assessment and Commission staff discretion, rather than quantitative analysis, as it did with the vegetation impacts in this case. Certificate Order, 167 FERC ¶ 61,052 at PP 110-112. I reject the view that the difficulty of quantifying GHG emissions impacts is an excuse for failing to evaluate the significance of those impacts.

(continued ...)

Calcasieu Pass LNG,¹⁵ I disagree with the decision to exclude GHG emissions from the cumulative impacts analysis.¹⁶

10. As I have stated before, it takes minimal effort to disclose the GHG emissions for the other FERC projects identified in the final EIS's cumulative impacts air region, and include an estimate of the total annual potential GHG emissions associated with a proposed project and other nearby projects as part of our environmental review. I am disappointed that the final EIS does not do so. I recognize that using the 50 km air region is a rudimentary proxy for assessing the cumulative impacts of GHG emissions because those emissions are not typically measured on a local or regional basis.¹⁷ But disclosing that minimal information would at least be a start, and I believe that failure to do so creates added legal risk.¹⁸

11. Since the Commission fails to disclose the cumulative GHG emissions numbers, I have included an estimate of them in Table 1 attached to my concurrence. I believe that,

¹⁵ *Venture Global Calcasieu Pass, LLC*, 166 FERC ¶ 61,144 (2019) (LaFleur, Comm'r, *concurring*).

¹⁶ Final EIS at 4-330-4-337, Table 4.13.1-1.

¹⁷ 50 kilometers is the distance used in the final EIS and by the EPA for cumulative modeling of large sources of air pollutants (nitrogen oxides [NO_x], sulfur oxides [SO_x], particulate matter [PM], etc.), volatile organic compounds, and hazardous air pollutants. GHGs are not included. Final EIS at 4-324- 4-325, Table 4.13-1.

¹⁸ Recently, the U.S. District Court for D.C. criticized the Bureau of Land Management (BLM) for failing to disclose the cumulative impacts of GHG emissions in sufficient detail. The court found that NEPA requires “BLM quantify the emissions from each leasing decision—past, present or reasonably foreseeable—and compare those emissions to regional and national emissions, setting forth with reasonable specificity the cumulative effect of the leasing decision at issue.” *WildEarth Guardians v. Zinke*, No. CV 16-1724 (RC), 2019 WL 1273181, at *46 (D.D.C. Mar. 19, 2019). By comparison, the U.S. District Court for Colorado, upheld BLM, finding they took an appropriately hard look at cumulative climate change impacts where, the agency: (1) looked at statewide emissions levels from emitting coal-fired power plants in Colorado and provided a comparative assessment; (2) provided a qualitative analysis of climate change and the role played by GHG emissions; (3) performed a regional cumulative impacts analysis for the future mineral development in the region for ten years; and (4) quantified the GHG emissions from both projects. *Citizens for a Healthy Cmty. v. Bureau of Land Mgmt.*, No. 1:17-CV-02519-LTB-GPG, 2019 WL 1382785, at *20-21 (D. Colo. Mar. 27, 2019).

(continued ...)

consistent with our NEPA obligations, at a minimum, the GHG emissions must be disclosed and considered, both cumulatively and with respect to individual facilities.

12. I will continue to consider and evaluate these issues as they arise in individual proceedings, however, I believe the Commission should proactively address these issues. If we do not, further guidance from the courts on our NEPA responsibility to consider climate change will likely require us to do so. Such guidance could create additional legal risk and add additional complexities to our reviews under both Section 3 and Section 7 of the NGA. Thus, I believe that proactive solutions to this challenging problem must be explored.

13. Given my review of the record including climate impacts, I find the Port Arthur LNG Project is not inconsistent with the public interest.¹⁹ As for Port Arthur Pipeline's Texas Connector and Louisiana Connector Projects, which is solely serving the Port Arthur LNG Project, I find the pipeline is in the public convenience and necessity. The D.C. Circuit has recognized that, as with the appended LNG export facility, the downstream indirect GHG emissions for the pipeline are not part of the Commission's environmental review and consideration.²⁰ Therefore, my public interest determination is based on a review of the rest of the environmental review of the pipeline project. After carefully balancing the need for the project and its environmental impacts, I find the project is in the public interest.

For these reasons, I respectfully concur.

Cheryl A. LaFleur
Commissioner

¹⁹ I recognize that it is difficult to balance the GHG impacts with the potential public benefits of export, since the latter are part of DOE's responsibility, and the Commission is working under a presumption of public interest. I have considered the information provided by the 2014 National Energy Technology Lab (NETL), *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, to provide some context to benefits. This analysis calculates the life cycle GHG emissions for regional coal and imported natural gas power in Europe and Asia. The approach includes GHG impacts of liquefaction and finds, on balance that export of US LNG has less climate impacts than some alternatives. As I have stated before, that analysis should be updated based on more recent information and proposed projects.

²⁰ See *Sabine Pass*, 827 F.3d at 68.

Table 1: Annual Direct CO₂e Emissions from FERC Projects within about 50km Port Arthur LNG						
	Port Arthur Liquefaction	Sabine Pass LNG	Golden Pass LNG Liquefaction	South Texas Expansion Project	Total	National Inventory for 2016
GHG in CO ₂ e (tpy)	5,190,000	10,220,000	5,330,000	5.2	20,740,005	6,395,700,000
Percent of National Inventory	0.08%	0.16%	0.08%	0.00%	0.32%	--
Notes:	Includes LNG terminal; North, South, and Louisiana Connector Compressor Stations	Includes trains 1-6	Includes terminal expansion, MP 1 Compressor Station, and MP 66 Compressor Station; does not include LNG import terminal	Piping modifications to the existing launcher/receiver at MP 412.73 on Line 16 within Texas Eastern's Vidor Compressor Station. This only shows the increase in emissions based on the modifications.	N/A	Table ES-2: Net GHG Emissions, inclusive of sources and sinks converted to english tons. https://www.epa.gov/sites/pr oduction/files/2018-01/documents/2018_complete_report.pdf