

166 FERC ¶ 61,144
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Venture Global Calcasieu Pass, LLC

Docket Nos. CP15-550-000

TransCameron Pipeline, LLC

CP15-551-000

CP15-551-001

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

(Issued February 21, 2019)

1. On September 4, 2015, Venture Global Calcasieu Pass, LLC (Calcasieu Pass) filed an application in Docket No. CP15-550-000, pursuant to section 3 of the Natural Gas Act (NGA)¹ and Part 153 of the Commission's regulations,² for authorization to site, construct, and operate a new liquefied natural gas (LNG) export terminal and associated facilities (Export Terminal) along the Calcasieu Ship Channel in Cameron Parish, Louisiana.

2. In the same application, TransCameron Pipeline, LLC (TransCameron) requested in Docket No. CP15-551-000, pursuant to section 7 of the NGA³ and Part 157 of the Commission's regulations,⁴ authorization to construct and operate a new interstate natural gas pipeline system consisting of two segments, the East and West Laterals. On June 28, 2016, TransCameron filed an amendment to its application, removing the West Lateral from the project and modifying the capacity of the East Lateral. As amended, TransCameron's project consists of approximately 23.4 miles of 42-inch-diameter pipeline and related facilities extending from the Grand Chenier Station in Cameron

¹ 15 U.S.C. § 717b (2012).

² 18 C.F.R. pt. 153 (2018).

³ 15 U.S.C. § 717f(c) (2012).

⁴ 18 C.F.R. pt. 157 (2018).

Parish, Louisiana, to the proposed Export Terminal. The project is capable of providing up to 2,125,000 dekatherms per day (Dth/d) of natural gas transportation service. TransCameron also requests approval of its proposed *pro forma* tariff, a blanket certificate under Part 157, Subpart F, of the Commission's regulations to perform certain routine construction activities and operations, and a blanket certificate under Part 284, Subpart G, of the Commission's regulations to provide open-access firm transportation services.

3. For the reasons discussed in this order, we will authorize Calcasieu Pass' proposal under section 3 to site, construct, and operate the Export Terminal Project. We will also authorize TransCameron's proposal under section 7(c) to construct and operate the East Lateral Project. These authorizations are subject to the conditions discussed herein.

I. Background and Proposals

4. Calcasieu Pass and TransCameron are limited liability companies organized under the laws of Delaware, and are direct, wholly-owned subsidiaries of Venture Global LNG, Inc. Upon receipt of its requested certificate authorizations and commencement of pipeline operations, TransCameron will become a natural gas company within the meaning of section 2(6) of the NGA⁵ and will be subject to the Commission's jurisdiction. As its operations will not be in interstate commerce, Calcasieu Pass 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.

A. Calcasieu Pass' Export Terminal Project

5. Calcasieu Pass seeks authorization to site, construct, and operate an LNG export terminal and associated facilities along the Calcasieu Ship Channel in Cameron Parish, Louisiana. The Export Terminal is designed with a nameplate liquefaction and export capacity of 10 million metric tons per annum (MTPA), and a peak achievable capacity of 12 MTPA under optimal operating conditions. The Export Terminal will receive natural gas via TransCameron's proposed East Lateral pipeline.

6. The Export Terminal will be located on an approximately 828-acre site⁶ and will include the following facilities:

⁵ 15 U.S.C. § 717a(6) (2012).

⁶ Calcasieu Pass states it has a lease option agreement for a 264.7-acre parcel for up to 70 years, while the remaining acreage is secured pursuant to an exclusive agreement that contemplates a lease option agreement on similar terms and conditions.

- one natural gas gate station;
- three pretreatment blocks to remove carbon dioxide and water from the natural gas received from the East Lateral;
- liquefaction facilities consisting of nine refrigerant blocks;⁷
- LNG storage facilities consisting of two full-containment, above-ground LNG storage tanks, each with a capacity of approximately 200,000 cubic meters, four LNG storage tank send-out pumps, one LNG recirculation pump, and cryogenic piping;
- boil-off, flash, and gas relief systems;
- two LNG berthing docks, each designed to accommodate LNG carriers of 120,000 to 210,000 cubic meters;
- a 720-megawatt electric power generation facility;
- safety and security systems; and
- other appurtenant facilities.

7. Calcasieu Pass received authorization from the Department of Energy, Office of Fossil Energy (DOE/FE) to export annually up to 12 metric tons per annum (MPTA) of natural gas in the form of LNG to countries with which the United States has a Free Trade Agreement.⁸ In addition, Calcasieu Pass currently has pending before DOE/FE applications to export LNG to other nations with which the U.S. permits such trade, but has not entered into a Free Trade Agreement.⁹

⁷ Each liquefaction block will contain the following equipment: (1) two single mixed refrigerant processing units; (2) a refrigerant make-up system; (3) a removal unit for heavy hydrocarbons; (4) refrigerant storage vessels; and (5) distribution piping between the refrigerant storage site and liquefaction blocks.

⁸ *Venture Global LNG, LLC*, FE Docket No. 13-69-LNG, Order No. 3345 (Sept. 27, 2013) (authorizing the export of 5 MTPA) (DOE/FE Order No. 3345); *Venture Global LNG, LLC*, FE Docket No. 14-88-LNG, Order No. 3520 (Oct. 10, 2014) (authorizing the export of an additional 5 MTPA) (DOE/FE Order No. 3520); *Venture Global Calcasieu Pass, LLC*, FE Docket No. 15-25-LNG, Order No. 3662 (June 17, 2015) (authorizing the export of an additional 2 MTPA) (DOE/FE Order No. 3662).

⁹ See applications pending before DOE/FE in Docket Nos. FE13-69-LNG, FE14-

B. TransCameron's East Lateral Project

8. TransCameron proposes to construct a new pipeline to provide up to 2,125,000 Dth/d of natural gas transportation service from interconnects with other interstate and intrastate pipelines¹⁰ to Calcasieu Pass' proposed Export Terminal in Cameron Parish, Louisiana. Specifically, TransCameron proposes to construct: (1) approximately 23.4 miles of 42-inch-diameter pipeline originating in the vicinity of Grand Chenier Station in Cameron Parish, Louisiana, and extending to the proposed Export Terminal, also located in Cameron Parish, Louisiana; (2) a meter station; and (3) other appurtenant facilities.

9. TransCameron states that it held a binding open season from July 27, 2015, to August 14, 2015, for the proposed firm transportation capacity, and a supplemental open season for the amended project from May 2, 2016, to May 9, 2016. TransCameron states that Calcasieu Pass executed a binding precedent agreement for 100 percent of the firm transportation capacity for a term of twenty years, and that no other entity bid or expressed interest during either open season. TransCameron proposes to provide service to Calcasieu Pass at negotiated rates.

10. TransCameron also requests: (1) a blanket certificate of public convenience and necessity pursuant to Part 284, Subpart G of the Commission's regulations authorizing TransCameron to provide transportation service to customers requesting and qualifying for transportation service under its proposed FERC Gas Tariff, with pre-granted abandonment authorization;¹¹ (2) 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;¹² and (3) approval of its *pro forma* tariff.

88-LNG, and FE15-25-LNG.

¹⁰ The East Lateral is proposed to interconnect with two interstate natural gas pipelines, Texas Eastern Transmission, LP and ANR Pipeline Company, and one intrastate pipeline, Bridgeline Holdings, LP.

¹¹ 18 C.F.R. § 284.221 (2018).

¹² *Id.* § 157.204.

II. Procedural Issues

11. Notice of Calcasieu Pass' and TransCameron's joint application was issued on September 18, 2015, and published in the *Federal Register* on September 24, 2015.¹³ Lake Charles LNG Export Company, LLC, Lake Charles LNG Company, LLC, and Trunkline Gas Company, LLC (collectively, Lake Charles); and Magnolia LNG, LLC filed timely, unopposed motions to intervene. Timely, unopposed motions to intervene are granted by operation of Rule 214(c) of the Commission's Rules of Practice and Procedure.¹⁴ No protests or adverse comments were filed.

12. Notice of TransCameron's amendment to its application was published in the *Federal Register* on July 14, 2016.¹⁵ No comments, protests, or motions to intervene were filed.

13. On July 7, 2018, Cameron LNG, LLC filed a motion to intervene, which the Commission granted on September 11, 2018.

III. Discussion

A. Calcasieu Pass' Export Terminal Project

14. 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 their location require approval by the Commission under section 3 of the NGA.¹⁶ While

¹³ 80 Fed. Reg. 57,604 (2015).

¹⁴ 18 C.F.R. § 385.214(c) (2018).

¹⁵ 81 Fed. Reg. 45,473 (2016).

¹⁶ The regulatory functions of NGA 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. 00-044.00A, effective May 16, 2006. Applications for authorization to import or export natural gas must be submitted to the Department of Energy (DOE). The Commission does not authorize importation or exportation of the commodity itself. *See EarthReports, Inc. v. FERC*, 828 F.3d 949, 952-53 (D.C. Cir. 2016) (detailing how regulatory oversight for the export of LNG and

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.”¹⁷

15. DOE/FE, pursuant to its authority under NGA section 3, has issued Calcasieu Pass authorizations to export up to 12 MTPA of domestically-produced natural gas to free trade nations from the proposed Export Terminal in Cameron Parish, Louisiana.¹⁸ DOE/FE’s orders approving Calcasieu Pass’ export volumes state 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 Calcasieu Pass in support of the Application.”¹⁹

16. We have reviewed Calcasieu Pass’ application to determine if the siting, construction, and operation of its LNG terminal as proposed would not be consistent with the public interest.²⁰ The proposed Export Terminal is to be located entirely on private lands that are currently occupied by, or proposed for, similar industrial activities. Further, the final environmental impact statement (EIS) prepared by Commission staff

supporting facilities is divided between the Commission and DOE).

¹⁷ 15 U.S.C. §§ 717b(a) and 717b(e)(3) (2012). 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).

¹⁸ DOE/FE Order No. 3345 at 10; DOE/FE Order No. 3520 at 11; DOE/FE Order No. 3662 at 13.

¹⁹ DOE/FE Order No. 3345 at 6; DOE/FE Order No. 3520 at 7; DOE/FE Order No. 3662 at 8. 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 and applications for such importation and exportation shall be granted without modification or delay.” 15 U.S.C. § 717b(c) (2012).

²⁰ *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.”).

regarding the proposed projects finds that most of the direct environmental impacts from construction of the proposed facilities are expected to be temporary or short term.²¹ All 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 regulations and the environmental mitigation measures recommended in the final EIS and adopted by this order.²² The final EIS also concludes that reasonably foreseeable indirect or cumulative impacts from operation of Export Terminal will not be significant.²³

17. Calcasieu Pass is proposing to operate its LNG terminal 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 terminal. Accordingly, Calcasieu Pass' proposal does not trigger NGA section 3(e)(4).²⁴

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

B. TransCameron's East Lateral Project

19. TransCameron's proposal to construct and operate facilities to transport natural gas in interstate commerce subject to the jurisdiction of the Commission is subject to the requirements of subsections (c), and (e) of NGA section 7.²⁵

1. Certificate Policy Statement

20. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new pipeline construction.²⁶ The Certificate Policy Statement establishes

²¹ Final EIS at 1-16.

²² Final EIS at 15.

²³ Final EIS at 14.

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

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

²⁶ *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).

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 pipeline 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.

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

22. As discussed above, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without subsidization from existing customers. TransCameron is a new company with no existing shippers. Thus, there is no potential for subsidization on TransCameron's system or degradation of service to existing customers.

23. In addition, there is no evidence that the East Lateral project will adversely affect other pipelines or their customers. The project is not intended to replace service on other pipelines; moreover, no pipeline company or their captive customers have protested TransCameron's application.

24. We are also satisfied that TransCameron has taken appropriate steps to minimize adverse impacts on landowners and surrounding communities. Approximately 86 percent of the pipeline route is collocated with other pipeline, utility, or road corridors.²⁷ In addition, TransCameron engaged in public outreach during the pre-filing process, working with all interested stakeholders and soliciting input on any concerns. Accordingly, for purposes of our consideration under the Certificate Policy Statement, we

²⁷ Final EIS at 15.

find that TransCameron has taken sufficient steps to minimize impacts on landowners and surrounding communities.

25. TransCameron's proposed pipeline will enable it to transport domestically-sourced gas to the Calcasieu Pass LNG terminal, where the gas will be liquefied for export. TransCameron has entered into a long-term precedent agreement with Calcasieu Pass for 100 percent of the system's capacity. Based on the benefits the proposed project will provide, the lack of adverse effects on existing customers, other pipelines and their captive customers, and the minimal adverse effects on landowners and surrounding communities, we find, consistent with the Certificate Policy Statement and section 7 of the NGA, that the public convenience and necessity requires approval of TransCameron's proposal, subject to the conditions discussed below.

2. Blanket Certificates

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

27. TransCameron also requests 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.²⁸ Because the Commission has previously determined through a rulemaking that these blanket-certificate eligible activities are in the public convenience and necessity,²⁹ it is the Commission's practice to grant new natural gas companies a Part

²⁸ 18 C.F.R. § 157.203 (2018).

²⁹ *Revisions to the Blanket Certificate Regulations and Clarification Regarding Rates*, Order No. 686, 117 FERC ¶ 61,074, at P 9 (2006)0, *order on reh'g*, Order No. 686-A, 119 FERC ¶ 61,303, *order on reh'g*, Order No. 686-B, 120 FERC ¶ 61,249 (2007).

157 blanket certificate if requested.³⁰ Accordingly, we will grant TransCameron a Part 157 blanket certificate, subject to the conditions imposed herein.

C. Rates

1. Initial Rates

28. TransCameron proposes to provide firm and interruptible transportation services under Part 284 of the Commission's regulations at cost-based recourse rates, under its proposed Rate Schedules FT and IT, and also requests the authority to offer service at negotiated rates. TransCameron's proposed cost of service includes a rate of return which utilizes a capital structure of 50 percent debt and 50 percent equity, a debt cost of 7.75 percent, and a return on equity of 14.00 percent. TransCameron proposes a depreciation rate of 5.00 percent.³¹ TransCameron utilizes a straight-fixed variable rate design and proposes an initial monthly Rate Schedule FT reservation charge of \$1.71 per dekatherm (Dth) and an initial Rate Schedule FT usage charge of \$0.00.³² TransCameron derived the proposed FT recourse rates using a first year annual cost of service of \$43,584,788 and annual reservation design determinants of 25,500,000 Dth.³³

29. TransCameron also proposes an initial Rate Schedule IT charge of \$0.056262 Dth per day, based on a 100 percent load factor of its Rate Schedule FT reservation charge.³⁴ TransCameron states it will have no compression or other facilities using gas as a fuel on its system. Therefore, TransCameron has proposed an initial fuel retainage of 0.0 percent and a lost and unaccounted for gas percentage of 0.25 percent.

30. On January 29, 2018, in response to a staff data request, TransCameron provided an adjusted cost of service and recalculated its initial rates to reflect changes in the

³⁰ *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).

³¹ TransCameron's Amendment Application at Exhibits N and O.

³² TransCameron's Amendment Application at Exhibit N.

³³ *Id.*

³⁴ *Id.*

federal tax code, as per the Tax Cuts and Jobs Act of 2017,³⁵ which became effective January 1, 2018. TransCameron's work papers show that the effect of the tax code change is a reduction in the estimated first year annual cost of service to \$39,639,478. Using the revised cost of service that reflects changes to the federal tax code results in an initial monthly Rate Schedule FT reservation charge of \$1.55 per Dth and an initial IT rate of \$0.0511 per Dth. TransCameron's proposed Rate Schedule FT usage charge of \$0.00 per Dth remains unchanged. As TransCameron's January 29, 2018 calculation reflects the federal tax code that will be in effect when the project goes into service, the Commission will use the revised rates for the purpose of establishing the initial recourse rates.³⁶

31. We have reviewed TransCameron's proposed cost of service and initial rates and generally find them reasonable for a new pipeline entity. We accept TransCameron's proposed recourse rates, as revised in TransCameron's January 29, 2018 data response, as the initial recourse rates for service on the pipeline.

2. Three-Year Filing Requirement

32. Consistent with Commission precedent, TransCameron is required to file a cost and revenue study no later than three months after the end of its first three years of actual operation to justify its existing cost-based firm and interruptible recourse rates.³⁷ In its filing, the projected units of service should be no lower than those upon which TransCameron'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

³⁵ Pub. L. No. 115-97, 131 Stat. 2054 (Dec. 22, 2017).

³⁶ On July 18, 2018, the Commission issued Order No. 849. *Interstate and Intrastate Natural Gas Pipelines; Rate Changes Relating to Federal Income Tax Rate*, Order No. 849, 164 FERC ¶ 61,031 (2018). Order No. 849 finds that an income tax double recovery results from granting a Master Limited Partnership (MLP) a separate income tax allowance and a pre-tax return on equity, and accordingly, establishes a policy that MLPs are not permitted to recover an income tax allowance in their cost of service. Order No. 849 also explains that other partnership and pass-through entities not organized as an MLP must, if claiming an income tax allowance, address the double-recovery concern. In a May 18, 2018 response to a staff data request, TransCameron states that it is not a master limited partnership or pass-through entity for income tax purposes.

³⁷ *Bison Pipeline, LLC*, 131 FERC ¶ 61,013, at P 29 (2010); *Ruby Pipeline, L.L.C.*, 128 FERC ¶ 61,224, at P 57 (2009); *MarkWest Pioneer, L.L.C.*, 125 FERC ¶ 61,165, at P 34 (2008).

update cost of service data.³⁸ TransCameron's cost and revenue study should be filed through the eTariff portal using a Type of Filing Code 580. In addition, TransCameron is advised to include as part of the eFiling description, a reference to Docket No. CP15-551-000 and the cost and revenue study.³⁹ 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, TransCameron may make a 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.

3. Negotiated Rates

33. TransCameron states that it will provide service to the project shipper under a negotiated rate agreement pursuant to negotiated rate authority in Section 4.14 of the General Terms and Conditions (GT&C) of its tariff. TransCameron must file either its negotiated rate agreements or tariff records setting forth the essential terms of agreements in accordance with the Alternative Rate Policy Statement⁴⁰ and the Commission's negotiated rate policies.⁴¹ TransCameron must file the negotiated rate agreements or tariff records at least 30 days, but not more than 60 days, before the proposed effective date for such rates.

D. Non-Conforming Contract Provisions

34. TransCameron states that it has granted Calcasieu Pass, its anchor shipper, certain contractual rights not available to other customers, which it states may be viewed as material deviations from the *pro forma* FT service agreement set forth in its proposed

³⁸ 18 C.F.R. § 154.313 (2018).

³⁹ *Electronic Tariff Filings*, 130 FERC ¶ 61,047, at P 17 (2010).

⁴⁰ Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines; Regulation of Negotiated Transportation Services of Natural Gas Pipelines, 74 FERC ¶ 61,076; clarification granted, 74 FERC ¶ 61,194 (1996), order on reh'g, 75 FERC ¶ 61,024, reh'g denied, 75 FERC ¶ 61,066, reh'g dismissed, 75 FERC ¶ 61,291 (1996), petition denied sub nom. Burlington Res. Oil & Gas Co. v. FERC, 172 F.3d 918 (D.C. Cir. 1998).

⁴¹ Natural Gas Pipelines Negotiated Rate Policies and Practices; Modification of Negotiated Rate Policy, 104 FERC ¶ 61,134 (2003), order on reh'g and clarification, 114 FERC ¶ 61,042, reh'g dismissed and clarification denied, 114 FERC ¶ 61,304 (2006).

tariff. TransCameron requests that the Commission approve these non-conforming contract provisions.

35. Specifically, TransCameron requests approval of the following provisions of the precedent agreement with Calcasieu Pass:

- Contract Extension Rights – Calcasieu Pass will have the right to extend the 20-year initial term of its Rate Schedule FT service agreement from one to ten years, at negotiated rates, subject to the shipper providing notice no later than two (2) years prior to the end of the initial term;
- Step-Up or Step-Down Rights – If Calcasieu Pass elects to extend its initial term of service, Calcasieu Pass may also choose to reduce its maximum transportation quantity for the extended term; provided, however, that the reduced maximum daily transportation quantity shall be no less than 225,000 Dth per day;
- Primary Point Entitlements – Calcasieu Pass will have entitlements at primary points of receipt that, in aggregate, exceed its maximum daily transportation quantity (MDTQ), provided that neither its primary firm entitlement at any single point of receipt nor its aggregate receipts on any day may exceed its MDTQ; and
- Creditworthiness Provisions – Project-specific creditworthiness requirements for the service agreement set forth in the precedent agreement with Calcasieu Pass.

36. In *Columbia Gas Transmission Corp.*, the Commission clarified that a material deviation is any provision in a service agreement that: (a) goes beyond filling in the blank spaces with the appropriate information allowed by the tariff, and (b) affects the substantive rights of the parties.⁴² The Commission prohibits negotiated terms and conditions of service that result in a shipper receiving a different quality of service than that offered other shippers under the pipeline's generally applicable tariff or that affect the quality of service received by others.⁴³ However, not all material deviations are impermissible. As we explained in *Columbia*,⁴⁴ provisions that materially deviate from

⁴² *Columbia Gas Transmission Corp.*, 97 FERC ¶ 61,221, at 62,002 (2001) (*Columbia*).

⁴³ *Monroe Gas Storage Co., LLC*, 130 FERC ¶ 61,113, at P 28 (2010).

⁴⁴ *Columbia*, 97 FERC at 62,003.

the corresponding pro forma agreement fall into two general categories: (a) provisions the Commission must prohibit because they present a significant potential for undue discrimination among shippers, and (b) provisions the Commission can permit without a substantial risk of undue discrimination.⁴⁵

37. We find that the incorporation of non-conforming provisions in Calcasieu Pass' service agreement constitutes material deviations from TransCameron's *pro forma* FT service agreement. However, in other proceedings, the Commission has found that non-conforming provisions may be necessary to reflect the unique circumstances involved with the construction of new infrastructure and to provide the needed security to ensure the viability of a project.⁴⁶ Here, we find the non-conforming provisions identified by TransCameron are permissible because they do not present a risk of undue discrimination, do not adversely affect the operational conditions of providing service, and do not result in any customer receiving a different quality of service.⁴⁷ As discussed further below, when TransCameron files its non-conforming service agreements, we require TransCameron to identify and disclose all non-conforming provisions or agreements affecting the substantive rights of the parties under the tariff or service agreement. This required disclosure includes any such transportation provision or agreement detailed in a precedent agreement that survives the execution of the service agreement.

38. At least 30 days, but not more than 60 days, before providing service to any project shipper under a non-conforming agreement, TransCameron must file an executed copy of the non-conforming service agreement and identify and disclose all non-conforming provisions or agreements affecting the substantive rights of the parties under the tariff or service agreement. This required disclosure includes any such transportation provision or agreement detailed in a precedent agreement that survives the execution of the service agreement. Consistent with section 154.112 of the Commission's regulations, TransCameron must also file a tariff record identifying the agreements as non-conforming agreements.⁴⁸ In addition, the Commission emphasizes that the above determination relates only to those items described by TransCameron in its application

⁴⁵ See also *Equitrans, L.P.*, 130 FERC ¶ 61,024, at P 5 (2010).

⁴⁶ See, e.g., *Tennessee Gas Pipeline Co.*, 144 FERC ¶ 61,219 (2013); *Midcontinent Express Pipeline LLC*, 124 FERC ¶ 61,089 (2008).

⁴⁷ See, e.g., *Gulf South Pipeline Co., L.P.*, 115 FERC ¶ 61,123 (2006); *Gulf South Pipeline Co., L.P.*, 98 FERC ¶ 61,318, at P 4 (2002).

⁴⁸ 18 C.F.R. § 154.112 (2018).

and not to the entirety of the precedent agreement or the language contained in the precedent agreement.⁴⁹

E. TransCameron's Pro Forma Tariff

1. Segmentation

39. TransCameron requests an exemption from the Commission's regulations requiring pipelines, to the extent operationally feasible, to permit shippers to segment firm capacity either for their own use or for the use of replacement shippers in capacity release transactions.⁵⁰ TransCameron states that the East Lateral operates as a uni-directional line, receiving gas from adjacent, receipt-only interconnections with upstream pipelines, and transporting it to the single delivery point at the Export Terminal. TransCameron asserts its proposed facilities have no compression or storage capabilities and that there are no intermediate points capable of segmentation. TransCameron concludes that it is not operationally feasible to offer segmentation rights on the system, and states that Commission precedent justifies not offering segmentation on a system where that activity is not operationally feasible.⁵¹

40. We find that because TransCameron has uni-directional, receipt-only interconnections with upstream pipelines and one delivery point, segmentation is not operationally feasible on the system as currently configured.⁵² Therefore, we will grant TransCameron a limited waiver from implementing segmentation on its system. The waiver is granted only until TransCameron adds a point to its system making segmentation operationally feasible. Before such additional point is placed in service,

⁴⁹ A Commission ruling on non-conforming provisions in a certificate proceeding does not waive any future review of such provisions when the executed copy of the non-conforming agreement(s) and a tariff record identifying the agreement(s) as non-conforming are filed with the Commission, consistent with section 154.112 of the Commission's regulations. *See, e.g., Tennessee Gas Pipeline Co., L.L.C.*, 150 FERC ¶ 61,160, at P 44 n.33 (2015).

⁵⁰ 18 C.F.R. § 284.7(d) (2018).

⁵¹ TransCameron and Calcasieu Pass Joint Application at 23 (citing *Sierrita Gas Pipeline, LLC*, 147 FERC ¶ 61,192, at P 56 (2014)).

⁵² *See Sierrita Gas Pipeline, LLC*, 147 FERC ¶ 61,192, at P 56 (2014) (finding segmentation is not possible where the pipeline has only one receipt point and one delivery point).

TransCameron must file new or revised tariff records in accordance with the Commission's regulations to provide for segmentation.

2. North American Energy Standards Board (NAESB)

41. TransCameron adopted the Business Practices and Electronic Communications Standards of NAESB Wholesale Gas Quadrant's (WGQ) Version 2.0. TransCameron has identified those standards incorporated by reference in GT&C Section 23. Those standards not incorporated by reference by TransCameron have also been identified, along with the tariff record in which they are located. In the time since TransCameron filed its tariff records in this proceeding, the Commission adopted the new NAESB WGQ Version 3.1 standards.⁵³ Thus, we direct TransCameron 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.

3. System Map

42. TransCameron's *pro forma* tariff does not include maps of its system and therefore does not comply with the Commission's regulations. TransCameron is required to revise its tariff to provide uniform resource locators (URLs) designating a location on the internet for publication of its system maps.⁵⁴

4. Daily Balancing

43. Section 2.6(b) of Rate Schedule FT states "[e]xcept as otherwise provided in this Tariff, Customer must balance its daily receipts and its daily deliveries at the end of each Gas Day." The tariff does not explain how a shipper can satisfy this requirement when Section 10.1 of the GT&C states that the best available operational data will be provided on the day immediately following the close of each Gas Day, and, in light of proposed GT&C Section 6, Nominations and Scheduling Procedures, which provides for no more than the standard three intraday nomination periods. Section 2.6(b) is also inconsistent with Section 2.7(b) which provides that the "responsibility [of a Customer] to adjust and maintain a concurrent balance between receipts and deliveries [is] based on the best

⁵³ *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.

⁵⁴ 18 C.F.R. § 154.106 (2018).

information available to Customer.” Therefore, section 2.6(b) of Rate Schedule FT is rejected.

5. GT&C Section 3.5 – Waiver of Gas Quality at Downstream Delivery Points

44. GT&C Section 3.5 states:

Delivery Point Obligations. Upon mutual agreement between Transporter and a downstream Interconnecting Party, Transporter may temporarily deliver Gas that does not conform to the quality specifications set forth in GT&C Section 3.1, if Transporter, in its reasonable operational judgment and in a not unduly discriminatory manner, determines that such delivery will not interfere with its ability to: (1) maintain prudent and safe operation of part or all of Transporter's pipeline system and ensures that such agreement does not adversely affect Transporter's ability to provide firm services. Transporter *may post waivers on its EBB at its discretion* and will report waivers in accordance with Part 358 of the Commission’s Regulations.

45. The proposed language emphasized above is inconsistent with section 358.7(h)(2) of the Commission’s regulations,⁵⁵ which requires a transmission provider to post on its Internet Web Site notice of each waiver of a tariff provision that it grants in favor of an affiliate, unless the waiver has been approved by the Commission. TransCameron is directed to revise GT&C Section 3.5 accordingly.

6. GT&C Section 4.1 – Requests for Service

46. GT&C Section 4.1 states that TransCameron is not obligated to provide transportation service “if the quantities tendered are so small as to cause operational difficulties”⁵⁶

47. Under sections 284.7(b) and 284.9(b) of the Commission’s regulations, an interstate pipeline may not discriminate as to the level of volumes transported.⁵⁷ The

⁵⁵ 18 C.F.R. § 358.7(h)(2) (2018).

⁵⁶ This language is also repeated in Section 2.3 of Rate Schedule FT and Section 2.2 of Rate Schedule IT.

⁵⁷ 18 C.F.R. § 284.7(b)(1) (2018) (“An interstate pipeline or intrastate pipeline that offers transportation service on a firm basis under Subpart B, C, or G must provide such service without undue discrimination, or preference, including undue discrimination or preference in the quality of service provided, the duration of service, the categories,

Commission, however, has allowed a pipeline to include a minimum volume restriction in its tariff when the pipeline was able to show that quantities below the threshold were too small to be metered and where the company provided an operational and cost justification for the restriction.⁵⁸ For example, in *Gulf South*, the Commission accepted a proposal for a 100 Dth per day threshold for connections of new receipt and delivery points.⁵⁹ The Commission relied on Gulf South's assertion that serving small volume points presented operational challenges because these receipt points were difficult to measure, which increased the potential for lost system gas.⁶⁰ In addition, in that case, Gulf South stated that the costs associated with operating small points would be greater than the maximum rate it would recover.⁶¹

48. Here, TransCameron has not specified a minimum volume or provided any justification for the restriction. Therefore, TransCameron is directed to clarify and justify the above-mentioned service thresholds referred to in its tariff or delete references to such thresholds.⁶²

7. GT&C Section 4.9 – Right of First Refusal

a. Shipper's Notice of Intent to Exercise Right of First Refusal

49. GT&C Section 4.9(a) sets forth the eligibility requirements for transportation service agreements to include a regulatory right of first refusal (ROFR),⁶³ and GT&C Section 4.9(h) permits TransCameron and a shipper to negotiate a contractual

prices, or volumes of natural gas to be transported, customer classification, or undue discrimination or preference of any kind.”); 18 C.F.R. § 284.9(b) (2018) (stating that the provisions of section 284.7(b) apply to interruptible service).

⁵⁸ See, e.g., *Gulf South Pipeline Co., LP*, 103 FERC ¶ 61,105, at P 13 n.7 (2003) (*Gulf South*); *Trailblazer Pipeline Co.*, 39 FERC ¶ 61,103, at 61,336 (1987); *Texas Eastern Transmission Corp.*, 37 FERC ¶ 61,260, at 61,680-81 (1986).

⁵⁹ *Gulf South*, 103 FERC ¶ 61,105 at P 13.

⁶⁰ *Id.*

⁶¹ *Id.* PP 9, 12.

⁶² The language must also be removed from Rate Schedules FT and IT.

⁶³ 18 C.F.R. § 284.221(d)(2)(ii) (2018).

ROFR in a firm transportation service agreement not otherwise eligible for the regulatory ROFR. GT&C Section 4.9(c)(ii) requires a shipper initiating the ROFR process to notify TransCameron in writing that it intends to exercise its ROFR on or before the earlier of: (a) twelve months prior to the expiration date for the customer's Transportation Service Agreement or (b) the date of the notice period provided for in customer's Transportation Service Agreement.

50. The Commission has previously held that a generally applicable ROFR process stated in the tariff cannot be superseded by contract.⁶⁴ Therefore, we direct TransCameron to remove from proposed GT&C Section 4.9(c)(ii) the language that requires the customer to notify TransCameron by the date of the notice period provided for in the customer's Transportation Service Agreement because it impermissibly allows the deadline for a shipper to notify TransCameron to be negotiated apart from the generally applicable notice deadline.

b. Elimination of the ROFR Rights of Shippers Whose Contracts will Expire within 36 Months of the Proposed In-Service Date of an Expansion Project

51. Under GT&C Section 4.9(c)(v), if TransCameron conducts an open season for an expansion project, the sizing of which could be affected by a shipper's plans regarding continuation of service under a ROFR, TransCameron may issue a separate notice during or after the project's open season to all shippers whose transportation service agreements include a ROFR and will also expire within 36 months from the proposed in-service date of the expansion project requiring the shippers to elect one of the following options:

- (1) Terminate their respective transportation service agreements at the end of the primary term;
- (2) Extend the term of their respective transportation service agreements at the maximum recourse rate, to a term that is no less than the term established in the open season; or
- (3) Initiate ROFR notice processes concurrently with the open season instead of under GT&C Section 4.9(c)(i).

Shippers notified will have forty-five (45) business days from the date of TransCameron's notice or until the end of the open season, whichever is longer, to notify TransCameron of their elections to initiate ROFR bidding processes.

⁶⁴ Wyoming Interstate Co., L.L.C., 145 FERC ¶ 61,289, at P 6 (2013) (citing Kinder Morgan Interstate Gas Transmission, LLC, 119 FERC ¶ 61,225 (2007)).

52. Under Commission policy, pipelines, after a fully subscribed open season for a proposed expansion project, may issue a notice initiating an early ROFR process to shippers whose contracts will expire within 36 months before the projected in-service date of the expansion.⁶⁵ As the Commission has explained, such an early ROFR process can help the pipeline to ensure that its proposed expansion project is correctly sized.⁶⁶

53. In *Southern*, the Commission clarified that an early ROFR process must be conducted under generally applicable ROFR provisions of the pipeline's tariff. Under such general procedures, once an existing shipper issues a notice to the pipeline that it may wish to retain its expiring capacity through the ROFR process, the pipeline must hold an open season requesting bids from third parties for all or a portion of the shipper's capacity, after which the shipper may decide whether to match the best bid or bids for all or a volumetric portion of the capacity it seeks to retain.⁶⁷ The Commission also held that under the early ROFR process, pipelines are prohibited from holding one open season under which third parties would submit bids for a combination of the shipper's capacity and the proposed expansion capacity.⁶⁸ Instead, bids for the shipper's capacity may be submitted only in a separate open season occurring after an open season for an expansion that has been fully subscribed.⁶⁹

54. TransCameron's proposal in general, and particularly with regard to option (3), is contrary to the Commission's requirements that the early ROFR notice be issued only after a fully subscribed expansion open season, and that the ROFR process for the shipper's capacity be conducted in a manner consistent with the generally applicable ROFR process contained in the pipeline's tariff.

55. Further, as we found regarding a similar proposal in *Southern*, TransCameron's proposed option (2), requiring ROFR shippers with expiring contracts to extend the term of their respective Transportation Service Agreements at the maximum recourse rate to a term that is no less than the term established in the open season, effectively turns the open season for the expansion capacity and the ROFR capacity into a single open season

⁶⁵ *Southern Natural Gas Co.*, 128 FERC ¶ 61,211, at PP 88-89 (2009) (*Southern*); *Gas Transmission Northwest Corp.*, 117 FERC ¶ 61,315, at P 55 (2006) (*GTN*).

⁶⁶ *Southern*, 128 FERC ¶ 61,211 at P 88 (citing *GTN*, 117 FERC ¶ 61,315 at P 55).

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *GTN*, 117 FERC ¶ 61,315 at P 55.

contrary to *GTN*.⁷⁰ This is because under option (2), the existing shippers would have to match bids received in the expansion open season, up to the maximum recourse rate and to a term that is no less than the term established in the expansion open season. Existing shippers would not have an opportunity to match bids for their own expiring capacity submitted in a separate ROFR open season, as required by *GTN*.⁷¹

56. Moreover, similar to our finding in *Southern*,⁷² TransCameron's proposal is unduly discriminatory because it would require shippers with ROFR rights, whose contracts expire during a period an expansion is being planned, to match rates and/or contract terms bid in an expansion open season. However, shippers with ROFR rights whose contracts expire after the expansion has gone into service would not be subject to any similar requirement to match rates and/or contract terms in the expansion shippers' contracts. Accordingly, we reject TransCameron's proposal and direct TransCameron to revise GT&C Section 4.9(c)(v) to reflect the Commission's policy developed in *Southern* and *GTN*, which requires that the early ROFR notice be issued only after a fully subscribed expansion open season, and that the ROFR process for the shipper's capacity be conducted in a manner consistent with the generally applicable ROFR process contained in TransCameron's tariff.

8. GT&C Section 4.11 – Contract Extension

57. GT&C Section 4.11(a) addresses contract extension rights. TransCameron proposes that "Transporter and Customer may mutually agree to the early termination of one or more [Transportation Service Agreements] in exchange for Customer's extension of the use of all or part of the underlying capacity under new terms."

58. The definition of "terms" in the proposed tariff language is unclear. When TransCameron files actual tariff records, it must revise GT&C Section 4.11(a) to specifically state what it means by "terms."

9. GT&C Section 5.6 – Liability

59. GT&C Section 5.6(c) discusses many situations in which parties are liable under Transportation Service Agreements, but does not mention parties being liable in situations of gross negligence. However, GT&C Section 25.1 states "[n]either

⁷⁰ *Southern*, 128 FERC ¶ 61,211 at P 88.

⁷¹ *GTN*, 117 FERC ¶ 61,315 at P 55.

⁷² *Southern*, 128 FERC ¶ 61,211 at P 89.

Transporter nor Customer shall be liable...except to the extent such damages arise out of such party's gross negligence, willful misconduct, or bad faith actions.”

60. The Commission's policy on limitations of liability disfavors limiting liability in situations of gross negligence, bad faith, and willful misconduct by excluding liability for indirect or consequential damages.⁷³ Section 25 of TransCameron's tariff adheres to this Commission policy, but Section 5.6(c) does not. Section 5.6(c) limits the liabilities of parties to direct damages only, which runs counter to the Commission's policy disfavoring limiting liability for indirect damages. Furthermore, Section 5.6(c) is inconsistent with Section 25 of TransCameron's tariff. Therefore, TransCameron is required to revise Section 5.6(c) to be consistent with both Section 25 of its tariff and Commission policy with regard to parties' liability in situations of gross negligence, bad faith, and willful misconduct.

10. GT&C Section 6.5 – Allocation of Capacity for Curtailment

61. GT&C Section 6.5 sets forth curtailment priorities when transportation service is interrupted due to capacity limitations. As proposed, GT&C Section 6.5 would curtail services in the reverse order from which they were scheduled in GT&C Section 6.3, except that services utilizing primary firm and flow-path secondary capacity would be curtailed last within the same priority. In pertinent part, TransCameron proposes to interrupt firm Secondary Capacity (GT&C Section 6.5(d)) ahead of firm Primary Capacity (GT&C Section 6.5(e)).

62. TransCameron's proposal is inconsistent with the Commission's policy that once scheduled, all firm service is assigned the same priority for curtailment purposes, irrespective of whether the capacity is utilized on a primary, secondary, or flow-path secondary basis.⁷⁴ We direct TransCameron to revise GT&C Section 6.5 in accordance with this discussion. In addition, the heading of GT&C Section 6.5 should be clarified to read “Curtailment of Capacity.”

11. GT&C Section 11.12 – Force Majeure

63. TransCameron's proposed definition of *force majeure* events in GT&C Section 11.12(b) includes “priority limitation or restraining orders of any kind of the government of the United States or a State or of any civil or military entity.”

⁷³ See *Enable Gas Transmission, LLC*, 152 FERC ¶ 61,052, at PP 148-159 (2015).

⁷⁴ *Dominion South Pipeline Company, L.P.*, 113 FERC ¶ 61,064, at P 41 (2005).

64. TransCameron's proposed tariff language conflicts with Commission policy because it can be interpreted to include regular, periodic maintenance activities required to comply with government actions as *force majeure* events. The Commission has clarified the basic distinction as to whether outages resulting from governmental actions are *force majeure* or non-*force majeure* events.⁷⁵ The Commission found that outages necessitated by compliance with government standards concerning the regular, periodic maintenance activities a pipeline must perform in the ordinary course of business to ensure the safe operation of the pipeline, including the Pipeline and Hazardous Materials Safety Administration's (PHMSA) integrity management regulations, are non-*force majeure* events requiring full reservation charge credits. Outages resulting from one-time, non-recurring government requirements, including special, one-time testing requirements after a pipeline failure, are *force majeure* events requiring only partial crediting.⁷⁶

65. In addition, TransCameron's proposed definition of *force majeure* events in GT&C Section 11.12(b) includes "any other causes, whether of the kind herein enumerated or otherwise, not reasonably within the control of the party claiming suspension." The Commission has defined *force majeure* outages as events that are both "unexpected and uncontrollable."⁷⁷ We direct TransCameron to revise GT&C Section 11 to comply with Commission Policy, as discussed above.

12. GT&C Section 13 – Fuel

66. TransCameron proposes a fuel tracker as part of its *pro forma* tariff. GT&C Section 13.5(a) states "[i]n each Annual and Periodic [Fuel Lost and Unaccounted for Adjustment Mechanism (FAM)] Filing, Transporter shall calculate the Current [Fuel Lost and Unaccounted for (FL&U)] Percentages by: (i) estimating the total FL&U quantities

⁷⁵ *Kinder Morgan Louisiana Pipeline LLC*, 154 FERC ¶ 61,145, at P 30 (2016); *TransColorado Gas Transmission Co., LLC*, 144 FERC ¶ 61,175, at PP 35-43 (2013); *Gulf South Pipeline Co., LP*, 141 FERC ¶ 61,224, at PP 14-47 (2012), *order on reh'g*, 144 FERC ¶ 61,215, at PP 31-34 (2013).

⁷⁶ *See Algonquin Gas Transmission, LLC*, 153 FERC ¶ 61,038, at P 104 (2015) (*Algonquin*).

⁷⁷ *North Baja Pipeline, LLC v. FERC*, 483 F.3d 819, 823 (D.C. Cir. 2007), *aff'g 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 and *Algonquin*, 153 FERC ¶ 61,038 at P 103.

required during the 12-month period commencing with the effective date of Transporter's FAM filing (Current FL&U Quantities)....”

67. Section 154.403(c)(10) of the Commission's regulations⁷⁸ states that “[a] step-by-step explanation of the methodology used to reflect changes in the fuel reimbursement percentage including the allocation and classification of the fuel use and unaccounted-for natural gas” must be included in the GT&C. TransCameron's proposed language explains that it will estimate the FL&U quantities, but does not explain the methodology TransCameron will use to produce those estimates. Therefore, when TransCameron files actual tariff records, it must revise GT&C Section 13 to include an explanation of how TransCameron will produce the estimates for the FL&U quantities required for the 12-month period.

13. GT&C Section 15 – Interruptible Revenue Crediting Proposal

68. The Commission's policy regarding new interruptible services requires the pipeline either to credit 100 percent of the interruptible revenues, net of variable costs, to maximum rate firm and interruptible customers, or to allocate costs and volumes to these services.⁷⁹ TransCameron has chosen the interruptible revenue credit option.

69. GT&C Section 15 addresses the calculation of the interruptible revenue credit and filing requirements for application of the credit to maximum rate shippers. TransCameron does not correctly identify all revenues subject to the interruptible revenue crediting mechanism. Specifically, TransCameron does not include authorized overrun revenues as interruptible revenues. The Commission has found that authorized overrun service is the equivalent of interruptible service⁸⁰ and must be included in the interruptible revenue crediting mechanism.⁸¹ In addition, TransCameron proposes to

⁷⁸ 18 C.F.R. § 154.403(c)(10) (2018).

⁷⁹ See, e.g., *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).

⁸⁰ *Sierrita Gas Pipeline, LLC*, 147 FERC ¶ 61,192, at P 66, *order granting clarification and reh'g dismissed*, 149 FERC ¶ 61,101 (2014); *Central New York Oil and Gas Co., LLC*, 114 FERC ¶ 61,105, at P 9 (2006), *TriState Pipeline, L.L.C.*, 88 FERC ¶ 61,328, at 62,006 (1999); *Puget Sound Energy, Inc.*, 84 FERC ¶ 61,347, at 62,516 (1998); *CNG Transmission Corp.*, 81 FERC ¶ 61,346, at 62,592 (1997).

⁸¹ *Florida Southeast Connection, LLC*, 154 FERC ¶ 61,080, at P 132 (2016); *Sabine Pass Liquefaction Expansion, LLC*, 151 FERC ¶ 61,012, at P 47 (2015); *Bison Pipeline LLC*, 131 FERC ¶ 61,013, at P 26 (2010).

credit interruptible revenues on a yearly basis. However, TransCameron does not propose to pay interest on these funds that it may retain for up to twelve months. We direct TransCameron to include authorized overruns as interruptible revenues subject to crediting and to pay interest on the accumulated balances consistent with section 154.501(d) of the Commission's regulations.⁸²

70. In GT&C Section 15.2, TransCameron proposes to credit revenues to "Qualifying Customers," which it describes as shippers (1) paying the maximum recourse rate; (2) paying a negotiated rate that is higher than the maximum recourse rate; and (3) identified as anchor shippers in TransCameron's certificate application. TransCameron's list of Qualifying Customers fails to include interruptible customers. The Commission's policy regarding new interruptible services requires a 100 percent credit of the interruptible revenues, net of variable costs, to maximum rate firm and interruptible customers.⁸³ We note that TransCameron has agreed to negotiated rates with Calcasieu Pass, its anchor shipper, for Rate Schedule FT service. TransCameron is permitted to share interruptible revenues with its negotiated rate shippers;⁸⁴ however, we note that maximum rate customers, as a group, must receive a proportionate share of 100 percent of interruptible revenues collected (less administrative costs to provide the interruptible service).⁸⁵ Interruptible revenues due to maximum rate shippers cannot be reduced to reflect negotiated rate provisions. Therefore, TransCameron is required to file revised rates or tariff records consistent with the Commission's policy regarding interruptible services on new pipelines. TransCameron must either credit 100 percent of the interruptible revenues, net of variable costs, to maximum rate firm and interruptible customers or allocate costs and volumes to these services.

14. Posting Requirements

71. TransCameron addresses web site information posting requirements in GT&C Sections 9.14, 20.4, and 20.5 of its tariff. GT&C Section 9.14 provides that TransCameron will post certain capacity release replacement shipper data on its EBB within 48 hours of the completed transaction. GT&C Sections 20.4 and 20.5 both appear to address the posting of available capacity, but section 20.4 lists only four data elements,

⁸² 18 C.F.R. § 154.501(d) (2018).

⁸³ *Georgia Strait Crossing Pipeline LP*, 98 FERC ¶ 61,271, at 62,055 (2002).

⁸⁴ *Florida Southeast Connection, LLC*, 154 FERC ¶ 61,080, at P 130 (2016); *Wyoming Interstate Co. Ltd.*, 121 FERC ¶ 61,135, at P 11 (2007); *Cheyenne Plains Gas Pipeline Co., L.L.C.*, 108 FERC ¶ 61,052, at PP 12-13 (2004).

⁸⁵ *Wyoming Interstate Co. Ltd.*, 121 FERC ¶ 61,135, at P 11.

whereas section 20.5 incorporates by reference the capacity posting requirements set forth in section 284.13(d) of the Commission's regulations.

72. Pipelines may propose to post more information than required and to post that information earlier than required. However, the Commission requires open access pipelines to post certain information in a timely fashion. For example, section 284.13(b)(1) of the Commission's regulations requires that firm service and capacity release information be posted no later than the first nomination under a transaction.⁸⁶ This does not match TransCameron's proposal in GT&C Section 9.14, where TransCameron proposes to post certain capacity release replacement shipper data within 48 hours after the transaction commences. In addition, section 284.13(d) of the Commission's regulations enumerates the data pipelines must post for available capacity.⁸⁷ Proposed GT&C Section 20.4 purports to enumerate the available capacity data elements to be posted, whereas section 20.5 simply incorporates the posting requirements of section 284.13(d) by reference. TransCameron's list of proposed posted capacity data elements in GT&C Section 20.4 do not match those required by section 284.13(d). Thus, the posting of available capacity obligations in GT&C Sections 20.4 and 20.5 are not the same. We direct TransCameron to revise GT&C Sections 9.14, 20.4, and 20.5 to reflect the posting requirements of the Commission's regulations.

15. Corrections

73. The preliminary statement references the West Lateral transmission facilities, which have since been removed from TransCameron's proposal. We direct TransCameron to remove references to the West Lateral facilities from its preliminary statement. Additionally, GT&C Section 27.4 states that the initial data collection period for the operational gas purchases and sale report "will commence with the in-service of Transporter's System pursuant to Docket No. ___ and continue through September 30, 2015." As September 30, 2015, occurs in the past, TransCameron must revise the date to reflect one which accurately represents the data collection period.

F. Accounting

74. TransCameron, a newly created 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.⁸⁸ Consistent with Commission precedent, we will

⁸⁶ 18 C.F.R. § 284.13(b)(1) (2018).

⁸⁷ 18 C.F.R. § 284.13(d) (2018).

⁸⁸ See, e.g., *ETC Tiger Pipeline, LLC*, 131 FERC ¶ 61,010, at P 80 (2010); *Ruby*

require TransCameron to capitalize the actual costs of borrowed and other funds 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 of AFUDC are properly capitalized in this project consistent with the Commission's requirements for newly created companies approved in other cases.

G. Environmental Analysis

75. To satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA),⁸⁹ Commission staff evaluated the potential environmental impacts of the proposed projects in an Environmental Impact Statement (EIS). On June 22, 2018, Commission staff issued the draft EIS addressing issues raised up to the point of publication. Notice of the draft EIS was published in the Federal Register on June 29, 2018, establishing a 45-day public comment period ending on August 13, 2018.⁹⁰ Commission staff held a public comment session on August 1, 2018, to receive comments on the draft EIS. We also received 12 written comment letters from federal and state agencies; Native American tribes; companies/organizations; and individuals in response to the draft EIS. The transcripts of the public comment session and all written comments on the draft EIS are part of the public record for the projects.

76. On October 22, 2018, 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.⁹¹ 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 applicants' proposed, and Commission staff's recommended, mitigation measures, which are included as conditions in the appendix to this order. No adverse comments concerning the final EIS have been filed. The U.S. Department of the Interior (DOI), on behalf of the Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), and the Louisiana Department of Wildlife and Fisheries (Louisiana DWF) filed comments supporting the final EIS's conclusions and

Pipeline, L.L.C., 128 FERC ¶ 61,224 at P 85; *Southeast Supply Header, LLC*, 119 FERC ¶ 61,153, at P 64 (2007).

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

⁹⁰ 83 Fed. Reg. 30,728.

⁹¹ 83 Fed. Reg. 54,586.

recommendations. Those comments and the major environmental issues addressed in the final EIS are discussed below.

1. Geology

77. Geologic hazards, such as hurricanes, flooding, and long-term sea level rise, could affect the long-term operation of the projects.⁹² Calcasieu Pass and TransCameron would design and construct the LNG Terminal and pipeline to protect the facilities from these hazards. For example, Calcasieu Pass would design and construct the LNG Terminal at an elevation to minimize potential impacts from flooding and sea level rise and construct an earthen berm on the west side of the site, and a floodwall on the east, north, and south sides of the site, to minimize impacts associated with potential storm surge.⁹³ The final EIS concluded that the projects would not significantly impact or be impacted by geologic conditions.

2. Soils

78. Construction of the projects could affect soil resources by increasing the potential for erosion, compaction, and rutting.⁹⁴ Approximately 56.3 acres of soils at the LNG Terminal site and less than 1 acre of soils crossed by the pipeline are considered highly susceptible to erosion.⁹⁵ Additionally, 144 acres of soil impacted by construction of the LNG Terminal and 291.8 acres of soil impacted by construction of the pipeline would be prone to compaction.⁹⁶ Calcasieu Pass and TransCameron would implement the mitigation measures contained in the project-specific *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) to control erosion, enhance successful revegetation, and minimize any potential adverse impacts on soil resources.⁹⁷ Therefore, the final EIS concludes that impacts on soil resources would not be significant and would be adequately minimized.

⁹² Final EIS at 3.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

3. Water Resources

79. Impacts on groundwater and surface water could occur during construction and operation of the LNG Terminal site and pipeline.⁹⁸ Calcasieu Pass and TransCameron would implement a variety of mitigation measures to minimize any potential impacts. Specifically, the applicants propose to implement: (1) the project-specific Plan and Procedures and Spill Prevention, Control, and Countermeasure Plan to minimize, to the extent possible, impacts on groundwater resources from construction and spills/leaks; (2) a Compensatory Mitigation Plan and Beneficial Use of Dredged Material Plan to minimize impacts associated with permanently filling eleven waterbodies within the LNG Terminal property boundary; (3) eight horizontal directional drilling (HDD) operations to cross 14 waterbodies, which would avoid disturbance of the stream beds, banks, and riparian vegetation; and (4) an HDD Contingency Plan in the event of an inadvertent release of drilling mud during an HDD crossing.⁹⁹ Additionally, because TransCameron did not conduct geotechnical investigations for the proposed HDDs, Environmental Condition 15 requires TransCameron to file the results of site-specific geotechnical investigations for each proposed HDD prior to construction. Therefore, the final EIS concludes that impacts on water resources would be adequately minimized and are not significant.

4. Wetlands

80. Construction of the LNG Terminal would result in the permanent loss of 127.6 acres of wetlands.¹⁰⁰ Construction of the pipeline facilities would affect a total of 317.8 acres of wetlands, but only approximately 1.4 acres of this impact would result in permanent wetland loss.¹⁰¹ The applicants propose to follow their project-specific Procedures to minimize impacts on wetlands.¹⁰² Additionally, to mitigate unavoidable wetland impacts, the applicants would comply with the Compensatory Mitigation Plan and Beneficial Use of Dredged Material Plan.¹⁰³ Therefore, the final EIS concludes that

⁹⁸ Final EIS at 3-5.

⁹⁹ *Id.*

¹⁰⁰ Final EIS at 5.

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

impacts on wetlands due to construction and operation of the projects have been minimized to the extent practicable and would be not be significant.

5. Vegetation

81. Construction and operation of the LNG Terminal would permanently impact approximately 314 acres of vegetation, resulting in the loss or conversion of 304.8 acres of marsh, 0.2 acre of water, and 9.0 acres of non-marsh/other land.¹⁰⁴ Construction of the pipeline would affect about 346.3 acres of vegetation, of which 1.5 acres would be permanently lost.¹⁰⁵ Of the remaining 345.1 acres, 329.8 acres would be temporarily affected and 15.3 acres would be avoided by HDD.¹⁰⁶ Impacts resulting from operation of the facilities would include conversion of some scrub-shrub vegetation to herbaceous vegetation due to maintenance of the pipeline right-of-way, and conversion of vegetation within new or expanded aboveground facilities to non-vegetated land.¹⁰⁷ Impacts on vegetation within the pipeline right-of-way and additional temporary workspaces (ATWS) would be temporary and short-term because these areas would revegetate within one to two growing seasons.¹⁰⁸ To minimize impacts of the projects on vegetative communities, the applicants would construct and operate the LNG Terminal and pipeline in accordance with the project-specific Plan and Procedures.¹⁰⁹

82. The Louisiana Department of Natural Resources (Louisiana DNR) identified one vegetation community of special concern, the Coastal Live Oak-Hackberry Forest natural community (also known as chenier forest),¹¹⁰ as potentially present in the project area.¹¹¹ The applicants developed a Migratory Bird Habitat Mitigation Plan, in consultation with the FWS and Louisiana DWF, to offset impacts on chenier habitats, which would help

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ Final EIS at 6.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ Chenier habitat is ancient beach ridges, composed primarily of sand and shell, that serve as storm barriers and stop-over habitat for migratory birds.

¹¹¹ Final EIS at 6.

restore some of the degraded oak-hackberry community at the LNG Terminal site.¹¹² In its comments on the final EIS, the Louisiana DWF stated that it supports the proposed Migratory Bird Habitat Mitigation Plan, particularly the restoration of chenier habitat adjacent to the proposed facilities.

83. Additionally, the Louisiana DWF and Louisiana Natural Heritage Program expressed concern for five state-designated rare plant species potentially occurring within the project area.¹¹³ The Louisiana Natural Heritage Program database also indicated two additional rare plant species potentially occur in the project area.¹¹⁴ Five rare plant occurrences were identified within the LNG Terminal site; two of these locations would not be impacted by construction and three locations would be unavoidable and would be impacted.¹¹⁵ The Louisiana DWF provided comments on the project through the Section 404 permit public notice comment process and on the draft EIS, but no longer expressed concern with any rare plants in the project area.¹¹⁶

84. Based on the implementation of the proposed mitigation measures, the final EIS concludes that construction and operation of the projects would not have a significant impact on vegetation communities.

6. Wildlife and Aquatic Resources

a. Wildlife

85. Construction of the LNG Terminal and pipeline could cause displacement, stress, and direct mortality of individual animals; however, those impacts would not have significant, long-term impacts on wildlife species due to the degraded wildlife habitat value provided by the site and the proposed mitigation for wetland impacts.¹¹⁷

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

Additionally, impacts due to operation of the facilities would be minimized through the project-specific Plan and Procedures and not be significant.¹¹⁸

86. In order to minimize potential effects on habitat for migratory bird species, including songbirds, waterbirds, and raptors at the LNG Terminal site, Calcasieu Pass developed a Migratory Bird Nesting Impact Mitigation Plan in consultation with the FWS and Louisiana DWF.¹¹⁹ Measures in this plan include a clearing-restriction window of March 1 through July 31, and surveys and hazing techniques if clearing must be conducted within the clearing restriction window.¹²⁰ In addition, Calcasieu Pass developed a Migratory Bird Habitat Mitigation Plan in consultation with the FWS and Louisiana DWF to offset impacts on chenier habitats, which are important to migratory birds.¹²¹ In comments on the final EIS, DOI stated that they support finalizing the Migratory Bird Nesting Impact Mitigation Plan and the Migratory Bird Habitat Mitigation Plan before construction and in coordination with the Louisiana DWF and FWS.

87. The Louisiana DWF indicated that colonial waterbird nesting colonies occur within the project area.¹²² The Louisiana DWF and FWS also provided guidelines for pre-construction site visits and, if warranted, distance and timing restrictions to minimize impacts on nesting birds.¹²³ Should work overlap with the nesting season of waterbirds within the pipeline area, TransCameron would consult with the FWS and Louisiana DWF regarding survey methods, timeframes, locations, and target species, and conduct a pre-construction field survey for evidence of nesting colonies of waterbirds within 400 meters of the construction workspace.¹²⁴ If evidence of active nesting colonies is found during

¹¹⁸ *Id.*

¹¹⁹ Final EIS at 6-7.

¹²⁰ Final EIS at 7.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.*

the survey, TransCameron would develop appropriate mitigation measures in consultation with the FWS and Louisiana DWF.¹²⁵

88. Additionally, the Louisiana DWF noted four state wildlife species of concern in the project area and expressed concern for the diamondback terrapin.¹²⁶ Environmental Condition 19 requires Calcasieu Pass and TransCameron to consult with the Louisiana DWF regarding the potential need for diamondback terrapin surveys prior to construction, and file that information for review and approval prior to construction.

89. With the implementation of the measures proposed by the applicants, the final EIS concludes that impacts on wildlife, including migratory birds and colonial-nesting waterbirds, would be avoided or minimized.¹²⁷

b. Aquatic Resources

90. Construction of the LNG Terminal berthing area and turning basin could result in increased sedimentation, turbidity, and noise levels, which could adversely affect aquatic resources.¹²⁸ Sedimentation and turbidity impacts on aquatic resources from dredging would be localized, temporary, and minor.¹²⁹ With respect to noise, Calcasieu Pass would use bubble curtains during pile driving and is considering noise attenuation measures to substantially reduce the extent of estimated underwater sound pressure levels produced by pile driving, thereby reducing the extent of potential behavioral and injury level effects on aquatic species.¹³⁰ Additionally, Environmental Condition 20 requires Calcasieu Pass to conduct test drives to measure actual underwater noise generated during in-water pile driving, and if needed, implement additional mitigation measures to reduce noise to acceptable levels.

91. Pipeline construction could also adversely affect aquatic resources. TransCameron proposes to use the HDD method to cross 14 waterbodies, which would

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ DOI supports the determination that the proposed mitigation measures for migratory birds would reduce impacts on migratory bird species to less-than-significant levels.

¹²⁸ Final EIS at 7.

¹²⁹ *Id.*

¹³⁰ Final EIS at 7-8.

avoid or minimize impacts on fisheries, fish habitat, and other aquatic resources.¹³¹ Should an inadvertent release occur during an HDD, TransCameron would implement the measures outlined in its HDD Contingency Plan to minimize potential impacts on aquatic resources.¹³² With respect to the remaining waterbody crossings, TransCameron would use a push or open-cut crossing method, which would result in temporary loss or modification of aquatic habitat, increase sedimentation and turbidity, and alteration of vegetative cover.¹³³ Although a majority of fish species present within the waterbody at the time of construction activities would likely be displaced to similar adjacent habitats, stress, injury, or death of individual fish may occur.¹³⁴ To minimize impacts on waterbodies and aquatic resources during pipeline construction, TransCameron would implement the measures outlined in its project-specific Procedures.¹³⁵ Once construction is complete, streambeds and banks would be restored to their pre-construction conditions and contours to the maximum extent practicable.¹³⁶ Therefore, the pipeline would have minimal, localized, and not significant impacts on aquatic resources.

92. Construction of the project will also have permanent and temporary impacts on essential fish habitat (EFH).¹³⁷ Temporary construction impacts are expected to be of short duration, as populations of EFH species and their food sources would be expected to recover quickly following construction.¹³⁸ These impacts would also be minimized through implementation of the project-specific Procedures, the Spill Prevention, Control, and Countermeasure Plan, and the HDD Contingency Plan.¹³⁹ Permanent adverse effects on EFH would be offset by compensatory mitigation.¹⁴⁰ On August 13, 2018, NMFS

¹³¹ Final EIS at 8.

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

provided three EFH conservation recommendations to minimize EFH impacts. Those recommendations were discussed in the final EIS, completing EFH consultation for the project. In its comments on the final EIS, NMFS stated that they do not object to the project and agree with the final EIS's determination that the proposed project would not adversely affect EFH.

93. The final EIS concludes that with implementation of the mitigation measures described above, the projects would have minimal and localized impacts on aquatic resources.

7. Threatened, Endangered, and Other Special Status Species

94. Commission staff determined that the projects are not likely to adversely affect the sixteen federally listed threatened and endangered species that may occur in the project area.¹⁴¹ As required by section 7 of the Endangered Species Act of 1973, we requested that the FWS and NMFS accept the information provided in the draft EIS as the Biological Assessment for the projects. The FWS provided concurrence on September 24, 2016, and November 1, 2016. Since ESA consultation with NMFS is not complete, Environmental Condition 21 requires completion of ESA consultation prior to the start of construction.

95. In comments on the final EIS, the Louisiana DWF noted that manatee, a threatened species, may occur in the surrounding waterbodies near the proposed terminal site. The Louisiana DWF states that all manatee sightings should be reported to the Louisiana DWF. In response to this comment, Calcasieu Pass committed to reporting any sightings of manatees to the Louisiana DWF.¹⁴²

8. Land Use, Recreation, and Visual Resources

96. The majority of the LNG Terminal facilities, which are located entirely on private land, would be within agricultural and herbaceous land (31 percent), developed land (15 percent), and emergent wetland (44 percent) that is surrounded by open water, and land that is currently occupied by or proposed for similar industrial activities.¹⁴³ There are currently no existing or planned residential or commercial developments within 0.25 mile

¹⁴¹ *Id.*

¹⁴² See Response of Venture Global Calcasieu Pass, LLC and TransCameron Pipeline, LLC to Comments on the Draft EIS, Appendix A at 10 (Aug. 23, 2018).

¹⁴³ Final EIS at 9.

of the terminal.¹⁴⁴ Therefore, due to the industrial use of adjacent land and the previously disturbed nature of the surrounding area, impacts on land use from the LNG Terminal would be minor.

97. LNG Terminal construction and operation may impact recreational activities, including wildlife viewing, beach use, boating, recreational vehicle (RV) use, and fishing.¹⁴⁵ Cameron Parish Police Jury intends to relocate and develop new recreation locations in the Project area, and Calcasieu Pass is supporting the Cameron Parish Police Jury in its efforts to continue the public use of the Cameron Jetty Fishing Pier, and has entered into a Cooperative Endeavor Agreement with Cameron Parish Police Jury to allow for continued public use of the facilities as Calcasieu Pass develops the Terminal.¹⁴⁶ Additionally, construction of the LNG Terminal would have some adverse impacts on recreation, including boating and fishing along the Calcasieu River Ship Channel and Gulf of Mexico.¹⁴⁷ However, these impacts would be minimized with Calcasieu Pass' proposed mitigation measures.¹⁴⁸

98. The presence of the LNG Terminal and associated increased lighting would have an influence on visual resources.¹⁴⁹ However, most of the activities and structures within the terminal site would be obscured by the proposed perimeter berm and wall, and the surrounding developed areas along the Calcasieu River Ship Channel are currently heavily lit by industrial facilities during the night-time hours.¹⁵⁰

99. With respect to the pipeline, it would include disturbance of existing land use, the creation of new easements, and the conversion of 1.3 acres of land to a permanent aboveground facility.¹⁵¹ The pipeline would cross private lands, a scenic byway (the

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

Creole Nature Trail National Scenic Byway), roads, and waters.¹⁵² There are currently no existing residences within 50 feet of the pipeline and no planned commercial or industrial developments within 0.25 mile of the pipeline.¹⁵³ With the exception of the aboveground facilities, TransCameron would restore all lands affected by construction to pre-construction contours, and would thus not result in a significant change in land use.¹⁵⁴ Therefore, impacts on land use from the pipeline would be temporary and minor. Additionally, because there would be no long-term impact on the Creole Nature Trail National Scenic Byway, the pipeline would not adversely impact recreation or special use areas.¹⁵⁵

100. Construction and operation of the pipeline may impact visual resources by altering the terrain and vegetation patterns during construction or right-of-way maintenance and from the presence of new aboveground facilities.¹⁵⁶ However, there would be no long-term impact on visual resources from the pipeline because the right-of-way would be restored to pre-construction contours and most of the vegetation disturbed is herbaceous.¹⁵⁷ With respect to the meter station and mainline valve, these facilities would be adjacent to existing industrial facilities and would not have a significant impact on visual resources.¹⁵⁸

101. Last, the project would be within the Louisiana Coastal Zone and all activities or developments that may affect Louisiana's coastal zone require a federal consistency review under the National Coastal Zone Management Program, and must obtain a Coastal Use Permit from the Louisiana DNR.¹⁵⁹ To ensure compliance with this federal requirement, Environmental Condition 22 requires Calcasieu Pass and TransCameron to file the consistency determination with the Commission prior to any project construction.

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ Final EIS at 10.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

102. The final EIS concludes that land use, recreation, and visual resource impacts associated with the projects would be minor.

9. Socioeconomics

103. Construction of the projects would result in minor positive socioeconomic impacts and would not have a significant adverse impact on local populations, employment, provision of community services, or property values.¹⁶⁰ Additionally, there would not be any disproportionately high or adverse environmental and human health impacts on low-income and minority populations.¹⁶¹ However, vehicle traffic is anticipated to temporarily increase substantially during construction of the LNG Terminal.¹⁶² To minimize the increase, Calcasieu Pass would transport materials by barge to nearby existing aggregate storage and handling facilities, and utilize off-site parking, shuttles, and infrastructure.¹⁶³ Environmental Condition 23 also requires Calcasieu Pass to file its updated Traffic Management Plan to minimize disruption to local traffic flow and communities and to ensure that construction-related road use proceeds in a safe and efficient manner.

104. The final EIS concludes that socioeconomic impacts associated with the projects would be minor.

10. Cultural Resources

105. The State Historic Preservation Office concurred that no significant archaeological or historic resources would be affected by the proposed projects.¹⁶⁴ Therefore, compliance with section 106 of the National Historic Preservation Act is complete.

11. Air Quality and Noise

106. Air quality would be affected by construction and operation of the projects. Though air pollutant emissions would be generated by operation of equipment during construction of the project facilities, most air emissions associated with the projects

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ Final EIS at 11.

would result from the long-term operation of the LNG Terminal.¹⁶⁵ Calcasieu Pass estimated ambient pollutant concentrations in the vicinity of the project and found that the project would not significantly contribute to any of the modeled National Ambient Air Quality Standard (NAAQS) exceedances, and is shown to be in compliance with the NAAQS.¹⁶⁶ Additionally, the project would not cause or contribute to any Prevention of Significant Deterioration (PSD) increment violations.¹⁶⁷

107. Certain construction activities, such as pile driving and dredging, could produce peak sound levels perceptible above the background sound levels at the two nearest noise sensitive areas (NSAs).¹⁶⁸ Calcasieu Pass has proposed to conduct pile driving activities during daytime hours; however, dredging activities would occur 24 hours per day.¹⁶⁹ As a result, Environmental Condition 25 requires Calcasieu Pass to file, prior to construction, a dredging noise mitigation plan that includes the measures it would implement to reduce the projected nighttime (7 pm to 7 am) noise levels attributable to dredging activities to at or below a day-night average sound level (L_{dn}) of 55 A-weighted decibels (dBA) at two nearby NSAs, and how it would monitor the noise levels during dredging activities.

108. With implementation of the mitigation measures identified in the noise analysis, the resulting noise at the NSAs during operation of the LNG Terminal would meet our criteria of an L_{dn} of 55 dBA. In order to ensure implementation of these measures, Environmental Condition 27 requires Calcasieu Pass to file a noise survey after placing each phase of liquefaction blocks into service and after placing the entire LNG Terminal into service.

109. With respect to pipeline construction, noise levels from HDD operations could exceed 55 dBA L_{dn} at some of the NSAs along the route. TransCameron proposed a

¹⁶⁵ *Id.*

¹⁶⁶ Concurrent emissions from phased-in construction and operation of the LNG Terminal would temporarily impact local air quality, and could result in exceedances of the NAAQS in the immediate vicinity of the LNG Terminal during these construction years. However, these exceedances would not be persistent at any one time during these years due to the dynamic and fluctuating nature of construction activities within a day, week, or month. Final EIS at 12.

¹⁶⁷ Final EIS at 12.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

number of best management practices to help reduce the noise from the HDD activities.¹⁷⁰ However, because HDD noise levels could still exceed 55 dBA Ldn, Environmental Condition 26 requires that TransCameron file an HDD noise analysis identifying the existing and projected noise levels at each NSA within 0.5 mile of the HDD entry and exit pits, as well as a mitigation plan to reduce projected noise levels.

110. The final EIS concludes that with implementation of the mitigation measures described above, the projects would not result in significant air quality or noise impacts.

12. Greenhouse Gas Emissions

111. With respect to impacts from GHGs, the final EIS discusses the direct GHG impacts from construction and operation of the Calcasieu Pass Project, the climate change impacts in the region,¹⁷¹ and the regulatory structure for GHGs under the Clean Air Act.¹⁷²

112. The final EIS estimated that operation of the Calcasieu Pass LNG terminal, including the terminal power plant facility, may result in emissions of up to 3,906,336 metric tons per year of carbon dioxide equivalent (CO₂e).¹⁷³ 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 operational emissions of the LNG terminal could potentially increase CO₂e emissions based on the 2016 levels by 0.07 percent at the national level.¹⁷⁴ Currently, there are no national targets to use as benchmarks for comparison.¹⁷⁵

¹⁷⁰ Final EIS at 13.

¹⁷¹ Final EIS at 4-296 and 4-297.

¹⁷² Final EIS at 4-149.

¹⁷³ Final EIS at Tables 4.11.1.3-1 and 4.11.1.5-1.

¹⁷⁴ EPA. 2018, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2016*, https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf Accessed December 2018.

¹⁷⁵ The national emissions reduction targets expressed in the EPA's Clean Power Plan and the Paris climate accord are pending repeal and withdrawal, respectively.

113. The final EIS included a qualitative discussion that addressed various effects of climate change.¹⁷⁶ The final EIS acknowledges that the quantified greenhouse gas emissions from the construction and operation of the project will contribute incrementally to climate change.¹⁷⁷ Further, the Commission has previously concluded it could not determine a project's incremental physical impacts on the environment caused by GHG emissions.¹⁷⁸ The Commission has also previously concluded it could not determine whether a project's contribution to climate change would be significant.¹⁷⁹

13. Reliability and Safety

114. The proposed projects would be designed, constructed, operated, and maintained to meet or exceed United States Coast Guard (USCG) Safety Standards,¹⁸⁰ the Department of Transportation (DOT) Minimum Federal Safety Standards,¹⁸¹ and other applicable federal and state regulations. Based on our technical review of the preliminary engineering design, Commission staff concluded that, with the incorporation of its recommendations, adopted as Environmental Conditions to this order, the Front End Engineering Design presented by Calcasieu Pass would include acceptable layers of protection or safeguards to reduce the risk of a potentially hazardous scenario from developing into an event that could impact the off-site public.¹⁸² Furthermore, Commission staff have made a number of recommendations, adopted as Environmental

¹⁷⁶ Final EIS at 4-296 – 4-297.

¹⁷⁷ EIS at 4-299.

¹⁷⁸ *Dominion Transmission, Inc.*, 163 FERC ¶ 61,128, at PP 67-70 (2018) (LaFleur, Comm'r, *dissenting in part*; Glick, Comm'r, *dissenting in part*).

¹⁷⁹ *Id.*

¹⁸⁰ 33 C.F.R. §§ 105, 127 (2018). Additionally, the USCG reviewed the suitability of the Calcasieu River Ship Channel, and issued a Letter of Recommendation (LOR) and LOR Analysis stating that the Calcasieu River Ship Channel should be considered suitable for the type and frequency of the LNG marine traffic associated with the proposed Project.

¹⁸¹ 49 C.F.R. pts. 192 and 193. In an October 5, 2017 letter to Commission staff, DOT stated that it had no objection to Calcasieu Pass' methodology for determining the candidate design spills used to establish the Part 193 siting requirements for the proposed Terminal.

¹⁸² Final EIS at 13.

Conditions to this order, to be implemented during construction and operation of the LNG Terminal to enhance reliability and safety and further mitigate the risk of impact on the public. The proposed pipeline would be constructed and operated in accordance with the DOT and other applicable standards; therefore, Commission staff determined that the pipeline would represent a minimal increase in risk to the nearby public.¹⁸³

14. Cumulative Impacts

115. The final EIS considered the cumulative impacts of the projects with other projects or actions within the geographic and temporal scope of the projects.¹⁸⁴ 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.¹⁸⁵ The final EIS concludes that, for resources where a level of impact could be ascertained, the project's contribution to cumulative impacts on resources affected by the projects would not be significant, and that the potential cumulative impacts of the projects and the other projects considered would be minor or insignificant.¹⁸⁶

15. Alternatives

116. The final EIS evaluated several alternatives to the proposed projects, including the No-Action Alternative, system alternatives for the proposed LNG facility and the proposed pipeline, alternative LNG Terminal configurations, alternative dredge disposal sites, alternative pipeline routes, and process alternatives to liquefy LNG.¹⁸⁷ The final EIS concluded 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, was the preferred alternative.¹⁸⁸

¹⁸³ Id.

¹⁸⁴ Final EIS at 14 and 4-270.

¹⁸⁵ Final EIS at 4-273.

¹⁸⁶ Final EIS at 14, 5-33; *see also* 4-298 – 4-299.

¹⁸⁷ Final EIS at 14.

¹⁸⁸ Final EIS at 14-15.

16. Environmental Analysis Conclusion

117. 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 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.

118. 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, are environmentally acceptable actions. Further, for the reasons discussed throughout the order, as stated above, we find that Calcasieu Pass' Export Terminal Project is not inconsistent with the public interest and that TransCameron's East Lateral Project is in the public convenience and necessity.

119. 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 Calcasieu Pass and TransCameron 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.¹⁸⁹

¹⁸⁹ 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).

IV. Conclusion

120. 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. CP15-550-000, Calcasieu Pass is authorized under section 3 of the NGA to site, construct, and operate the proposed project located in Cameron Parish, Louisiana, as described and conditioned herein, and as more fully described in Calcasieu Pass' application and subsequent filings, including any commitments made therein, and subject to the environmental conditions contained in the Appendix to this order.

(B) Calcasieu Pass' proposed liquefaction facilities shall be constructed and made available for service within five years of the date of this order.

(C) In Docket No. CP15-551-001, a certificate of public convenience and necessity under section 7(c) of the NGA is issued to TransCameron authorizing it to construct and operate the proposed project, as described and conditioned herein, and as more fully described in TransCameron's application and subsequent filings, including any commitments made therein.

(D) The certificate authorized in Ordering Paragraph (C) above is conditioned on:

- (1) TransCameron's facilities being constructed and made available for service within five years of the date of this order;
- (2) TransCameron's compliance with all applicable Commission regulations under the NGA, particularly the general terms and conditions set forth in Parts 154, 157, and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the regulations;
- (3) TransCameron's compliance with the environmental conditions contained in the Appendix to this order

(E) A blanket transportation certificate is issued to TransCameron under Subpart G of Part 284 of the Commission's regulations.

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

(G) TransCameron shall file a written statement affirming that they have executed firm contracts for the capacity levels and terms of service represented in the signed precedent agreement, prior to commencing construction.

(H) TransCameron's initial rates and tariff are approved, as conditioned and modified herein in the body of this order.

(I) TransCameron shall file actual tariff records that comply with the requirements contained in the body of this order not less than 30 days and not more than 60 days prior to the commencement of interstate service consistent with Part 154 of the Commission's regulations.

(J) TransCameron must file at least 30 days, but not more than 60 days before the in-service date of the proposed facilities, an executed copy of the non-conforming agreement reflecting the non-conforming language and a tariff record identifying these agreements as non-conforming agreements consistent with section 154.112 of the Commission's regulations.

(K) No later than three months after the end of its first three years of actual operation, as discussed herein, TransCameron must make a filing to justify its existing cost-based firm and interruptible recourse rates. TransCameron's cost and revenue study should be filed through the eTariff portal using a Type of Filing Code 580. In addition, TransCameron is advised to include as part of the eFiling description, a reference to Docket No. CP15-551-001 and the cost and revenue study.

(L) TransCameron shall adhere to the accounting requirements discussed in the body of this order.

(M) Calcasieu Pass and TransCameron shall notify the Commission's environmental staff by telephone or e-mail of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Calcasieu Pass or TransCameron. Calcasieu Pass and

Docket No. CP15-550-000, et al.

- 46 -

TransCameron 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.

Appendix

Environmental Conditions

As recommended in the Final EIS, this authorization includes the following conditions:

1. Calcasieu Pass and TransCameron shall follow the construction procedures and mitigation measures described in their application and supplements (including responses to staff data requests) and as identified in the EIS, unless modified by the Order. Calcasieu Pass and TransCameron must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the 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 OEP **before using that modification.**
2. For the Terminal, 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, 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 Project. This authority shall allow:
 - a. the modification of conditions of the Order;

- b. stop-work authority; 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**, Calcasieu Pass and TransCameron each shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's 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**, Calcasieu Pass and TransCameron 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.

TransCameron'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. TransCameron's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

6. Calcasieu Pass and TransCameron shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. 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, and Maintenance Plan* and/or minor field realignments per landowner needs and requirements which 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**, Calcasieu Pass and TransCameron shall each file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. Calcasieu Pass and TransCameron must file revisions to the plan as schedules change. The plan(s) shall identify:

- a. how Calcasieu Pass and TransCameron 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 Calcasieu Pass and TransCameron 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 onsite construction and inspection personnel;
- c. the number of EIs assigned per spread, and how Calcasieu Pass will ensure that sufficient personnel are available to implement the environmental mitigation;
- d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
- e. the location and dates of the environmental compliance training and instructions Calcasieu Pass and TransCameron will give to all personnel involved in construction and restoration (initial and refresher training as the

- project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
- f. Calcasieu Pass personnel (if known) and specific portion of Calcasieu Pass and TransCameron's organization having responsibility for compliance;
 - g. the procedures (including use of contract penalties) Calcasieu Pass and TransCameron 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 onsite personnel;
 - iii. the start of construction; and
 - iv. the start and completion of restoration.
8. Calcasieu Pass and TransCameron shall employ at least one EI for the Terminal and one EI per pipeline construction spread, or as may be established by the Director of OEP. The EIs shall be:
- a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 7 above) and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
 - d. a full-time position, separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.
9. Beginning with the filing of its Implementation Plan, Calcasieu Pass and TransCameron shall file updated status reports with the Secretary on a **monthly** basis for the Terminal, and a **biweekly** basis for the Pipeline, 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 Calcasieu Pass and TransCameron's efforts to obtain the necessary federal authorizations;
 - b. Project schedule including the current construction status, 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 which 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 Calcasieu Pass and TransCameron from other federal, state, or local permitting agencies concerning instances of noncompliance, and Calcasieu Pass and TransCameron's response.
10. Calcasieu Pass and TransCameron must receive written authorization from the Director of OEP **before commencing construction of any Project facilities**. To obtain such authorization, Calcasieu Pass and TransCameron must file with the Secretary documentation that each has received all applicable authorizations required under federal law (or evidence of waiver thereof).
 11. Calcasieu Pass must receive written authorization from the Director of OEP **prior to introducing hazardous fluids into the Terminal 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. Calcasieu Pass must receive written authorization from the Director of OEP **before placing the Terminal 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 areas affected by the Terminal are proceeding satisfactorily.
13. TransCameron must receive written authorization from the Director of OEP **before placing the Pipeline into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas affected by the Pipeline are proceeding satisfactorily.
 14. **Within 30 days of placing the authorized facilities in service**, Calcasieu Pass and TransCameron shall each 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 Calcasieu Pass and TransCameron have complied with or will comply with. This statement shall also identify any areas affected by the project 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 Pipeline**, TransCameron shall file with the Secretary the results of site-specific geotechnical investigations conducted for each proposed HDD. The results shall include a description of the subsurface lithology along the drill path, standard penetration test results, and soil mechanic properties. Based on the HDD results, TransCameron shall also include an HDD feasibility study conducted by a qualified contractor that considers the potential for hydrofracture and an inadvertent release of drilling fluids using the USACE methodology for the installation of the HDDs. (Final EIS section 4.3.2.2)
 16. **Prior to construction of the Pipeline**, TransCameron shall revise its Project-specific Procedures without the requested modification to section VI.B.3.c and file it with the Secretary for review and written approval by the Director of OEP. (Final EIS section 4.4.3.6)
 17. **Prior to construction of the Project**, Calcasieu Pass and TransCameron shall file with the Secretary the final *Noxious Weed and Invasive Species Plant Management Plan* for review and written approval by the Director of OEP. (Final EIS section 4.5.2)

18. **Prior to construction of the Terminal**, Calcasieu Pass shall file with the Secretary the final Migratory Bird Nesting Impact Mitigation Plan and Migratory Bird Habitat Mitigation Plan developed in consultation with the FWS and LDWF. (Final EIS section 4.6.1.3)
19. **Prior to construction of the Project**, Calcasieu Pass and TransCameron shall file with the Secretary correspondence documenting consultation with LDWF that addresses the potential need for diamondback terrapin surveys. If surveys are necessary, Calcasieu Pass and TransCameron shall file with the Secretary its plan to conduct surveys for the diamondback terrapin, correspondence with the LDWF, and any mitigation measures Calcasieu Pass and TransCameron will implement should terrapins be found. (Final EIS section 4.6.1.3)
20. **Prior to initiating pile driving activities at the Terminal**, Calcasieu Pass shall perform initial test drives to measure the actual underwater noise generated during in-water pile driving. Following the completion of the initial test drives, Calcasieu Pass shall file with the Secretary and NMFS the acoustic monitoring methods, results, and any additional mitigation measures that will be implemented to reduce noise to acceptable levels, for review and written approval by the Director of OEP. (Final EIS section 4.6.2.1)
21. Calcasieu Pass and TransCameron shall **not begin construction of the Project facilities until**:
 - a. the FERC staff receives comments from the NMFS regarding the proposed action;
 - b. the FERC staff completes any necessary ESA section 7 consultation with NMFS; and
 - c. Calcasieu Pass and TransCameron have received written notification from the Director of the OEP that construction and/or use of mitigation may begin. (Final EIS section 4.7.1.5)
22. **Prior to construction of the Project**, Calcasieu Pass and TransCameron shall file with the Secretary a copy of the determination of consistency with the Coastal Zone Management Plan issued by the LDNR. (Final EIS section 4.8.1.5)
23. **Prior to construction of the Terminal**, Calcasieu Pass shall file with the Secretary, for review and written approval by the Director of OEP, a Final Traffic Management Plan that includes information relative to off-site parking and the use of shuttles. (Final EIS section 4.9.12.1)
24. **Prior to construction of the Terminal**, Calcasieu Pass shall file with the Secretary, for review and written approval by the Director of OEP, a Fugitive Dust

Control Plan that specifies the precautions that Calcasieu Pass will take to minimize fugitive dust emissions from construction activities, including additional mitigation measures recommended by the EPA to control PM₁₀ and PM_{2.5}. The plan shall clearly explain how Calcasieu Pass will implement such measures as:

- a. watering the construction workspace and access roads;
 - b. providing measures to limit track-out onto the roads;
 - c. identifying the speed limit that Calcasieu Pass will enforce on unsurfaced roads;
 - d. covering open-bodied haul trucks, as appropriate;
 - e. clarifying that the EI has the authority to determine if/when water or an alternative dust suppressant needs to be used for dust control; and
 - f. clarifying the individuals with the authority to stop work if the contractor does not comply with dust control measures. (Final EIS section 4.11.1.4)
25. **Prior to construction of the Terminal**, Calcasieu Pass shall file with the Secretary a dredging noise mitigation plan, for review and written approval by the Director of OEP, that includes the measures it will implement to reduce the projected nighttime (7 pm to 7 am) noise levels to at or below 55 dBA Ldn at NSAs 1 and 3, and how it will monitor the noise levels during dredging activities. (Final EIS section 4.11.2.4)
26. **Prior to construction of the HDDs identified in table 4.11.2-3 of the EIS**, TransCameron shall file with the Secretary an HDD noise analysis identifying the existing and projected noise levels at each NSA identified within 0.5 mile of each HDD entry and exit site. If noise attributable to the HDD is projected to exceed an Ldn of 55 dBA at any NSA, TransCameron shall file with the noise analysis a mitigation plan to reduce the projected noise levels for the review and written approval by the Director of OEP. **During drilling operations**, TransCameron 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 an Ldn of 55 dBA at the NSAs. (Final EIS section 4.11.2.4)
27. Calcasieu Pass shall file with the Secretary a full power load noise survey for the Terminal **no later than 60 days** after each phase of liquefaction blocks are placed into service. If the noise attributable to operation of the equipment at the Terminal exceeds an Ldn of 55 dBA at the nearest NSA, **within 60 days** Calcasieu Pass shall modify operation of the liquefaction facilities or install additional noise controls until a noise level below an Ldn of 55 dBA at the NSA is achieved. Calcasieu Pass 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. (Final EIS section 4.11.2.4)

28. Calcasieu Pass shall file a noise survey with the Secretary **no later than 60 days** after placing the entire Terminal into service. If a full load condition noise survey is not possible, Calcasieu Pass shall provide an interim survey at the maximum possible horsepower load **within 60 days** of placing the Terminal into service and provide the full load survey **within 6 months**. If the noise attributable to operation of the equipment at the Terminal exceeds an Ldn of 55 dBA at the nearest NSA under interim or full horsepower load conditions, Calcasieu Pass 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. Calcasieu Pass 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. (Final EIS section 4.11.2.4)
29. **Prior to initial site preparation**, Calcasieu Pass shall file with the Secretary the following information, stamped and sealed by the professional engineer-of-record, registered in Louisiana:
 - a. quality assurance and quality control procedures to be used for civil/structural design and construction;
 - b. site preparation drawing and specifications; and
 - c. seismic specifications for procured equipment prior to the issuing of requests for quotations. (Final EIS section 4.12.5)
30. **Prior to construction of the final design**, Calcasieu Pass shall file with the Secretary the following information, stamped and sealed by the professional engineer-of-record, registered in Louisiana:
 - a. pile installation drawings and specifications;
 - b. LNG storage tank and foundation design drawings and calculations;
 - c. LNG facility structures and foundation design drawings and calculations (including prefabricated and field-constructed structures as applicable); and
 - d. perimeter berm and floodwall design drawings and calculations based upon the design recommendations provided in the Project Levee and Floodwall Overtopping Analysis report (Moffat and Nichol, 2016) and the Project Geotechnical Study report (Fugro, 2015). (Final EIS section 4.12.5)

31. **Prior to commencement of service**, Calcasieu Pass shall file with the Secretary a surface maintenance plan, stamped and sealed by the professional engineer-of-record registered in Louisiana, for the perimeter berm 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. (Final EIS section 4.12.5)

Conditions 32 through 107 shall apply to the Calcasieu Pass Project LNG Terminal facilities. Information pertaining to these specific conditions 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 filed 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 would 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**, Calcasieu Pass shall file an overall Terminal schedule, which includes the proposed stages of the commissioning plan.
33. **Prior to initial site preparation**, Calcasieu Pass shall file quality assurance and quality control procedures for construction activities.
34. **Prior to initial site preparation**, Calcasieu Pass shall file procedures for controlling access during construction.
35. **Prior to initial site preparation**, Calcasieu Pass shall develop an Emergency Response Plan (ERP) (including evacuation) and coordinate procedures with the USCG; 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 including, but not limited to, the calculated AEGL dispersion zones;
- 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 marine carrier to activate sirens and other warning devices.

Calcasieu Pass shall notify FERC staff of all planning meetings in advance and shall report progress on the development of its Emergency Response Plan at **3-month intervals**.

- 36. **Prior to initial site preparation**, Calcasieu Pass 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. Calcasieu Pass 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**.
- 37. **Prior to initial site preparation**, Calcasieu Pass shall file a complete specification of the proposed LNG tank design and installation.
- 38. **Prior to construction of the final design**, Calcasieu Pass shall file information/revisions pertaining to Calcasieu Pass’ response numbers 64, 68, 69, 73, 74, 77, 80, 83, and 88 of its February 3, 2017 filing, which indicated features to be included or considered in the final design.
- 39. **Prior to construction of the final design**, Calcasieu Pass shall file information/revisions pertaining to the response numbers 1, 3, 4, 5, 8, 10, 11, 12, 13, and 14 of its December 13, 2017 filing, which indicated features to be included or considered in the final design.
- 40. **Prior to construction of the final design**, Calcasieu Pass shall file information/revisions pertaining to the response numbers 1(a), 3(b), 6(b), 7, 9(a) leakage source table changes, 13, and 15 of its March 7 and 13, 2018 filings, which indicated features to be included or considered in the final design.
- 41. **Prior to construction of the final design**, Calcasieu Pass shall file details of its foundation heating system of the LNG storage tanks or details of an alternative

system that demonstrates cold temperatures will be prevented from causing frost heave underneath the tank. If an elevated pile cap design is selected, Calcasieu Pass shall prevent the migration and ignition of vapor clouds underneath the LNG storage tank or demonstrate the tank would be able to withstand such a scenario.

42. **Prior to construction of the final design**, Calcasieu Pass shall file change logs that list and explain any changes made from the FEED provided in its 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.
43. **Prior to construction of the final design**, Calcasieu Pass shall file a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems.
44. **Prior to construction of the final design**, Calcasieu Pass shall file an up-to-date complete equipment list, process and mechanical data sheets, and specifications.
45. **Prior to construction of the final design**, Calcasieu Pass shall file three-dimensional plant drawings to confirm plant layout for maintenance, access, egress, and congestion.
46. **Prior to construction of the final design**, Calcasieu Pass shall file up-to-date Process Flow Diagrams with heat and material balances that demonstrate the peak liquefaction rate of 12 MPTA is achievable and a complete set of Piping and Instrumentation Diagrams (P&IDs), which include the following information:
 - a. equipment tag number, name, size, duty, capacity, and design conditions;
 - b. equipment insulation type and thickness;
 - c. storage tank 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.

47. **Prior to construction of the final design**, Calcasieu Pass shall file revised P&IDs to be consistent and include the full tag numbering system for valves and instrumentation to prevent operator errors.
48. **Prior to construction of the final design**, Calcasieu Pass shall file a car seal philosophy and a list of all car-sealed and locked valves consistent with the P&IDs.
49. **Prior to construction of the final design**, Calcasieu Pass shall file a hazard and operability review of the completed design prior to issuing the P&IDs for construction. The review shall include a list of recommendations and actions taken on the recommendations.
50. **Prior to construction of the final design**, Calcasieu Pass shall provide a means to remove mercury as part of the design to limit concentrations to less than 0.01 micrograms per normal cubic meter or alternatively provide monitoring for mercury by means of an analyzer or preventative maintenance inspections of the heat exchangers and connections for a mercury removal package.
51. **Prior to construction of the final design**, Calcasieu Pass shall include provisions in the facility plot plan for the possible future installment of a mercury removal system.
52. **Prior to construction of the final design**, Calcasieu Pass shall include space for possible future installment of LNG drain pumps for the BOG Compressor Drain Drum (110-V0003).
53. **Prior to construction of the final design**, Calcasieu Pass shall include an antisurge and control system on the recycling gas compressor (103-K1001).
54. **Prior to construction of the final design**, Calcasieu Pass shall include a vent valve on the drain line 3"-BO-126-040002-1K0A1-PH from the Warm Flare Knockout Drum (126-V0001).
55. **Prior to construction of the final design**, Calcasieu Pass shall include a flow meter on the discharge of the LNG Loading Pumps to verify the pump's performance.
56. **Prior to construction of the final design**, Calcasieu Pass shall include an antisurge and control system on the molecular sieve dehydration system.
57. **Prior to construction of the final design**, Calcasieu Pass shall include double isolation valves on the Cold Flare Scrubber (00A-V-1110).

58. **Prior to construction of the final design**, Calcasieu Pass shall file the cause-and-effect matrices for the process instrumentation and emergency shutdown system. The cause-and-effect matrices shall include alarms and shutdown functions, details of the voting and shutdown logic, and set points.
59. **Prior to construction of the final design**, Calcasieu Pass shall specify that all emergency shutdown valves are to be equipped with open and closed position switches connected to the Distributed Control System/Safety Instrumented System.
60. **Prior to construction of the final design**, Calcasieu Pass shall file the procedures for pressure/leak tests which address the requirements of ASME VIII and ASME B31.3, as required by 49 C.F.R. Part 193.
61. **Prior to construction of the final design**, Calcasieu Pass 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 required by 49 C.F.R. Part 193, and shall provide justification if not using an inert or non-flammable gas for clean-out, dry-out, purging, and tightness testing.
62. **Prior to construction of the final design**, Calcasieu Pass shall demonstrate that, for hazardous fluids, 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.
63. **Prior to construction of the final design**, Calcasieu Pass shall specify that piping specifications for stainless steel piping capable of operating at cryogenic temperatures shall require the inner and outer ring of spiral wound gaskets to be stainless steel.
64. **Prior to construction of the final design**, Calcasieu Pass shall include dual relief valves on the ethylene, propane, and pentane storage drums.
65. **Prior to construction of the final design**, Calcasieu Pass 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.
66. **Prior to construction of the final design**, Calcasieu Pass shall file an updated fire protection evaluation of the proposed facilities carried out in accordance with the requirements of NFPA 59A (2001 edition), Chapter 9.1.2 as required by 49 C.F.R. Part 193. The evaluation shall include a list of recommendations and supporting justifications, and actions taken on the recommendations. Clarification shall be provided on the use of high expansion foam or foam glass blocks for LNG spill

impoundments and specific consideration shall be given to the use of other foam systems or automatic fire protection measures in the hazardous fluid storage areas, including the diesel storage area.

67. **Prior to construction of the final design**, Calcasieu Pass shall file spill containment system drawings with dimensions and slopes of curbing, trenches, impoundments, and capacity calculations for trenches and impoundments considering any foundations and equipment within impoundments, the sizing and design of the down-comer that would transfer LNG tank top spills to the ground-level impoundment system, and demonstration that the piping spill trays at the base of the LNG tanks would withstand the force and shock of a sudden cryogenic release.
68. **Prior to construction of the final design**, Calcasieu Pass shall file revised dimensions for Discharge Holding Basins 127-M0011, 127-M0021, and 127-M0041 to contain the liquid volume associated with the high liquid level in the hot oil surge drum or shall demonstrate that sizing liquid volumes greater than those already considered could not occur.
69. **Prior to construction of the final design**, Calcasieu Pass shall file detailed calculations to confirm that the final fire water volumes would be vaporized or accounted for when evaluating the capacity of the impoundment system during a spill and fire scenario.
70. **Prior to construction of the final design**, Calcasieu Pass shall file documentation of the PHAST model suitability for predicting the rainout from a catastrophic failure of the liquid nitrogen storage tank, including any validation against experimental data for similar scenarios. Alternatively, Calcasieu Pass shall revise the liquid nitrogen containment design to take into account for the non-flashing portion of the vessel liquid volume in the PHAST modeling results or to account for the liquid fraction indicated by experimental data for similar scenarios of a similar scale.
71. **Prior to construction of the final design**, Calcasieu Pass shall provide containment for the liquid from a failure of a feed gas booster compressor knock out drum, as well as any other significant liquid vessels outside of containment areas, or shall file a detailed explanation of how this liquid would be safely collected, including calculations for the liquid volume considered.
72. **Prior to construction of the final design**, Calcasieu Pass shall file a detailed analysis to demonstrate that liquid from an LNG storage tank failure would not be expected to reach the metal storm surge wall and gate or shall demonstrate that the storm surge wall, up to a necessary height, would be designed or protected to withstand the potential spill conditions, including sudden cryogenic temperatures.

73. **Prior to construction of the final design**, Calcasieu Pass 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 NFPA 59A (2001 edition).
74. **Prior to construction of the final design**, Calcasieu Pass 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.
75. **Prior to construction of the final design**, Calcasieu Pass shall file electrical area classification drawings.
76. **Prior to construction of the final design**, Calcasieu Pass 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. The list shall include the instrument tag number, type and location, alarm indication locations, and shutdown functions of the hazard detection equipment.
77. **Prior to construction of the final design**, Calcasieu Pass shall file a technical review of its proposed facility design that:
 - a. identifies all combustion/ventilation air intake for equipment and buildings and the distances to any possible hazardous fluid release (LNG, flammable refrigerants, flammable liquids and flammable gases); and
 - b. demonstrates that these areas are adequately covered by hazard detection devices and indicates how these devices would isolate or shut down any combustion or ventilation equipment whose continued operation could add to or sustain an emergency.
78. **Prior to construction of the final design**, Calcasieu Pass shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas when determining the lower flammability limit set points for methane, propane, and ethylene, pentane, and condensate.
79. **Prior to construction of the final design**, Calcasieu Pass shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas when determining the toxic concentration set points for condensates, ammonia, and hydrogen sulfide.
80. **Prior to construction of the final design**, Calcasieu Pass shall file a drawing showing the location of the emergency shutdown buttons. Emergency shutdown

buttons shall be easily accessible, conspicuously labeled, and located in an area which would be accessible during an emergency.

81. **Prior to construction of the final design**, Calcasieu Pass shall file the cause-and-effect matrices for the fire and gas detection system and emergency shutdown system. The cause-and-effect matrices shall include alarms and shutdown functions, details of the voting and shutdown logic, and set points.
82. **Prior to construction of the final design**, Calcasieu Pass shall file complete plan drawings and a list of the fixed and wheeled, dry-chemical, and hand-held fire extinguishers, and other hazard control equipment. Drawings shall clearly show the location by tag number of all fixed, wheeled, and hand-held extinguishers. The list shall include the equipment tag number, type, capacity, equipment covered, discharge rate, and automatic and manual remote signals initiating discharge of the units. The spacing of portable fire extinguishers shall be demonstrated to meet NFPA 10 spacing requirements.
83. **Prior to construction of the final design**, Calcasieu Pass shall include clean agent systems in the electrical switchgear and instrumentation buildings.
84. **Prior to construction of the final design**, Calcasieu Pass shall file facility plans and drawings that show the location of the firewater and foam systems. Drawings shall clearly show: firewater and foam piping; post indicator valves; and the location, and area covered by, each monitor, hydrant, deluge system, foam system, water-mist system, and sprinkler. The drawings shall also include piping and instrumentation diagrams of the firewater and foam system.
85. **Prior to construction of the final design**, Calcasieu Pass shall install firewater hydrants or monitors that cover the LNG storage tanks for exposure cooling.
86. **Prior to construction of the final design**, Calcasieu Pass 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. The firewater main header pressure transmitter shall also be connected to the DCS and recorded.
87. **Prior to construction of the final design**, Calcasieu Pass shall file the structural analysis of the LNG storage tank and outer containment demonstrating they are designed to withstand all loads and combinations. The analysis shall include thermal loads on the outer containment of the full containment storage tanks when exposed to a roof tank top fire or adjacent tank top fire and overpressure and projectile loads from wind borne projectiles and ignition of design spills.

88. **Prior to construction of final design**, Calcasieu Pass 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.
89. **Prior to construction of the final design**, Calcasieu Pass shall file plans to equip the LNG storage tank and adjacent piping and supports with permanent settlement monitors to allow personnel to observe and record the absolute and relative settlement of the LNG storage tank and adjacent piping.
90. **Prior to construction of final design**, Calcasieu Pass shall file complete plan drawings of lighting, camera coverage, security fencing, including facility access and egress for the entire facility. The lighting shall include all lighting, including the process and storage tank areas, and shall be supported by a photometric analysis. The camera coverage shall include all camera coverage within the site and delineate operator and security camera coverage. The fencing shall surround the entire facility, including along the entire shoreline, and shall evaluate the mesh size proposed and shall show access/egress points and vehicle barriers at those locations and other locations throughout the plant.
91. **Prior to construction of the final design**, Calcasieu Pass shall file plant geometry models or drawings that verify the confinement and congestion represented in the front-end engineering design or provide revised overpressure calculations indicating that a 1 psi overpressure would not impact the public.
92. **Prior to construction of the final design**, Calcasieu Pass shall file a detailed quantitative analysis to demonstrate that adequate thermal mitigation would be provided for each significant component that could fail from an impoundment fire. The analysis shall consider 4,000 BTU/ft²-hr or a more detailed analysis of the degradation of strength and pressure rise from the radiant heat exposures. Trucks at the truck transfer station shall be included in the analysis. A combination of passive and active protection shall be provided and demonstrate the effectiveness and reliability. 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 would mitigate the heat absorbed by the vessel.
93. **Prior to commissioning**, Calcasieu Pass 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. Calcasieu Pass 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.

94. **Prior to commissioning**, Calcasieu Pass shall file results of the LNG storage tank hydrostatic test and foundation settlement results along with adjacent piping. At a minimum, foundation settlement results shall be provided thereafter annually via a semi-annual operational report.
95. **Prior to commissioning**, Calcasieu Pass shall file plans and detailed procedures for testing the integrity of onsite mechanical installation, functional tests, introduction of hazardous fluids, operational tests, and placing the equipment into service.
96. **Prior to commissioning**, Calcasieu Pass shall tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves.
97. **Prior to commissioning**, Calcasieu Pass shall file a tabulated list and drawings of the proposed hand-held fire extinguishers. The list shall include the equipment tag number, extinguishing agent type, capacity, number, and location. The drawings shall show the extinguishing agent type, capacity, and tag number of all hand-held fire extinguishers.
98. **Prior to commissioning**, Calcasieu Pass shall file the operation and maintenance procedures and manuals, as well as safety procedures, hot work procedures and permits, abnormal operating conditions reporting procedures, and management of change procedures and forms.
99. **Prior to commissioning**, Calcasieu Pass shall maintain a detailed training log that demonstrates that operating staff has completed required training.
100. **Prior to introduction of hazardous fluids**, Calcasieu Pass shall complete and document all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the Distributed Control System and the Safety Instrumented System that demonstrates full functionality and operability of the system.
101. **Prior to introduction of hazardous fluids**, Calcasieu Pass 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).
102. Calcasieu Pass shall file a request for written authorization from the Director of OEP **prior to unloading the first LNG import commissioning cargo and prior to loading the first LNG export commissioning cargo. After first production of LNG**, Calcasieu Pass 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 block, 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**.

103. **Prior to commencement of service**, Calcasieu Pass shall file an alarm management program to ensure effectiveness of process alarms.
104. **Prior to commencement of service**, Calcasieu Pass shall develop procedures for offsite contractors' responsibilities, restrictions, and limitations and for supervision of these contractors by Calcasieu Pass staff.
105. **Prior to commencement of service**, Calcasieu Pass shall label piping with fluid service and direction of flow in the field, in addition to the pipe labeling requirements of NFPA 59A (2001 edition).
106. **Prior to commencement of service**, Calcasieu Pass shall notify the FERC staff of any proposed revisions to the security plan and physical security of the plant.
107. **Prior to commencement of service**, Calcasieu Pass shall file a request for written authorization from the Director of OEP. Such authorization will only be granted following a determination by the USCG, under its authorities under the Ports and Waterways Safety Act, the Magnuson Act, the Maritime Transportation Security Act, and the Security and Accountability For Every Port Act, that Calcasieu Pass has installed appropriate measures to ensure the safety and security of the facility and the waterway.

In addition, conditions 108 through 111 shall apply **throughout the life** of the LNG Terminal facilities:

108. 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, Calcasieu Pass 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 piping and instrumentation diagrams 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.

109. **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, number and volume of trucking, etc.), plant modifications, including future plans and progress thereof. Abnormalities shall include, but not be limited to: unloading/loading/shipping problems, potential hazardous conditions from 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 to provide FERC staff with early notice of anticipated future construction/maintenance projects at the LNG facility.
110. 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.
111. Significant non-scheduled events, including safety-related incidents (e.g., LNG, condensate, refrigerant, or natural gas releases, fires, explosions, mechanical failures, unusual over pressurization, and major injuries) and security-related incidents (e.g., attempts to enter site, suspicious activities) shall be reported to FERC staff. In the event an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification shall be made **immediately**, without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. In all instances, notification shall be made to FERC staff **within 24 hours**. This notification practice shall be incorporated into the LNG facility's emergency plan. Examples of reportable hazardous fluids related incidents include:
 - a. fire;

- b. explosion;
- c. estimated property damage of \$50,000 or more;
- d. death or personal injury necessitating in-patient hospitalization;
- e. release of hazardous fluids for five minutes or more;
- f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes hazardous fluids;
- g. any crack or other material defect that impairs the structural integrity or reliability of an LNG facility that contains, controls, or processes hazardous fluids;
- h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes hazardous fluids to rise above its 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 to 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 LNG

facility to cease operations. Following the initial company notification, FERC staff would determine the need for a separate follow-up report or follow-up in the upcoming semi-annual operational report. All company follow-up reports shall include investigation results and recommendations to minimize a reoccurrence of the incident.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Venture Global Calcasieu Pass, LLC
TransCameron Pipeline, LLC

Docket Nos. CP15-550-000
CP15-551-000
CP15-551-001

(Issued February 21, 2019)

LaFLEUR, Commissioner, *concurring*:

1. Today's order grants authorization to Venture Global Calcasieu Pass, LLC, pursuant to section 3 of the Natural Gas Act (NGA),¹ to site, construct and operate a new liquefied natural gas (LNG) export terminal (Calcasieu Pass Project) in Cameron Parish, Louisiana.² The Commission also authorizes TransCameron Pipeline, LLC (TransCameron), pursuant to section 7 of the NGA,³ to construct and operate a pipeline, the East Lateral Project, to provide up to 2,125,000 dekatherms per day (Dth/day) of natural gas transportation service 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 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

¹ 15 U.S.C. § 717b (2012).

² *Venture Global Calcasieu Pass, LLC*, 166 FERC ¶ 61,144 (2019) (Certificate Order).

³ 15 U.S.C. § 717f(c) (2012).

⁴ 15 U.S.C. § 717b(a)-(c) (2012).

⁵ 15 U.S.C. § 717b(c) (2012).

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 Act (NEPA) which, as relevant here, requires the Commission to take a “hard look” at the potential environmental impacts that could result from the Calcasieu Pass 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 impacts of LNG exports as part of the DOE’s determination of the public interest in exporting the natural gas.⁶ However, the Commission still has the clear responsibility to disclose and consider the direct and cumulative impacts of the proposed LNG export facility, in order to satisfy our obligations under NEPA and section 3 of the NGA.

5. I appreciate that the Commission has in fact disclosed in the Certificate Order the direct GHG emissions of the Calcasieu Pass Project, and has provided important context by comparing them to the national GHG emissions inventory.⁷ We have included this comparison in the past to provide 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.⁸

⁶ *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).

⁷ Certificate Order at P 112. Final EIS at Table 4.11.1-5.1 and 4-297. *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.”)

⁸ *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

6. I acknowledge that the disclosure of the national comparison data is only the first step to assist the Commission in ascribing significance to a given rate or volume of GHG emissions as part of our climate change analysis. The magnitude of the direct GHG emissions from the Calcasieu Pass Project certainly appear to be significant, as contemplated by NEPA. However, to date, the Commission has not identified a framework for making a significance determination. As I have previously explained, using the Social Cost of Carbon⁹ could enable the Commission to assess the significance of GHG emissions.¹⁰ While the Commission has argued that monetizing climate damages through the Social Cost of Carbon does not readily lend itself to the Commission's environmental review of natural gas facilities, I am confident that, given the importance of this issue, the Commission could find a way to adapt and apply a metric such as the Social Cost of Carbon to reach a significance threshold determination. Indeed, the Commission makes challenging determinations on quantitative and qualitative issues in many other areas of our work, but has simply chosen not to attempt a significance determination in this context.¹¹ While making a significance determination

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.

⁹ https://www.epa.gov/sites/production/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf

¹⁰ E.g., *Florida Southeast Connection*, 162 FERC ¶ 61,233 (2018) (LaFleur, Comm'r, dissenting in part); *Dominion Transmission Inc.*, 163 FERC ¶ 61,128 (2018) (LaFleur, Comm'r, dissenting in part); and *Florida Southeast Connection, LLC*, 164 FERC ¶ 61,099 (2018) (LaFleur, Comm'r, dissenting).

¹¹ 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*,

on GHG emissions could be difficult, that challenge does not relieve the Commission of its responsibility to address this issue.

7. With regards to cumulative impacts analysis, I appreciate the work done in the final EIS to address a range of resources impacted within the identified geographic scope of the Calcasieu Pass Project. However, I disagree with the Commission's failure to disclose and discuss cumulative potential direct GHG emissions associated with Calcasieu Pass Project, as well as the other projects identified in the final EIS within the 50 kilometers air region.¹²

8. A NEPA cumulative impacts analysis considers the effect of the current project along with any other past, present or likely future action in the same geographic region.¹³ Commission staff considers the geographic scope for cumulative impacts for traditional air pollutants such as criteria pollutants (nitrogen oxides [NO_x], sulfur oxides [SO_x], particulate matter [PM], etc.), volatile organic compounds, and hazardous air pollutants to be the local air quality region, such as an individual valley or basin, large airsheds, or a specific distance from the jurisdictional activity based upon historical air quality models (e.g., 50 kilometers).¹⁴ However, GHG emissions are not included in the cumulative impacts analysis because the impacts of GHG emissions are not local or regional.

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 (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.

¹² Final EIS at 4-275-4-278 Table 4.13.1.1-1.

¹³ 40 C.F.R. § 1508.7 (2017).

¹⁴ 50 kilometers is the distance used in the final EIS and by the EPA for

9. I disagree with the decision to exclude these emissions from the cumulative impacts analysis. I believe it would take minimal effort to disclose the direct GHG emissions for the other projects identified in table 4.13.1.1-1 of the final EIS, and include an estimate of the total annual potential GHG emissions associated with the Calcasieu Pass Project and those other projects as part of our environmental review.¹⁵ Notably, five of the projects listed in the final EIS are LNG projects that have considerable direct GHG emissions.

10. I recognize that GHG emissions are not typically measured on a local or regional basis, but at a national or global level. Given this, the fact that proposed LNG export facilities are clustered in close geographic proximity does not lead to a different impact than if they were more geographically distributed. I also recognize that it is difficult to balance these impacts with the potential public benefits of export, since the latter are part of DOE's responsibility, not part of the Commission's public interest determination. This division of authority makes assessing the climate impacts of LNG export very complicated. However, it is clear that the liquefaction of natural gas for export has meaningful GHG consequences.¹⁶ I believe at a minimum direct GHG emissions must be disclosed and considered, both cumulatively and with respect to individual facilities. Since the other air-related cumulative impacts were assessed geographically using the 50 kilometers zone, I have displayed the direct GHG impacts in the same way in Table 1

cumulative modeling of large sources of air pollutants. Final EIS at 4-272, Table 4.13-1.

¹⁵ In *Freeport*, Sierra Club argued that the Commission violated NEPA by failing to include in the cumulative impacts analysis, without any geographic or other limiting principles, all LNG facilities in the United States. The Commission limited its cumulative impact analysis to Brazoria County, Texas as the Freeport Project's geographic study area. The D.C. Circuit upheld the Commission, finding, "given the scant record evidence identifying any reasonably foreseeable and proximate effects of the Freeport Projects themselves (separate from their exports) on national energy markets or emission levels," it did not act arbitrarily or capriciously. 827 F.3d at 50. Here, by comparison, the air region identified in the final EIS has five LNG facilities along with two FERC-jurisdictional pipeline projects, and two additional non-jurisdictional projects. The Commission has the information on the direct GHG emissions from these projects and could easily disclose that as part of its environmental review.

¹⁶ National Energy Technology Lab (NETL), *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, May 29, 2014. This analysis calculates the life cycle GHG emissions for regional coal and imported natural gas power in Europe and Asia. The cradle-to-grave approach includes GHG impacts of liquefaction.

Docket No. CP15-550-000, et al.

- 6 -

11. As with recent pipeline orders, I am attempting to assess LNG projects as I believe the law requires, despite the complications of the Commission's shared authority with the DOE and my concerns regarding how the Commission limits its disclosure and discussion of GHG emissions. I will continue to consider and evaluate these issues as they arise in individual proceedings. However, given my review of the record and the governing law as I read it, I find the Calcasieu Pass Project is not inconsistent with the public interest.¹⁷

12. As for TransCameron's East Lateral Project, which is solely serving the Calcasieu Pass 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.¹⁸ 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 all of these reasons, I respectfully concur.

Cheryl A. LaFleur
Commissioner

¹⁷ 15 U.S.C. § 717b (2012).

¹⁸ *See Sabine Pass*, 827 F.3d at 68.

Docket No. CP15-550-000, et al.

Table 1

Annual Direct CO₂e Emissions from FERC Projects within about 50km of Calcasieu Pass LNG

	Calcasieu Pass LNG	Lake Charles Liquefaction	Sabine Pass LNG	Golden Pass LNG Liquefaction	Cameron LNG Liquefaction	Magnolia LNG	Port Arthur Liquefaction	Commonwealth LNG	Driftwood	Kinder Morgan Louisiana Pipeline (Lake Charles LNG)	Columbia Gulf's Cameron Access Pipeline	Total	National Inventory for 2016
GHG in CO ₂ e (million english tons)	3,910,000	4,510,000	10,220,000	5,330,000	7,650,000	2,790,000	5,190,000	N/A	10,610,000	520,000	70,000	50,800,000	6,395,700,000
Percent of National Inventory	0.06%	0.07%	0.16%	0.08%	0.12%	0.04%	0.08%	N/A	0.17%	0.01%	0.00%	0.79%	--
Notes:	Includes LNG Terminal	Includes LNG Terminal emissions	Includes trains 1-6	Includes terminal expansion, MP 1 Compressor Station, and MP 66 Compressor Station; does not include LNG import terminal	Includes LNG terminal, two expansions (CP13-25, CP13-27, and CP15-560), and Holbrook Compressor Station	Includes LNG terminal and Compressor Station 760	Includes LNG terminal; North, South, and Louisiana Connector Compressor Stations	No data available. Air quality resource report not yet filed; state air quality permits not yet filed	Includes LNG terminal and operation of 3 compressor stations	Includes Longville and 203-A Compressor Stations	Includes Lake Aruther Compressor Station	N/A	Table ES-2: Net GHG Emissions, inclusive of sources and sinks converted to english tons. https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Venture Global Calcasieu Pass, LLC
TransCameron Pipeline, LLC

Docket Nos. CP15-550-000
CP15-551-000
CP15-551-001

(Issued February 21, 2019)

GLICK, Commissioner, *dissenting*:

1. I dissent from today's order because it fails to meet the requirements of both the Natural Gas Act¹ (NGA) and the National Environmental Policy Act² (NEPA). In particular, the Commission is again deliberately ignoring the consequences that 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 an LNG facility that will directly emit large volumes of greenhouse gas (GHG) emissions. Yet that is precisely what is happening today.

2. In authorizing Venture Global Calcasieu Pass, LLC's liquefied natural gas export terminal (LNG Terminal) and TransCameron Pipeline, LLC's associated natural gas pipeline (Pipeline Project) (collectively, the Project) the Commission again refuses to even consider the climate change implications of the Project's direct GHG emissions when conducting its public interest determinations under sections 3 and 7 of the NGA.³ Similarly, the Commission's NEPA analysis ignores the Project's potential contribution to climate change, enabling the Commission to misleadingly conclude that its

¹ 15 U.S.C. § 717b (2012).

² National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852.

³ We evaluate the LNG Terminal pursuant to section 3 of the NPA and the Pipeline Project pursuant to section 7. As discussed below, the public interest standards in NGA sections 3 and 7 differ in both their scope and burden of proof. *See infra* notes 6-7 and accompanying text. Nevertheless, climate change remains a relevant—and essential—consideration in evaluating whether an energy infrastructure project is or is not consistent with the public interest.

environmental “impacts will be reduced to less than significant levels.”⁴ As a result, I have no choice but to dissent.

I. The Commission’s Public Interest Determination Is 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 Department of Energy (DOE) and the Commission.⁵ The NGA establishes a general presumption favoring imports and exports of LNG unless there is an affirmative finding that the import or export “will not be consistent with the public interest.”⁶ Section 3 provides for two independent public interest determinations: One regarding the import or export of LNG and one regarding the facilities used to import or export LNG. First, the DOE determines whether the import or export of LNG is in the public interest, with transactions among free trade countries legislatively deemed to be “consistent with the public interest.”⁷ Second, the Commission determines whether “an application for the siting, construction, expansion, or operation of an LNG terminal”⁸ is consistent with the public interest. Pursuant to that

⁴ *Venture Global Calcasieu Pass, LLC*, 166 FERC ¶ 61,144, at P 16 (2019) (Certificate Order).

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, 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 the exports of LNG rests with the DOE, NEPA does not require the Commission to consider the upstream or downstream GHG emissions that are indirect effects of the exports themselves when determining whether the export facilities satisfy section 3’s public interest standard. See *Freeport*, 827 F.3d at 46-47; see also *Sierra Club v. FERC*, 867 F.3d 1357, 1373 (D.C. Cir. 2017) (discussing *Freeport*). The Commission must, however, still consider the direct emissions associated with a proposed export facility. See *Freeport*, 827 F.3d at 41, 46.

⁸ 15 U.S.C. § 717b(e). In 1977, Congress transferred the regulatory functions of NGA section 3 to the DOE. The DOE, however, subsequently delegated to the

authority, the Commission must approve the LNG export facility unless the record shows that the proposed facility would be inconsistent with the public interest.⁹

4. In making that determination, the Commission must find that a proposed LNG facility's impact on the environment and public safety would not be not contrary to the public interest. I do not believe that the Commission can make that finding without duly considering the harm caused by GHG emissions that are a direct result of authorizing the Project. The final environmental impact statement (EIS) finds that the Project will directly emit nearly 4 million tons of GHGs annually.¹⁰ Unfortunately, as discussed below, the Commission once again refuses to assess the significance of those emissions or evaluate the harm they will cause. Today's order even goes so far as to effectively assume that the resulting harm to the environment will not be significant.¹¹ The result is that climate change plays no meaningful role in the Commission's public interest determination. I cannot countenance an approach that acts as if climate change is not relevant to the public interest. So long as the Commission adheres to such a deeply misguided approach, I have no choice but to dissent from its orders, regardless of what I might otherwise think about the benefits of a project.

II. The Commission Fails to Satisfy Its Obligations under NEPA

5. 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."¹² As noted, the EIS concludes that the Project will directly

Commission authority to approve or deny an application for the siting, construction, expansion, or operation of a 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 36, 40-41.

¹⁰ EIS at 4-143, tbl. 4.11.1.3-1; *id.* at 4-297 ("Based on the total annual potential emissions for the constructed terminal site, Project operations would increase [carbon dioxide equivalent] emissions by 3,915,514 [tons per year]."); *see also* Certificate Order, 166 FERC ¶ 61,144 at P 113 ("The Final EIS acknowledges that the quantified greenhouse gas emissions from the construction and operation of the project will contribute incrementally to climate change.").

¹¹ Certificate Order, 166 FERC ¶ 61,144 at PP 16, 76.

¹² *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d

emit nearly 4 million tons of GHGs annually.¹³ Although that quantification of the Project's GHG emissions is a necessary step toward meeting the Commission's NEPA obligations, counting the volume of emissions is insufficient.¹⁴

6. That approach entirely sidesteps the question of whether the Project's contribution to climate change is significant. Addressing the significance of that contribution (and the resulting harm to the public welfare) is essential because a finding of significance informs the government's and the public's review of the proposed project and also triggers an inquiry into potential ways of mitigating the impacts.¹⁵ In addition, recognizing the impacts as significant ensures that those impacts factor into the Commission's public interest determination. In refusing to assess the significance of the Project's GHG emissions, today's order effectively writes climate change out of the public interest determination entirely.

7. Nothing in today's order justifies that result. The Commission concludes that it need not determine whether the Project's contribution to climate change is significant because "[t]here is no standard methodology" to determine whether the GHG emissions "would result in physical effects on the environment for the purposes of evaluating the Project's impact on climate change, either locally or nationally."¹⁶ As a logical matter, the argument that there is no single standard methodology for evaluating the significance

1172, 1216 (9th Cir. 2008).

¹³ EIS at 4-143, tbl. 4.11.1.3-1.

¹⁴ 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.").

¹⁵ 40 C.F.R. § 1502.16 (NEPA requires an implementing agency to form a "scientific and analytic basis for comparison" of the environmental consequences of its action in its environmental review, which "shall include a discussion of direct effects and their significance.").

¹⁶ EIS at 4-298–4-299; see also Certificate Order, 166 FERC ¶ 61,144 at P 113 (acknowledging that the Project will contribute to climate change but claiming that it cannot determine whether that contribution—or the resulting harm—will be significant).

of GHG emissions does not prevent the Commission from adopting *a* methodology, even if other potential methods are available.

8. In any case, the absence of a standard methodology for evaluating the significance of GHG emissions is not a reason to effectively ignore those emissions and act as if the Project will not have a significant impact on the harms caused by climate change.¹⁷ Yet that is precisely what the Commission does here when it concludes that the Project's impacts, including its environmental impacts, "will be reduced to less than significant levels."¹⁸ The bottom line is that the Commission is finding that its choice not to evaluate the significance of the environmental harm caused by the Project's GHG emissions supports the conclusion that the Project will not cause significant environmental harm. That Kafkaesque approach is not the "hard look" that NEPA requires.

9. The Commission's rationale is all-the-more bewildering because the Commission has a useful tool to evaluate 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. Especially when it comes to a global problem like climate change, a measure for translating a single project's climate 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.

10. Buried in an appendix to the EIS, the Commission rejects using the Social Cost of Carbon relying on deeply flawed reasoning that I have previously critiqued at length.¹⁹ It bears repeating that the courts have held it arbitrary and capricious for an agency to monetize certain benefits of a project while ignoring its harms, including the harm caused

¹⁷ My colleague, Commissioner LaFleur, wrestled with these questions and reached a judgment on the merits of the Project notwithstanding the lack of analysis in the Commission's order. Providing context for the Project's GHG emissions is a useful first step that promotes public disclosure and informed decisionmaking. But neither that context nor a concurrence recognizing the seeming significance 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 apparent belief that this contribution is irrelevant to the public interest.

¹⁸ Certificate Order, 166 FERC ¶ 61,144 at PP 16, 76.

¹⁹ See, e.g., *Fla. Se. Connection, LLC*, 164 FERC ¶ 61,099 (2018) (Glick, Comm'r, dissenting).

by the Project's contribution to climate change.²⁰ The courts' concern that an agency must not "unfairly place a 'thumb on the scale by inflating the benefits of the action while minimizing its impacts'" holds true regardless whether the Commission considers the effects quantitatively or qualitatively.²¹ The Commission's rigid refusal to monetize the harms of climate change using the Social Cost of Carbon while simultaneously monetizing the Project's long-term socioeconomic benefits—including direct, indirect, and induced benefits from employment, investments, and local taxes—is arbitrary and capricious.²²

²⁰ See *Mont. Env't'l Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1097 (D. Mont. 2017) (finding it arbitrary and capricious for the agency to quantify the benefits of its decision and then explain that a similar analysis of the costs was impossible given the availability of the Social Cost of Carbon); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1193 (D. Colo. 2014) (finding that the agency was arbitrary and capricious in refusing to use the Social Cost of Carbon protocol when calculating costs and benefits of an action that would generate GHG emissions).

²¹ *Mont. Env't'l Info. Ctr.*, 274 F. Supp. 3d at 1098. In any case, the fact that the Commission has concluded that certain environmental impacts are "best" considered qualitatively is no answer for why the Commission cannot use a quantitative measure of the Project's contribution to climate change as an input to making a qualitative determination of its significance. As the Environmental Protection Agency has explained, the Commission may use estimates of the Social Cost of Carbon "for project analysis when [the Commission] determines that a monetary assessment of the impacts associated with the estimated net change in GHG emissions provides useful information in its environmental review or public interest determination." United States Environmental Protection Agency, Comments, Docket No. PL18-1-000, at 4–5 (filed June 21, 2018). Even assuming, *arguendo*, that climate change can be adequately considered qualitatively, that does not excuse the Commission's outright refusal to utilize quantitative methods as well.

²² The EIS recognizes Venture Capital's claim that the "Project would result in beneficial cumulative impacts on the local economy and tax revenues based on its estimated investment of \$4.25 billion." EIS at 4-118. Nevertheless, the Commission argues that neither it nor Commission staff "use[s]" those quantified benefits. Instead, that information is disclosed to the public because it may be useful in making an informed judgment about the Project. But when it comes to the Social Cost of Carbon, the Commission's preference for disclosing potentially useful information seems to vanish. The Commission argues that there is "no basis to designate a particular dollar figure calculated from the [Social Cost of Carbon] tool as significant" and so disclosing

11. The Commission's refusal to seriously consider the significance of the Project's GHG emissions is even more mystifying because NEPA "does not dictate particular decisional outcomes."²³ NEPA "'merely prohibits uninformed—rather than unwise—agency action.'"²⁴ 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 even help infrastructure developers by reducing their legal risk in the appeals that will inevitably follow many of our orders. At the end of the day, no one benefits from the Commission's refusal to take climate change seriously and I will continue to advocate for an approach that gives climate change the consideration that it demands.

For these reasons, I respectfully dissent.

Richard Glick
Commissioner

that information "would be arbitrary and would not meaningfully inform either the NEPA conclusions or the public." *See* EIS App. N at N-53. Disclosing information only when it supports an agency's preferred outcome is consistent with neither good government nor NEPA's purpose of ensuring that "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," *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

²³ *Sierra Club v. U.S. Army Corps of Engineers*, 803 F.3d 31, 37 (D.C. Cir. 2015).

²⁴ *Id.* (quoting *Robertson*, 490 U.S. at 351).

Document Content(s)

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