170 FERC ¶ 61,046
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Rio Grande LNG, LLC Docket Nos. CP16-454-001
Rio Bravo Pipeline Company, LLC CP16-455-001

ORDER ON REHEARING AND STAY

(Issued January 23, 2020)

1. On November 22, 2019, the Commission issued an order pursuant to section 3 of the Natural Gas Act (NGA)[1] and Part 153 of the Commission's regulations[2] authorizing Rio Grande LNG, LLC (Rio Grande) to site, construct, and operate a liquefied natural gas (LNG) terminal on the Brownsville Shipping Channel in Cameron County, Texas (Rio Grande LNG Terminal).[3] The Commission also authorized, pursuant to NGA section 7(c)[4] and Parts 157 and 284 of the Commission's regulations,[5] Rio Bravo Pipeline Company, LLC (Rio Bravo) to construct and operate a pipeline system in Jim Wells, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas, to transport natural gas in interstate commerce to the Rio Grande LNG Terminal for processing, liquefaction, and export (Rio Bravo Pipeline Project).

2. On December 23, 2019, the Commission received two requests for rehearing of the November 22 Order, one from Sierra Club, Texas RioGrande Legal Aid, Save RGV from LGV, Defenders of Wildlife, the City of South Padre Island, the City of Port Isabel, the Town of Laguna Vista, and Cynthia and Gilberto Hinojosa (collectively, Sierra Club); and the other from Mr. John Young. Sierra Club also sought a stay pending the resolution of the

[1] 15 U.S.C. § 717b (2018).

[2] 18 C.F.R. pt. 153 (2019).

[3] *Rio Grande LNG, LLC*, 169 FERC ¶ 61,131 (2019) (November 22 Order).

[4] 15 U.S.C. § 717f (2018).

[5] 18 C.F.R. pt. 157 (2019).

rehearing request. For the reasons discussed below, we deny the requests for rehearing and dismiss Sierra Club's request for stay as moot.

I. Background

3. The Rio Grande LNG Terminal is designed to produce a nominal capacity of up to 27 million metric tonnes per annum (MTPA) of LNG for export.[6] The project facilities will occupy 750.4 acres of land on a 984.2-acre parcel[7] and include six natural gas liquefaction trains, each with a nominal capacity of 4.5 MTPA, for a total nominal capacity of 27 MTPA; four full-containment LNG storage tanks, each with a net capacity of approximately 180,000 cubic meters (m^3); two LNG carrier loading berths; one 1,500-foot-diameter turning basin; LNG truck loading and unloading facilities with four loading bays; two natural gas liquids truck loading bays; and other facilities such as administrative buildings, a central control building, a workshop, a warehouse, electrical equipment enclosures, a communication system, and other support structures.[8]

4. In August 2016, Rio Grande received authorization from the Department of Energy, Office of Fossil Energy (DOE) to export the project's full capacity, which is equivalent to 1,318 billion cubic feet (Bcf) annually (approximately 3.6 Bcf per day (Bcf/d)) equivalent of natural gas in the form of LNG to countries with which the United States has a Free Trade Agreement (FTA).[9] In addition, Rio Grande currently has a pending application with DOE to export LNG to other nations with which the U.S. permits such trade, but has not entered into an FTA.[10]

5. The Rio Bravo Pipeline Project is designed to provide up to 4.5 Bcf per day (i.e., 4,500,000 dekatherms per day (Dth/d)) of firm natural gas transportation service from

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[6] November 22 Order, 169 FERC ¶ 61,131 at P 5.

[7] The parcel is owned by the Brownsville Navigational District, a political subdivision of Texas that operates the Port of Brownsville. Rio Grande's parent company, NextDecade, executed an Option to Lease the acreage from the Brownsville Navigational District. *Id.* P 7 & n.12.

[8] *Id.* PP 6-7.

[9] *Rio Grande LNG, LLC*, DOE/FE Docket No. 15-190-LNG, Order No. 3869 (2016). Assuming a gas density of 0.7 kg/m^3, 3.6 Bcf/d is 26.1 MTPA, which is roughly equivalent to the authorized 27 MTPA.

[10] Rio Grande's application to export LNG to non-FTA nations, filed on December 23, 2015, is pending before DOE/FE in Docket No. 15-190-LNG.

interconnects in the Agua Dulce Market Area[11] to the Rio Grande LNG Terminal. The Rio Bravo Pipeline Project will include two parallel 42-inch-diameter natural gas pipelines approximately 135.5 miles long, three 180,000 horsepower (hp) compressor stations, an approximately 2.4-mile-long pipeline header system, and other appurtenant facilities.[12] The pipeline is fully subscribed by Rio Bravo's affiliate, RioGas Marketing, LLC (RioGas) for a 20-year term at a negotiated rate.[13]

II. Procedural Matters

A. Late Filed Requests for Rehearing

6. NGA section 19(a) allows an aggrieved party to file a request for rehearing within thirty (30) days after the issuance of a final Commission order.[14] The Commission's business hours are "from 8:30 a.m. to 5:00 p.m.,"[15] and filings must be made before 5:00 p.m. in order to be considered filed on that day.[16] The Commission may accept submissions deemed to be late when documents could not be presented on time due to error or oversight on the part of the Commission.[17]

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[11] The Agua Dulce Market Area refers to the proposed interconnects located in the vicinity of the Agua Dulce Hub in Nueces County, Texas, including connections to the following pipelines: Houston Pipe Line Company Pipeline, Gulf South Pipeline, Kinder Morgan Texas Pipelines, Natural Gas Pipeline Company of America, Transcontinental Gas Pipeline, Tennessee Gas Pipeline, TransTexas Gas, and EPGT Texas Pipeline. November 22 Order, 169 FERC ¶ 61,131 at P 9 & n.15.

[12] *Id.* PP 1, 9.

[13] *Id.* P 10.

[14] 15 U.S.C. § 717r(a) (2018) ("Any person, State, municipality, or State commission aggrieved by an order issued by the Commission in a proceeding under this chapter to which such person, State, municipality, or State commission is a party may apply for a rehearing within thirty (30) days after the issuance of such order."). *See* 18 C.F.R. § 385.713(b) (2019) ("A request for rehearing by a party must be filed not later than thirty (30) days after issuance of any final decision or other final order in a proceeding.").

[15] 18 C.F.R. § 375.101(c) (2019).

[16] *See, e.g.*, *Cameron LNG, LLC*, 148 FERC ¶ 61,237, at P 6 (2014).

[17] *See, e.g.*, *Westar Energy, Inc.*, 137 FERC ¶ 61,142, at P 19 (2011) (accepting requests for rehearing when the request was submitted within the thirty (30)-day limit but

7. Requests for rehearing of the November 22 order were due by 5:00 p.m. on December 23, 2019. On that date, Sierra Club's request for rehearing was received at 5:40 p.m. and Mr. Young's at 9:07 p.m., both after the 5:00 p.m. deadline. However, the Commission's eFiling system could not accept filings starting at 4:40 p.m. and was not restored until after 5:00 p.m. Accordingly, Sierra Club's and Mr. Young's filings are deemed to have been timely filed.

B. Deficient Rehearing Request

8. Mr. Young's request for rehearing is deficient because it fails to include a Statement of Issues section separate from his arguments, as required by Rule 713 of the Commission's Rules of Practice and Procedure. Rule 713 states that requests for rehearing must "[s]tate concisely the alleged error in the final decision" and "include a separate section entitled 'Statement of Issues,' listing each issue in a separately enumerated paragraph" that includes precedent relied upon.[18] Any issue not so listed will be deemed waived.[19] Accordingly, we dismiss Mr. Young's rehearing request. However, the rehearing request raises several of the same issues raised by Sierra Club, which are addressed below.

9. Mr. Young's statements regarding the impacts of the project on the Boca Chica Beach SpaceX developments[20] are dismissed on the separate ground that he raises this issue for the first time on rehearing. Mr. Young had ample opportunity to present this information during the Commission's environmental review process. The Commission looks with disfavor on parties raising issues for the first time on rehearing that could have been raised earlier, particularly during the National Environmental Policy Act (NEPA) scoping process, in part, because other parties are not permitted to respond to requests for rehearing.[21] Further,

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was incorrectly time stamped due to an error in the Commission's eFiling system).

[18] 18 C.F.R. §§ 385.713(c)(1), (2).

[19] *Id.* § 385.713(c)(2).

[20] John Young Request for Rehearing at 6.

[21] *See Baltimore Gas & Electric Co.*, 91 FERC ¶ 61,270, at 61,922 (2000) ("We look with disfavor on parties raising on rehearing issues that should have been raised earlier. Such behavior is disruptive to the administrative process because it has the effect of moving the target for parties seeking a final administrative decision."); *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 764 (2004) ("Persons challenging an agency's compliance with NEPA must 'structure their participation so that it ... alerts the agency to the [parties'] position and contentions,' in order to allow the agency to give the issue meaningful consideration.") (quoting *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 553 (1978)); *see also Tenn. Gas Pipeline Co., L.L.C.*, 162 FERC ¶ 61,167, at P 10 (2018); *Nw. Pipeline, LLC*, 157 FERC ¶ 61,093, at P 27 (2016) ("We dismiss the Cemetery's argument

Mr. Young fails to specify any error with the Commission's analysis of the projects' impacts on the SpaceX developments, as required by the Commission's regulations, which state that requests for rehearing must "[s]tate concisely the alleged error in the final decision."[22]

III. Discussion

A. The Natural Gas Act

1. Market Need

10. Sierra Club and Mr. Young argue that the Commission failed to support its finding that the Rio Bravo Pipeline is required by the public convenience and necessity.[23] Sierra Club states that the November 22 Order only alluded to two pieces of evidence to support a finding that the pipeline will provide public benefits: (1) DOE's finding that exports of the natural gas commodity to FTA nations are presumed to be in the public interest and (2) Rio Bravo's contract to provide natural gas transportation services to an affiliate.[24] Sierra Club states that neither supports a finding that the benefits of the project outweigh any economic and environmental harms to the surrounding community.[25]

11. First, Sierra Club argues that the Commission cannot rely on DOE's approval of exports under NGA section 3 to demonstrate a finding of public convenience and necessity under NGA section 7.[26] Sierra Club states that under NGA section 3, "DOE shall approve

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that EA's indirect impacts analysis was deficient because the Cemetery raises this argument for the first time on rehearing.").

[22] 18 C.F.R. § 385.713(c)(1).

[23] Sierra Club Request for Rehearing and Stay at 6-8; John Young Request for Rehearing at 2-4.

[24] Sierra Club Request for Rehearing and Stay at 8; John Young Request for Rehearing at 2-4.

[25] Sierra Club Request for Rehearing and Stay at 6-7.

[26] *Id.* at 7. Mr. Young also asserts that Rio Grande has not shown sufficient demand to justify approval of the Rio Grande LNG Terminal under NGA section 3, where the 27 MPTA capacity Terminal has only one contract for 2 MPTA. John Young Request for Rehearing at 4-5. Mr. Young conflates the NGA section 3 and section 7 standards. Unlike under NGA section 7, the Commission does not assess market need under NGA section 3. Rather, as explained in the November 22 Order, DOE has exclusive jurisdiction over commodity exports, and issues inhering in that decision. November 22 Order, 169 FERC ¶ 61,131 at P 20. And here, DOE has already found that Rio Grande's exportation of

projects unless it finds that the proposed exportation will not be consistent with the public interest."[27] Sierra Club asserts that NGA section 7 does not provide a presumption favoring approval of a project; rather, section 7 requires an affirmative demonstration that the project would provide net benefits to the American public.[28] Sierra Club states that the Commission is required to make an affirmative demonstration because section 7, unlike section 3, grants pipelines the power of eminent domain.[29]

12. Second, Sierra Club and Mr. Young state that the Commission cannot rely on the contract between Rio Bravo and its affiliate, RioGas, as evidence of public need.[30] Sierra Club recognizes that the Commission often accepts contracts as evidence of public need, but states that the U.S. Court of Appeals for the D.C. Circuit (D.C. Circuit) recently explained that the Commission has not demonstrated that reliance on contracts is an appropriate indicator for public need when that contract serves a foreign customer.[31]

13. It is well established that precedent agreements are significant evidence of demand for a project.[32] As the court stated in *Minisink Residents for Environmental Preservation &*

1,318 Bcf per year of domestically-produced natural gas to free trade nations from the Terminal is not inconsistent with the public interest.

[27] *Id.* (citing 15 U.S.C. § 717b(a)) (internal quotations and emphasis omitted).

[28] *Id.* (citing 15 U.S.C. § 717f(e)).

[29] *Id.* (citing *City of Oberlin, Ohio v. FERC*, 937 F.3d 599, 607 n.2 (D.C. Cir. 2019) (*City of Oberlin*)).

[30] Sierra Club Request for Rehearing and Stay at 7; John Young Request for Rehearing at 2-4.

[31] Sierra Club Request for Rehearing and Stay at 7 (citing *City of Oberlin*, 937 F.3d at 606-07).

[32] Certificate Policy Statement, 88 FERC ¶ 61,227 at 61,748 (precedent agreements, though no longer required, "constitute significant evidence of demand for the project"); *Sierra Club v. FERC*, 867 F.3d 1357, 1379 (D.C. Cir. 2017) (affirming Commission reliance on preconstruction contracts for 93 percent of project capacity to demonstrate market need); *Twp. of Bordentown v. FERC*, 903 F.3d 234, 263 (3d Cir. 2018) ("As numerous courts have reiterated, FERC need not 'look[] beyond the market need reflected by the applicant's existing contracts with shippers.'") (quoting *Myersville Citizens for a Rural Cmty., Inc., v. FERC*, 183 F.3d 1301, 1311 (D.C. Cir. 2015)); *Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199 at *1 (D.C. Cir. Feb.19, 2019) (unpublished) (precedent agreements are substantial evidence of market need). *See also Midship Pipeline Co., LLC*, 164 FERC ¶ 61103, at P 22 (2018) (long-term precedent agreements for 64 percent of the system's

Safety v. FERC, and again in *Myersville Citizens for a Rural Community, Inc., v. FERC*, nothing in the Certificate Policy Statement or in any precedent construing it suggest that the policy statement requires, rather than permits, the Commission to assess a project's benefits by looking beyond the market need reflected by the applicant's precedent agreements with shippers.[33] As noted above, 100 percent of the firm transportation capacity of the Rio Bravo Pipeline has been subscribed by RioGas for a 20-year term. Thus, there is sufficient evidence in the record to support our finding that the service to be provided by the pipeline is needed.

14. Nevertheless, Sierra Club and Mr. Young argue the Commission should look beyond the need for transportation of natural gas in interstate commerce evidenced by the precedent agreement in this proceeding and make a judgement based on how the gas will be used after it is delivered at the end of the pipeline and the interstate transportation is completed. However, under current Commission policy if there are precedent or service agreements, the Commission does not, and need not, make judgments about the needs of individual shippers[34] or ultimate end use of the commodity, and we see no justification to make an exception to that policy here.

15. The principle purpose of Congress in enacting the NGA was to encourage the orderly development of reasonably-priced gas supplies.[35] Thus, the Commission takes a broad look in assessing actions that may accomplish that goal. The Certificate Policy Statement explains that, in deciding whether to authorize the construction of new pipeline facilities, the Commission initially balances the public benefits of a proposed project against the potential

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capacity is substantial demonstration of market demand); *PennEast Pipeline Co., LLC*, 164 FERC ¶ 61,098, at P 16 (2018) (affirming that the Commission is not required to look behind precedent agreements to evaluate project need); *NEXUS Gas Transmission, LLC*, 160 FERC ¶ 61,022, at P 41 (2017), *order on rehearing*, 164 FERC ¶ 61,054 (2018) (finding need for a new pipeline system that was 59 percent subscribed).

[33] *Minisink Residents for Envtl. Pres. & Safety v. FERC*, 762 F.3d 97, 110 n.10 (D.C. Cir. 2014); *see also Myersville Citizens for a Rural Cmty., Inc., v. FERC*, 183 F.3d 1301, 1311 (D.C. Cir. 2015). Further, Ordering Paragraph (G) of the November 22 Order requires that Rio Bravo file a written statement affirming that it has executed contracts for service at the levels provided for in their precedent agreements prior to commencing construction.

[34] Certificate Policy Statement, 88 FERC ¶ 61,227 at 61,744 (citing *Transcontinental Gas Pipe Line Corp.*, 82 FERC ¶ 61,084, at 61,316 (1998)).

[35] *NAACP v. FPC*, 425 U.S. 662, 669-70 (1976). *See generally Adelphia Gateway, LLC.*, 169 FERC ¶ 61,220 (2019) (McNamee, Comm'r, concurrence) (elaborating on the purpose of the NGA)

adverse consequences.[36] This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will the Commission proceed to complete the environmental analysis, where other interests are addressed.

16. We believe it is appropriate to credit contracts for transportation of gas volumes ultimately destined for export as supporting a public convenience and necessity finding. Looking at the situation broadly, gas imports and exports benefit domestic markets; thus, contracts for the transportation of gas that will be imported or exported are appropriately viewed as indicative of a domestic public benefit. The North American gas market has numerous points of export and import, with volumes changing constantly in response to changes in supply and demand, both on a local scale, as local distribution companies' and other users' demand changes, and on a regional or national scale, as the market shifts in response to weather and economic patterns.[37] Any constraint on the transportation of domestic gas to points of export risks negating the efficiency and economy the international trade in gas provides to domestic consumers.

17. Moreover, Congress directed, in NGA section 3(c), that the importation or exportation of natural gas from or to "a nation with which there is in effect a free trade agreement requiring national treatment for trade in natural gas, shall be deemed to be consistent with the public interest, and applications for such importation or exportation shall be granted without modification or delay."[38] While this provision of the NGA is not directly implicated by Rio Bravo Pipeline's application under NGA section 7(c), it is indicative of the importance that Congress has placed on establishing reciprocal gas trade between the United States and those countries with which it has entered free trade agreements.

18. We view transportation service for all shippers as providing public benefits, and do not weigh different prospective end uses differently for the purpose of determining need. This includes shippers transporting gas in interstate commerce for eventual export, since

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[36] *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227, at 61,745 (1999), *clarified*, 90 FERC ¶ 61,128, *further clarified*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

[37] *See, e.g.*, U.S. Energy Information Administration (EIA), *Increases in natural gas production from Appalachia affect natural gas flows*, March 12, 2019, https://www.eia.gov/todayinenergy/detail.php?id=38652 (explaining how the increase in shale gas production in the Mid-Atlantic has altered inflows and outflows of gas to the Eastern Midwest and South Central Regions, and to Canada); EIA, *Natural Gas Weekly Update*, October 24, 2018, https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2018/10_25/ (pipeline explosion in Canada leads to lower U.S. gas imports and higher regional prices).

[38] 15 U.S.C. § 717b(a).

such transportation will provide domestic public benefits, including, as noted above: contributing to the development of the gas market, in particular the supply of reasonably-priced gas; adding new transportation options for producers, shippers, and consumers; boosting the domestic economy and the balance of international trade; and supporting domestic jobs in gas production, transportation, and distribution, and domestic jobs in industrial sectors that rely on gas or support the production, transportation, and distribution of gas.

19. With respect to the specifics of this case, the Rio Bravo Pipeline Project will provide a necessary service to the Rio Grande LNG terminal, which cannot operate without the gas to be delivered via the pipeline. Further, regardless of where the end-use consumers of the gas transported under the executed service agreements are located, the project will provide additional capacity to transport gas out of the Agua Dulce Market Area in Nueces, Texas. The Rio Bravo Pipeline Project will provide additional transportation options through interconnections with eight unaffiliated interstate and intrastate natural gas pipelines.[39] Furthermore, as discussed above, the production and sale of domestic gas contributes to the growth of the economy and supports domestic jobs in gas production, transportation, and distribution. These are valid domestic public benefits of the Rio Bravo pipeline, which do not require us to distinguish between gas supplies that will be consumed domestically and those that will be consumed abroad.

20. Finally, affiliation with a project sponsor does not lessen a shipper's need for capacity and its contractual obligation to pay for its subscribed service.[40] "[A]s long as the precedent agreements are long term and binding, we do not distinguish between pipelines' precedent agreements with affiliates or independent marketers in establishing market need for a proposed project."[41] We find that the relationship between Rio Bravo and RioGas will neither lessen RioGas's need for capacity nor diminish RioGas's obligation to pay for its

[39] Application at 15.

[40] *See Mountain Valley*, 161 FERC ¶ 61,043, at P 45, *order on reh'g*, 163 FERC ¶ 61,197, at P 90, *aff'd*, *Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199, at *3. *See also, e.g.*, *Greenbrier Pipeline Co., LLC*, 101 FERC ¶ 61,122, at P 59, *reh'g denied*, 103 FERC ¶ 61,024.

[41] *Millennium Pipeline Co. L.P.*, 100 FERC ¶ 61,277, at P 57 (2002) (citing *Tex. E. Transmission Corp.*, 84 FERC ¶ 61,044 (1998)). *See also City of Oberlin*, 937 F.3d at 605 (finding petitioners' argument that precedent agreements with affiliates are not the product of arms-length negotiations without merit, because the Commission explained that there was no evidence of self-dealing and stated that the pipeline would bear the risk of unsubscribed capacity); *Myersville Citizens for a Rural Community, Inc. v. FERC*, 783 F.3d 1301, 1311 (D.C. Cir. 2015) (rejecting argument that precedent agreements are inadequate to demonstrate market need).

capacity under the terms of its contract.[42] When considering applications for new certificates, the Commission's sole concern regarding affiliates of the pipeline as shippers is whether there may have been undue discrimination against a non-affiliate shipper.[43] Here, no entity presented evidence of impropriety or self-dealing to indicate anti-competitive behavior or affiliate abuse.

2. Landowner Impacts

21. Sierra Club claims the Commission violated the Certificate Policy Statement by failing to identify the extent to which Rio Bravo has not secured voluntary easements and may seek to rely on eminent domain.[44] According to Sierra Club, without this information, the Commission is unable to conclude that Rio Bravo has taken appropriate steps to minimize adverse impacts on landowners, part of the Commission's analysis under the Certificate Policy Statement.[45]

22. In the November 22 Order, the Commission indicated that it was satisfied that Rio Bravo has taken appropriate steps to minimize adverse impacts on landowners and surrounding communities.[46] The Rio Bravo Pipeline Project would impact approximately 1,997 acres of land during construction and approximately 1,224 acres of land during operation.[47] Approximately 66 percent of the pipeline right-of-way would be collocated with or adjacent or parallel to existing pipeline, roadway, railway, or utility rights-of-way.[48] Contrary to Sierra Club's claim, the NGA, the Commission's regulations, and the Certificate Policy Statement do not require the Commission to catalog the state of right-of-way agreements, particularly when there is no indication in the record to suggest that Rio Bravo has

[42] Further, without compelling record evidence, we will not speculate on the motives of a regulated entity or its affiliate.

[43] *See* 18 C.F.R. § 284.7(b) (2019) (requiring transportation service to be provided on a non-discriminatory basis).

[44] Sierra Club Request for Rehearing and Stay at 5, 39.

[45] *Id.* at 40.

[46] November 22 Order, 169 FERC ¶ 61,131 at P 31.

[47] Final Environmental Impact Statement (EIS) at 2-25.

[48] *Id*. *See, e.g.*, *Mountain Valley*, 161 FERC ¶ 61,043, at P 57 (2017) (noting that approximately 30 percent of the MVP Project's rights-of-way will be collocated or adjacent to existing pipeline, roadway, railway, or utility rights-of-way).

made inadequate efforts to negotiate these agreements.[49] Moreover, we note while the Hinojosas, who join Sierra Club's rehearing request, assert that they are affected landowners, they do not state that they face the threat of eminent domain or otherwise claim any impacts to their property. As we concluded in the November 22 Order, Rio Bravo took steps to mitigate adverse impacts where possible and feasible, in particular by collocating the majority of the pipeline route and incorporating reroutes to address landowner concerns and avoid environmental impacts,[50] and we are therefore satisfied that Rio Bravo took steps to minimize impacts to landowners.[51]

B. Environmental Impacts

1. Proposed Action Size

23. Sierra Club and Mr. Young assert that the Commission erred by evaluating and approving pipeline facilities and liquefaction facilities that are not limited to the minimum capacities adequate to produce the proposed 27 MTPA of LNG.[52] Sierra Club states that a smaller pipeline system, possibly based on a single 48-inch-diameter pipeline rather than the proposed pair of 42-inch-diameter pipelines, and a smaller liquefaction system using five liquefaction trains, rather than the authorized six, could be "maxe[d] out"[53] to produce the 27 MTPA of LNG. Sierra Club contends that the Commission violated NEPA by failing to evaluate these smaller facilities as lower-impact, reasonable alternatives to Rio Grande's proposed facilities and violated the NGA by approving infrastructure that "exceeds what is necessary," "will not actually be used," and provides no public benefit.[54]

24. In the other direction, Sierra Club contends that Rio Grande's request to build over-sized facilities makes it reasonably foreseeable that Rio Grande will later seek to use the facilities' full capacity to produce 33 MTPA of LNG. The Commission failed to evaluate this scenario in a Supplemental Environmental Impact Statement, Sierra Club continues,

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[49] *See* Certificate Policy Statement, 88 FERC ¶ 61,227, *clarified*, 90 FERC ¶ 61,128, *further clarified*, 92 FERC ¶ 61,094.

[50] Final EIS at 2-17; *infra* P 32.

[51] November 22 Order, 169 FERC ¶ 61,131 at P 31; Final EIS at 3-26 to 3-27.

[52] Sierra Club Request for Rehearing and Stay at 8-15; John Young Request for Rehearing at 5.

[53] Sierra Club Request for Rehearing and Stay at 11.

[54] *Id*.

as a reasonably foreseeable future action contributing to the cumulative effect analysis under NEPA.[55]

25. Sierra Club raises the Driftwood LNG Project's single 48-inch-diameter pipeline[56] as a design model for a downsized 4 Bcf/d pipeline to serve the Rio Grande LNG Terminal, but Sierra Club does not consider the particular factors applicable to this project. In order to move a potential volume of natural gas in interstate or foreign commerce reliably and safely, an applicant will incorporate design margins for flexible operation to adapt to obstacles or imperfect conditions. For example, the Final EIS dismissed an alternative pipeline configuration using a single 60-inch-diameter pipeline in part because a single pipeline, unlike Rio Grande's proposal for paired 42-inch-diameter pipelines, could require shutting down or limiting gas delivery during maintenance and inspection activities.[57] Further, the design of individual pipeline systems reflect the applicant's design and operational objectives, including, among other things, unique terrain, construction techniques, and receipt and delivery pressure limitations. Thus, it is not a given that the Driftwood LNG Project's single 48-inch-diameter pipeline can be adopted as a design model for a downsized 4 Bcf/d pipeline to serve the Rio Grande LNG Terminal. In fact, a pair of 42-inch-diameter pipelines was recently proposed, evaluated, and authorized to provide 4 Bcf/d of transportation service for the recently approved Plaquemines LNG Project.[58] The Commission does not independently design systems for pipeline companies; rather, the Commission ensures that any proposed design is or will be required by the public convenience and necessity, based on an evaluation of adequacy, reliability, safety, environmental impacts, and other factors in the public interest.

26. Similarly, the liquefaction capacity typically includes design margins to account for variations in the actual liquefaction rate and availability. For example, liquefaction rates will change based on ambient temperatures and feed gas conditions that can vary, and an LNG terminal may operate at reduced levels or stop operation entirely as a result of maintenance activities or weather-related disruptions to LNG vessel traffic. In addition, Rio Grande proposes to truck a portion of LNG for distribution to refueling stations in south Texas,[59] which would necessitate liquefaction rates to be higher than export rates. Therefore, it

[55] *Id*. at 10, 13-15

[56] Sierra Club Request for Rehearing and Stay at 10 -13 (citing *Driftwood LNG LLC*, 167 FERC ¶ 61,054 (2019)).

[57] Final EIS at 3-26.

[58] *Venture Global Plaquemines LNG, LLC*, 168 FERC ¶ 61,204 (2019).

[59] Final EIS at 1-17 to 1-18. Rio Grande estimates that full use of the proposed trucking facilities would result in the road distribution of up to 0.4 MTPA. *Id*. at 1-18.

would be expected to have a maximum liquefaction rate that is higher than the export rate. Rio Grande provided mass balances for the design of the liquefaction and export facilities in its application and provided results of a reliability, availability, and maintainability analysis. Commission staff reviewed the mass balances for the liquefaction rates in various ambient and feed gas conditions along with the projected reduction in capacity that takes into account the projected reliability, availability, and maintainability and found that they are representative of Rio Grande's proposed export rate range and do not represent an overbuild.[60] We agree with this conclusion.

27. Finally, the information submitted by Sierra Club and John Young does not indicate that Rio Grande will use its liquefaction capacity of up to 5.87 MTPA per train to increase total LNG production in the future. Rio Grande's third-party engineering, procurement, and construction contracts filed with the Securities and Exchange Commission anticipate that even the higher-capacity trains will combine "to achieve a total of up to *twenty-seven* [MTPA]."[61] In the November 22 Order, the Commission concluded that the six liquefaction trains and other LNG terminal facilities are not inconsistent with the public interest, and that all of the proposed facilities are an environmentally acceptable means of meeting a liquefaction and export target of 27 MTPA.[62] As noted in the November 22 Order, and as Rio Grande has acknowledged, any expansion of export capacity or additional LNG exports vessels, or both, at the Rio Grande LNG Terminal would require Rio Grande to seek and receive additional authorizations from DOE, the Commission, and other applicable federal and state agencies.[63] Any incremental environmental impacts not evaluated as part of the instant proceeding would be analyzed prior to Commission action on any future request for authorization to expand the LNG Terminal's export capacity.[64] We affirm the conclusion in the November 22 Order that a

[60] *See also* Application, Resource Report 13, Section 13.4.1.4 (explaining that the terminal has a nominal liquification capacity of 27 MTPA (6 trains each producing a nominal 4.5 MTPA)).

[61] U.S. Securities and Exchange Commission, NextDecade Corp., Form 10-Q Quarterly Report to U.S. Securities and Exchange Commission, Ex. 10.7 at 6 (filed Aug. 6, 2019) (defining "expanded facility") (emphasis added); *id*. Ex. 10.8 at 6 (same), https://www.sec.gov/Archives/edgar/data/1612720/000155837019007245/0001558370-19-007245-index.htm.

[62] November 22 Order, 169 FERC ¶ 61,131 at PP 25, 32, 133.

[63] *Id.* P 131.

[64] *Id*. *See, e.g*., Office of Energy Projects, Draft Supplemental Environmental Impact Statement for the Magnolia Liquefied Natural Gas Production Capacity Amendment, Docket No. CP19-19-000 (filed Sept. 27, 2019) (evaluating proposal to optimize LNG terminal's final design including additional and modified process equipment);

supplemental EIS is not required because Sierra Club and Mr. Young have not shown "substantial changes in the proposed action that are relevant to environmental concerns" or "significant new circumstances or information relevant to environmental concerns."[65]

2. Alternatives Affecting Wetlands

28. Sierra Club contends that the Commission failed to take a hard look at alternatives that would relocate the Rio Bravo Pipeline Project's Compressor Station 3 to an upland location along the pipeline route, outside of a wetland area.[66]

29. The Commission took the requisite hard look at this pipeline route. Courts review both an agency's stated project purpose and its selection of alternatives under the "rule of reason," where an agency must reasonably define its goals for the proposed action, and an alternative is reasonable if it can feasibly achieve those goals.[67] When an agency is tasked to decide whether to adopt an applicant's proposal, and if so, to what degree, a reasonable range of alternatives to the proposal includes rejecting the proposal, adopting the proposal, or adopting the proposal with some modification.[68] An agency may eliminate those alternatives that will not achieve a project's goals or which cannot be carried out because they are too speculative, infeasible, or impractical.[69]

Freeport LNG Development, L.P., 156 FERC ¶ 61,019 (2016) (authorizing increased LNG production capacity based in part on Commission staff's Environmental Assessment); *Sabine Pass Liquefaction, LLC*, 146 FERC ¶ 61,117 (2014) (same).

[65] November 22 Order, 169 FERC ¶ 61,131 at P 131 (applying standards at 40 C.F.R. § 1502.9(c)(1) (2019)).

[66] Sierra Club Request for Rehearing and Stay at 15-18.

[67] *See, e.g.*, *Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1066-67 (9th Cir. 1998) (stating that while agencies are afforded "considerable discretion to define the purpose and need of a project," agencies' definitions will be evaluated under the rule of reason). *See also City of Alexandria v. Slater*, 198 F.3d 862, 867 (D.C. Cir. 1999); 43 C.F.R. § 46.420(b) (2019) (defining "reasonable alternatives" as those alternatives "that are technically and economically practical or feasible and meet the purpose and need of the proposed action").

[68] *See Theodore Roosevelt Conservation P'ship v. Salazar*, 661 F.3d 66, at 72-74 (D.C. Cir. 2011).

[69] *Fuel Safe Washington v. FERC*, 389 F.3d 1313, 1323 (10th Cir. 2004) (The Commission need not analyze "the environmental consequences of alternatives it has in good faith rejected as too remote, speculative, or . . . impractical or ineffective.") (quoting *All*

30. The November 22 Order explained that the proposed LNG Terminal site, including Compressor Station 3, is the most environmentally preferable and practicable alternative.[70] Rio Bravo proposed to locate Compressor Station 3 within the boundary of the proposed LNG terminal site.[71] Rio Grande analyzed five alternative sites for the LNG terminal, two of which contained alternative locations for Compressor Station 3.[72] Rio Bravo stated that it needed to locate Compressor Station 3 close to Brownsville Navigation District's main utility corridor in an area accessible to State Highway 48 so that Compressor Station 3's operations and maintenance traffic would not interfere with the operation of the LNG Terminal.[73] Rio Bravo explained that it could not move Compressor Station 3 southward to completely avoid wetland areas because the southern area is needed by the LNG Terminal for its material offloading facility and onsite batching plants.[74] The Final EIS examined Sierra Club's request to relocate Compressor 3 outside of wetland areas. The Final EIS explained that in order to avoid all wetlands, the applicants would have to locate Compressor Station 3 at least 10 miles northwest of its proposed site.[75] We find that relocating Compressor Station 3 outside of the proposed LNG Terminal site is not an environmentally preferable alternative. Additional siting could impact landowners, waterbodies, noise sensitive areas, and viewsheds. Moreover, we note that wetlands impacts associated with the site will be mitigated through the use of compensatory mitigation required by the Army Corps of Engineers (Corps) CWA 404 permit.[76]

Indian Pueblo Council v. United States, 975 F.2d 1437, 1444 (10th Cir. 1992) (internal quotation marks omitted)); *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 837-38 (D.C. Cir. 1972) (same). *See also Nat'l Wildlife Fed'n v. FERC*, 912 F.2d 1471, 1485 (D.C. Cir. 1990) (NEPA does not require detailed discussion of the environmental effects of remote and speculative alternatives).

[70] November 22 Order, 169 FERC ¶ 61,131 at P 75 (citing Final EIS at 5-6).

[71] Application at 17.

[72] Rio Grande and Rio Bravo April 19, 2018 Environmental Information Response, CWA Section 404 Permit at 2-2 – 2-8.

[73] *Id.* at 2-6.

[74] *Id.*

[75] *Id.* at 3-28; Volume 3 Part III at 119.

[76] *Infra* P 83.

3. Pipeline Route Realignment

31. Sierra Club contends that the Commission violated NEPA by failing to take a hard look at a pipeline route adjustment referenced in the Fish and Wildlife Service's (FWS) October 2, 2019 Biological Opinion.[77] Specifically, Sierra Club points to language in the Biological Opinion that states "[t]o further reduce direct impacts to ocelot habitat, [Rio Bravo] will re-route the pipeline between [milepost (MP)] 69.9 to MP 79.2, to avoid 62.6 acres of habitat. [Rio Bravo] will move the route south into existing row crop agricultural land and collocate with an existing transmission line [right-of-way]."[78] Sierra Club questions whether this re-route was analyzed in the Final EIS.

32. The November 22 Order certificated the preferred pipeline route that Commission staff analyzed in the Final EIS. As discussed further below,[79] the November 22 Order also conditioned the LNG Terminal and pipeline authorizations on Rio Grande's and Rio Bravo's implementation of the mandatory measures contained in FWS's Biological Opinion.[80] The Biological Opinion requires Rio Grande and Rio Bravo to implement certain applicant-proposed conservation measures, including realigning the pipeline route to avoid 62.6 acres out of 135.9 acres of ocelot and jaguarundi habitat.[81] FWS issued its Biological Opinion on October 2, 2019, five months after Commission staff issued the Final EIS on April 26, 2019. Because this realignment differs from the certificated route, and potentially implicates lands and resources that were not previously analyzed in the Final EIS, Rio Bravo must submit for

[77] Sierra Club Request for Rehearing and Stay at 18-20.

[78] FWS October 2, 2019 Biological Opinion at 22 (Biological Opinion).

[79] *See infra* PP 84-89.

[80] November 22 Order, 169 FERC ¶ 61,131 at P 91 ("With imposition of the conditions required herein, *which include all measures required by FWS in its Biological Opinion*, we find construction and operation of the projects as approved will be an environmentally acceptable action and not inconsistent with the public interest.") (emphasis added).

[81] *See* Biological Opinion at 5 (describing Rio Bravo's Voluntary Conservation Measure 2 as "[Rio Bravo] has realigned the pipeline route to avoid 62.6 acres out of 135.9 acres of ocelot and jaguarundi habitat"), 22 ("[t]o further reduce direct impacts to ocelot habitat, [Rio Bravo] will re-route the pipeline between MP 69.9 to MP 79.2, to avoid 62.6 acres of habitat. [Rio Bravo] will move the route south into existing row crop agricultural land and collocate with an existing transmission line [right-of-way].") and 34 (requiring Rio Grande and Rio Bravo to "fully implement the Voluntary Conservation Measures").

Commission approval a variance request pursuant to Environmental Condition 6,[82] or an amendment, as appropriate. Any variance request must be supported by detailed alignment sheets and aerial photographs, landowner approval, and all environmental and cultural surveys and clearances.[83] If unable to obtain approval from any newly-affected landowners along the route realignment, Rio Bravo would be required to file an amendment request. To avoid and minimize impacts to the ocelot and jaguarundi in accordance with the conditions of the incidental take statement, Rio Bravo is required to, prior to receiving authorization to commence construction of the pipeline facilities, request and receive approval from the Commission for the route realignment it agreed to with FWS.[84]

33. In the alternative, Sierra Club argues that even if the Final EIS analyzed the pipeline realignment included in the Biological Opinion, the discrepancies in the description of ocelot and jaguarundi habitat impacts between the Final EIS and the Biological Opinion render the Final EIS deficient.[85] We disagree. The Final EIS did not provide specific acreage estimates of ocelot and jaguarundi habitat that would be impacted by the project. Rather, the Final EIS explained that FWS, in consultation with Rio Grande and Rio Bravo, had identified prime areas of ocelot habitat along the proposed pipeline between mileposts 70 and 115.[86] The Final EIS further explained that FWS would work with Rio Grande and Rio Bravo to identify any specific areas of high quality habitat where impacts should be avoided or minimized and that final mitigation plans for the loss of ocelot habitat would be determined prior to the conclusion of the Endangered Species Act (ESA) consultation process.[87] As discussed above, the Biological Opinion reflects the culmination of these mitigation planning efforts.

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[82] November 22 Order, 169 FERC ¶ 61,131 at Environmental Condition 6 (contemplating route adjustments resulting from implementation of Endangered Species Act mitigation).

[83] *See id.*

[84] *See* Commission staff January 14, 2020 Memo (containing email correspondence from FWS, which clarifies the route of the Rio Bravo-proposed pipeline re-alignment and provides an alignment sheet depicting the route that Rio Bravo and FWS agreed would avoid impacting 62.6 acres of ocelot and jaguarundi habitat).

[85] Sierra Club Request for Rehearing and Stay at 19.

[86] Final EIS at 4-157.

[87] *Id*.

4. Commercial Fishing and Tourism Impacts

a. Commercial Fishing and Shrimping Impacts

34. Sierra Club asserts that the Final EIS failed to take a hard look at the impacts of LNG vessel transit obstruction on commercial fishing and shrimping operations using the Brownsville Shipping Channel.[88] Sierra Club explains that commercial and sport fisherman will be impacted by increased vessel traffic, primarily caused by the Coast Guard's authority to restrict marine traffic and establish security zones for LNG carriers.[89] Sierra Club states that LNG vessel arrivals and departures will block fishing and other traffic for up to three hours, but the Final EIS did not evaluate how those delays will impact commercial fishers.

35. In fact, the Final EIS determined that the project would result in direct, minor impacts on commercial fishery vessel operators resulting from the delays during LNG carrier transit.[90] As described by Sierra Club,[91] LNG vessel arrivals and departures will block fishing and other traffic for up to three hours, but the fishing vessels could follow behind outbound LNG carriers at an approved distance.[92] The Final EIS found that concurrent operation of the Rio Grande LNG, Texas LNG, and Annova LNG projects would result in permanent and moderate impacts to commercial fishery vessel operators, due to a 48 percent increase in vessel traffic in the Brownsville Shipping Channel which will cause delays in fishing vessels reaching the Gulf of Mexico or fishing destinations in the Laguna Madre.[93]

36. Additionally, Sierra Club asserts that the Final EIS does not address how aquatic life mortality caused by the LNG project will impact commercial fishing.[94] The Final EIS determined, and we agree, that the project is not expected to impact the yield of commercial fisheries in the project area.[95] As discussed in the Final EIS, impacts on such resources would be minor, and with implementation of required mitigation, impacts on

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[88] Sierra Club Request for Rehearing and Stay at 20-23.

[89] *Id.* at 20 (citing Final EIS at 4-232).

[90] Final EIS at 4-222, 4-467.

[91] Sierra Club Request for Rehearing and Stay at 20-21.

[92] Final EIS at 4-467.

[93] *Id.*

[94] Sierra Club Request for Rehearing and Stay at 22.

[95] Final EIS at 4-221 to 4-222.

essential fish habitat and the species and life stages that utilize the essential fish habitat would be permanent but minor.[96]

37. Further, the Final EIS evaluated the cumulative impacts on aquatic resources caused by construction and operation of the Rio Grande LNG Terminal, Texas LNG, and Annova LNG projects and found that the impacts on aquatic resources would be additive.[97] As stated above, in addition to the Rio Grande LNG Terminal, the Texas LNG and Annova LNG projects will also impact essential fish habitat; however, all of the projects are required to mitigate any permanent impacts to these habitats under their Clean Water Act (CWA) section 404 permits.[98] Thus, the Final EIS found the cumulative impacts of the projects on essential fish habitat would be minor.[99] The Final EIS found that construction of the projects would dredge a large portion of the Brownsville Shipping Channel for an extended period of time and would result in increases in turbidity and decreases in dissolved oxygen.[100] The Final EIS stated that these effects would reduce the prey available for predators in the area and that more mobile species would relocate to find suitable habitat.[101] However, the Final EIS explained that these effects would be moderate but temporary, ending once construction ceases.[102] The Final EIS evaluated the effects of concurrent pile-driving activities and found, with mitigation measures, the

[96] *Id.* at 4-103 to 4-126, 4-467.

[97] *Id.* at 4-440.

[98] *Id.*

[99] *Id.*

[100] *Id.* We note that Mr. Young also expressed concern about the potential cumulative effects of dredging in the Brownsville Shipping Channel from the Rio Grande LNG, Texas LNG, and Annova LNG projects, but he did not address the Commission's discussion of this issue in the November 22 Order or list specific points of error in the November 22 Order. Nonetheless, we note that the Final EIS discussed the cumulative dredging impacts for the Rio Grande LNG, Texas LNG, Annova LNG, and Jupiter Export Terminals, and the Brazos Island Harbor Channel Improvement project and determined that these projects would have the greatest cumulative effect on surface water resources due to turbidity and sedimentation. These impacts would be minor to moderate, but temporary, and each project is required to comply with water quality standards; therefore, sedimentation and turbidity levels would return to the pre-dredging conditions following the cessation of dredging activities. Final EIS at 4-425 to 4-426.

[101] Final EIS at 4-440.

[102] *Id.*

effects of pile-driving on aquatic species would be minor.[103] The Final EIS also evaluated the impacts of concurrent operation of the projects and found that cooling and ballast water discharges would have temporary and negligible impacts on aquatic species.[104] The projects must comply with the CWA to minimize impacts on surface water, and to avoid, minimize, or mitigate wetland impacts.[105] The Final EIS found, and we agree, that although the Rio Grande LNG project will contribute to the cumulative impacts on aquatic resources, the impacts would not be significant.[106]

b. Tourism Impacts

38. Sierra Club states that the Final EIS determined that the Rio Grande LNG Terminal would have moderate impacts on tourism,[107] but failed to include how impacts to wildlife,[108] recreational fishing,[109] short-term rentals,[110] and industrial development would impact tourism. [111]

39. We disagree. The Final EIS evaluated how wildlife impacts would affect tourism. The Final EIS explained that impacts on tourism, including nature-based and eco-tourism, would generally be greatest during construction of the Rio Grande LNG Terminal.[112] Following construction, the LNG Terminal would be the primary source of permanent impacts on tourism as the pipelines would be buried and the associated aboveground facilities would be in remote areas, offering limited visibility and mitigating noise impacts.[113] To mitigate impacts on visual receptors and operational noise from the LNG

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[103] *Id.* at 4-438 to 4-439.

[104] *Id.* at 4-439.

[105] *Id.* at 4-440.

[106] *Id.*

[107] Sierra Club Request for Rehearing and Stay at 24 (citing Final EIS at 4-467).

[108] *Id.*

[109] *Id.* at 25.

[110] *Id.* at 26.

[111] *Id.*

[112] Final EIS Volume 3 Part III at 6, 21, 93.

[113] *Id.*

Terminal,
Rio Grande would use ground flares, grey tank coloring, horticultural plantings, and the construction of a levee that would obstruct most construction activities and low-to-ground operational facilities from view.[114] The Final EIS found, and we agree, that no visual or noise impacts on South Padre Island beaches and associated tourism would occur, given that the beaches face the ocean and are 5 miles away.[115]

40. The Final EIS examined impacts to several nature tourism sites. The Final EIS determined that aside from the Lower Texas Coast Site 039 in the Bahia Grande portion of the Laguna Atascosa National Wildlife Refuge, most nature tourism facilities in the National Wildlife Refuge are located about 9 miles north of the LNG terminal site and would not be impacted by construction or operation of the terminal.[116] The Final EIS also evaluated the impacts at Boca Chica Beach, a visitor-oriented National Wildlife Refuge site, located about 5.5 miles southeast of the LNG Terminal, and found that construction noise would not be perceivable at this site.[117] With regard to the Lower Texas Coast Site 039, the Final EIS found that this site would be exposed to noise from the LNG Terminal construction, including pile driving, which is louder than ambient noise levels.[118] Additionally, the Final EIS determined that concurrent operation of the Rio Grande LNG, Texas LNG, and Annova LNG projects will have a significant impact on visual resources from recreational areas, including the Laguna Atascosa National Wildlife Refuge.[119] However, the projects are not anticipated to have an impact to beach visitors, because the South Padre Island beaches face eastward toward the Gulf of Mexico, away from the project

[114] *Id.*

[115] *Id.*

[116] *Id.* at 4-217.

[117] *Id.*

[118] *Id.*

[119] *Id.* at 4-466 to 4-467.

site.[120] Additionally, the view of the projects' facilities will be obstructed by dunes,[121] beach hotels, and condominiums along the South Padre Island shore.[122]

41. We disagree with Sierra Club's claim that the Final EIS did not address how impacts to recreational fishing would affect the tourism industry.[123] In response to Sierra Club's comments, the Final EIS recognized the interdependency between tourism and recreational fishing and stated that recreational fishing is a major tourist draw in the Rio Grande Valley.[124] The Final EIS determined that construction and operation of the LNG Terminal could affect recreational fishing through restrictions in fishing access, increases in noise, and changes in vessel traffic, but would not restrict fishing access to bays in the project area or in the Gulf of Mexico.[125] Rio Grande is working with relevant agencies to provide a parking and fishing area on the western bank of the Bahia Grande Channel to mitigate these impacts.[126] Additionally, the Final EIS found that operational noise could cause anglers to visit other sites not immediately adjacent to the LNG Terminal site; but, the number of recreational fishing visits to the general project area would not change.[127] The Final EIS recognized impacts on recreational fishing boats for trips that begin from Port Isabel or South Padre Island, in the form of delays at Brazos Santiago Pass, if they arrive during LNG carrier transit.[128] The Final EIS also found that operation of the Rio Grande LNG Terminal, Texas LNG, and Annova LNG Terminals will result in permanent and moderate cumulative impacts to tourism and recreational fishing, because a 48 percent increase in LNG vessel

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[120] *Id.* at 4-216, 4-466.

[121] *Id.* at 4-217 (finding the Rio Grande LNG Terminal will have no visual impacts to the Boca Chica Beach because the terminal views of the terminal will be obstructed by sand dunes).

[122] *See* Texas LNG Terminal Final EIS at 4-153, 4-332 (CP16-116-000) (Texas LNG Final EIS) (stating that the Rio Grande LNG Terminal, Texas LNG, and Annova LNG projects would have no visual impacts at South Padre Island beaches because views of the terminals would be obstructed by beach hotels, and condominiums).

[123] Sierra Club Request for Rehearing and Stay at 24.

[124] Final EIS Volume 3 Part III at 96; Final EIS at 4-219 to 4-220.

[125] *Id.* at 4-219.

[126] *Id.*

[127] *Id.* at 4-220.

[128] *Id.* at 4-220, Volume 3 Part III at 6, 21, 93.

traffic will cause delays in recreational fishing vessel access to the Brownsville Shipping Channel to reach the Gulf of Mexico.[129]

42. We also disagree with Sierra Club's assertion that the Final EIS did not consider how impacts to commercial fishing can affect tourism and vice versa.[130] As explained above, the Final EIS determined that minor, temporary, and permanent impacts on commercial fishing in the Brownsville Shipping Channel would occur from construction and operation of the LNG Terminal; however, the majority of the commercial fishing industry is based on offshore shrimping and fishing. As a result, the project is unlikely to result in a measurable effect on commercial landings in the project area.[131] Further, the Final EIS discussed potential impacts to charter boat tours, including those designed for viewing maritime activities.[132] As stated above, the Final EIS evaluated the cumulative effects of concurrent operation of the Rio Grande LNG, Texas LNG, and Annova LNG projects on tourism and commercial fishing and found that the projects would result in permanent and moderate impacts, due to a 48 percent increase in vessel traffic in the Brownsville Shipping Channel which will delay fishing or tourist vessels accessing the Gulf of Mexico or fishing destinations in the Laguna Madre.[133]

43. Sierra Club argues that the Final EIS did not consider how an increased demand for short-term rentals used by the Rio Grande LNG Terminal, Texas LNG, Annova LNG, and Rio Bravo Pipeline Project construction workers would impact tourism.[134] The Final EIS stated that within the affected area, a total of 38,212 housing units would be available for rent to the workforce, including hotel and motel rooms, vacant housing units, and RV sites.[135] The Final EIS found the project's workers would occupy about 2.8 and 3.5 percent of the currently available housing, indicating sufficient lodging units would be available to accommodate the non-resident workers, resulting in minor and temporary impacts on the availability of housing units.[136] We find that the proposed construction schedules for the

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[129] *Id.* at 4-678.

[130] Sierra Club Request for Rehearing and Stay at 27.

[131] Final EIS Volume 3 Part III at 103.

[132] *Id*. at 4-216.

[133] *Id.* at 4-467.

[134] Sierra Club Request for Rehearing at 26.

[135] *Id.* at 4-225.

[136] *Id.*

Rio Grande LNG Terminal, Texas LNG, Annova LNG, and Rio Bravo Pipeline Project could coincide with other demands for housing and temporary accommodations for tourism.[137] Non-local workers hired temporarily, who seek hotel accommodations, could potentially compete with seasonal visitors in Cameron County, specifically, the destination locations of South Padre Island, Port Isabel, Harlingen, and Brownsville.[138] However, given the number of hotel rooms in the vicinity of the projects, we do not anticipate serious disruptions to short-term tourism housing.[139]

44. Sierra Club states that industrial development will discourage future investment in tourism industries. Sierra Club's assertion is unsupported and speculative. The Final EIS acknowledged that, although the land proposed to be developed for the Rio Grande LNG Terminal, Texas LNG, and Annova LNG projects are zoned for industrial use, the concurrent construction and operation of three large industrial facilities as well as the associated non-jurisdictional facilities would result in change of the character of the landscape.[140] We can reasonably assume that this change would cause some visitors to choose to vacation elsewhere or alter their recreation activities to destinations in the region that are further from the project sites. However, given the extent of tourism areas (including birding areas, National Wildlife Refuges, National Historic Landmarks, and beaches) and the distance of these areas from the LNG Terminal cites, neither construction or operation would be expected to significantly impact tourism at these locations.[141] The Final EIS found and we agree that the projects may cause a change in visitation patterns to the area, but we do not expect the projects to change in the number of visits to the project area.[142] Accordingly, we find that employment in the tourism industry is not likely to be significantly affected by the projects.[143]

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[137] *See* Texas LNG Final EIS at 4-147.

[138] *Id.*

[139] *Id*.

[140] Final EIS at 4-467.

[141] *Id.* at ES-11, 4-217 to 4-219; Volume 3 Part III at 21 (stating that construction and operation of the project is not expected to impact the birding, nature-based, or eco-tourism industries).

[142] *Id.* at 4-218 to 4-219.

[143] *Id.* at 4-219.

c. Mitigation for Commercial and Tourism Impacts

45. Sierra Club asserts that the Final EIS failed to include appropriate mitigation measures to compensate for the impacts of the Rio Grande LNG project on commercial fishing and tourism.[144] Sierra Club cites to other LNG projects that the Commission approved "only contingent upon mitigation packages" that required companies to provide funds to commercial fisherman, public interest trusts, and marine habitat and mammal protection.[145]

46. As discussed above, the Final EIS found that the Rio Grande LNG project would result in direct, minor impacts on commercial fishery vessel operators due to delays caused by LNG carrier transit.[146] Additionally, impacts from the project on aquatic resources would be minor and, with the implementation of required mitigation, impacts on essential fish habitat and the species and life stages that use the essential fish habitat would be permanent but minor.[147] Thus, the Final EIS determined that the project is not expected to impact commercial fisheries in the project area.[148] Accordingly, we find the mitigation measures proposed by the applicant sufficient to protect commercial fishers and will not require monetary compensation.

47. Additionally, the Final EIS determined that the Rio Grande LNG Terminal's noise and visual impacts on beachgoers, bird-watchers, tour operators, and other visitors would occur only in the immediate area of the LNG Terminal site.[149] To ensure noise sensitive areas are not significantly affected by operational noise, Environmental Conditions 35, 36, and 38 require the applicants to conduct post-construction noise surveys after each noise-producing unit (e.g., each liquefaction train and compressor) is placed into service and after the entire LNG Terminal (including Compressor Station 3) is placed into service.[150] In

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[144] Sierra Club Request for Rehearing and Stay at 28.

[145] *Id.*

[146] Final EIS at 4-222.

[147] *Id.* at 4-124 to 4-125, 4-222. Given the temporary, minor impacts on essential fish habitat, the National Marine Fisheries Service did not provide any conservation recommendations for the project under the Magnuson-Stevens Fishery Conservation and Management Act. November 22 Order, 169 FERC ¶ 61,131 at P 82; Final EIS at 4-126.

[148] Final EIS at 4-222.

[149] *Id.* at 4-216.

[150] November 22 Order, 169 FERC ¶ 61,131 at P 106; Final EIS at 5-18.

the November 22 Order, the Commission determined that with the implementation of the mitigation measures proposed by the applicants and required by the environmental conditions, construction and operation of the projects would not result in significant noise impacts on residents and surrounding communities.[151] Further, to minimize visual impacts of the aboveground structures, the November 22 Order stated that Rio Grande would use gray LNG storage tanks, maintain vegetation plantings, and construct a storm surge protection levee, which would obscure most construction activities and low-to-ground operational facilities from view.[152] We find these measures sufficient to mitigate noise and visual impacts on tourism and do not find monetary compensation necessary.

5. Air Quality Impacts

a. Cumulative Impacts from NO_2 Emissions

48. Sierra Club contends that the Commission failed to support the conclusion in the Final EIS that impacts on local and regional air quality would not be significant.[153] First, Sierra Club argues that the analysis in the Final EIS is flawed because the Commission failed to justify its conclusion that the predicted exceedances of the 1-hour NO_2 National Ambient Air Quality Standard (NAAQS) resulting from cumulative impacts would not have significant health impacts.[154]

49. The EIS appropriately relied upon federal air emission limits under the Clean Air Act (CAA), including the limits prescribed under the NAAQS, and staff analyzed the estimated concentration for criteria pollutants and averaging periods accordingly.[155] In fact, the EIS presented air quality impacts modeling that extended beyond the federal and state required analyses, with the Rio Grande LNG Terminal modeling examining emissions from both mobile sources and terminal operations, and the cumulative impacts modeling examining mobile and operational emissions from all three Brownsville LNG Terminals.[156]

50. This modeling showed that the operational emissions for the Rio Grande LNG Terminal would not exceed the NAAQS for 1-hour NO_2. The project would contribute to

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[151] November 22 Order, 169 FERC ¶ 61,131 at P 106; Final EIS at 5-18.

[152] November 22 Order, 169 FERC ¶ 61,131 at P 95; Final EIS at ES-10.

[153] *See* Sierra Club Request for Rehearing and Stay at 28.

[154] *Id.* at 29.

[155] Final EIS at 4-475.

[156] *Id.* at 4-264, 4-266.

cumulative emissions in an uninhabited area between the fence lines of the Rio Grande LNG and Texas LNG Terminals resulting in emissions of up to 196 parts per billion (ppb), which exceeds the 1-hour NO_2 NAAQS of 100 ppb.[157] Despite these emissions increases, the operations of the Rio Grande LNG Terminal will not cause the re-designation of the attainment status for the air quality control region and no violation of the CAA is expected to occur because the NAAQS will not be exceeded for the region.[158] Moreover, the localized exceedance estimate is conservative, as the analysis reflects conditions occurring only when all three terminals will be loading LNG vessels simultaneously.[159] Nonetheless, the Final EIS assessed the project's air quality impacts on human health, explaining that it is unlikely, but possible, that people may be exposed to elevated NO_2 levels in the immediate vicinity of the facilities.[160] The EIS went on to explain that concentrations of 1-hour NO_2 are expected to disperse before reaching the nearest residential areas of Port Isabel and Laguna Heights, which have estimated ambient concentrations of less than 75 ppb, well below the 1-hour NO_2 NAAQS of 100 ppb.[161] Consequently, the EIS concluded, and we agree, that the cumulative impacts on regional air quality from NO_2 would be long-term during the operational life of the project, but minor.[162]

b. Cumulative Impacts from Ozone Emissions

51. Sierra Club next claims that the Commission failed to adequately assess the cumulative impacts of ozone-forming emissions from the Rio Grande LNG Terminal.[163] Sierra Club argues that the Commission improperly assumed, because the Annova LNG and Texas LNG Terminals would emit less than 10 percent of Rio Grande LNG Terminal's emissions of the ozone precursor, NO_x, that the three Brownsville LNG Terminals would not cause a cumulative ozone increase of more than 10 percent.[164] Sierra Club argues, however, that because the Rio Grande LNG Terminal will cause ozone levels to reach 68.6 ppb—1.4 ppb below the 8-hour 70 ppb standard—a 10 percent increase in ozone would

[157] *Id.* at 4-475, 4-479, Vol. 2, Appendix P, P-4, Table O.1-3.

[158] *Id.* at 5-15.

[159] *Id.* at Vol. 2, Appendix P, P-5.

[160] *Id.* at 4-475, Vol. 2, Appendix P, P-5.

[161] *Id*.

[162] *Id.* at 5-21.

[163] Sierra Club Request for Rehearing and Stay at 29.

[164] *Id.*

raise ambient concentrations to 69.76 ppb.[165] Hence, Sierra Club claims that any additional emissions increase from any other sources would result in a violation of the NAAQS standard and argues this is likely to be the case because the EIS omitted mobile emissions from LNG vessels and emissions associated with an increased facility output to 33 MTPA.[166]

52. The Final EIS assessed the potential for direct and cumulative impacts on ozone levels in the Rio Bravo Project area.[167] Based on a conservative analysis done for the Texas Commission on Environmental Quality (TCEQ), the project would result in 2,058 tons of ozone-forming NO_x emissions per year[168] and the 8-hour maximum predicted increase of ozone would result in 11.6 ppb of emissions. When these ozone emissions are considered with the background ozone concentration of 57 ppb, they would result in ambient ozone concentrations of 68.6 ppb, which would not exceed the 8-hour ozone standard of 70 ppb.[169]

53. The Annova LNG and Texas LNG Terminal operations would emit ozone precursor pollutants NO_x and volatile organic compounds (VOC), and therefore contribute to the cumulative impacts on regional ozone emissions. However, neither would be a major source and TCEQ did not require emissions from these not yet built projects to be included in Rio Grande's ozone modeling. Accordingly, the Final EIS conducted additional conservative analysis above and beyond what the TCEQ permit required by considering all the Brownsville LNG Terminals' operational NO_x emissions. These emissions would result in an increase of 178 tons per year (tpy) of NO_x,[170] which, as discussed in the Final EIS, would result in less than a 10 percent increase of the Rio Grande LNG Terminal's NO_x emissions.[171] Such linear analysis is conservative and results in estimates that are likely much higher than what would occur. Nonetheless, as Sierra Club itself states,[172] such NO_x

[165] *Id.* (citing Final EIS at 4-478).

[166] *Id.*

[167] Final EIS at 4-268-69, 4-478.

[168] *Id.* at 4-262, Table 4.11.1-7.

[169] *Id.* at 4-269, 4-478.

[170] The Texas LNG Terminal's operational emissions are 96.3 tons of NO_x per year. Texas LNG Final EIS at 4-181, Table 4.11.1-6. The Annova LNG Terminal's operational emissions are 82 tons of NO_x per year. Annova LNG Terminal Final EIS at 4-181, Table 4.11.1-6 (CP16-480-000) (Annova LNG Final EIS).

[171] Final EIS at 4-478.

[172] Sierra Club Request for Rehearing and Stay at 29.

increases could result in ozone increases that are close to, but ultimately would not exceed, the 8-hour NAAQS.[173]

54. Sierra Club argues that the Commission is required to include emissions that would occur if the Rio Grande LNG Terminal increased its output to 33 MPTA. We disagree. The terminal facilities are only authorized to produce 27 MTPA. As discussed in the November 22 Order and above, if Rio Grande sought to expand the Rio Grande LNG Terminal's export capacity, further authorization would be required and associated impacts would be analyzed.[174]

55. Although the ozone modeling for the Rio Grande LNG Terminal did not include operational emissions from the Annova LNG and Texas LNG Terminals, or LNG vessel mobile emissions servicing the three Brownsville LNG Terminals, if we consider these sources' potential impact on ozone using the ozone precursor NO_x, NO_x emissions would increase by 1,417.2 tpy[175] to a total of approximately 3,475 tpy of NO_x.[176] These increases in NO_x could contribute to violations of the ozone NAAQS. If we consider the relationship between ozone and NO_x from the Rio Grande LNG Terminal ozone model and apply that proportional factor to scale these ozone impacts to the 3,475 tpy of NO_x,[177] we conservatively predict that ozone levels in the area could increase by 19.6 ppb.[178] This could

[173] *Id.*; Final EIS at 4-478.

[174] *See* November 22 Order, 169 FERC ¶ 61,131 at PP 129-131; *supra* P 27.

[175] This figure includes: 928.7 tpy of NO_x from operational mobile emissions near the Rio Grande LNG Terminal, 96.3 tpy of NO_x from operational facility emissions and 142.6 tpy of NO_x of operational mobile emissions near the Texas LNG Terminal, and 82 tpy of NO_x from operational facility emissions and 167.6 tpy of NO_x of operational mobile emissions near the Annova LNG Terminal. *See* Final EIS at 4-162, Table 4.11.1-7; Texas LNG Final EIS at 4-181, Table 4.11.1-6; Annova LNG Final EIS at 4-185 to 4-186, Tables 4.11.1-4, 4.11.1-5.

[176] Commission staff calculated this figure by adding 1,417.2 tons of NO_x from n.175 to 2,058 tpy of operational NO_x facility emissions from the Rio Grande LNG Terminal. Final EIS at 4-162, Table 4.11.1-7.

[177] Commission staff compared the magnitude of emissions on a proportional basis. *See* Rio Grande LNG Project, Rio Bravo Pipeline Project, Air Quality Modeling Report Terminal and Compressor Station 3, January 2018.

[178] Commission staff calculated this increase by using the following equation: 11.6 ppb + 11.6 ppb (1417.2 ppb/2058.7 ppb) = 19.6 ppb.

result in a total ambient impact of 76.5 ppb,[179] exceeding the 70 ppb ozone NAAQS.[180] As discussed, the analysis of all three terminals' operational NO_x emissions is conservative.[181] In light of this worst case scenario based on the combined results of the ozone scaling showing the cumulative ozone levels exceed the ozone NAAQS and the cumulative NO_2 modeling showing areas between the facility fence lines will exceed the 1-hour NO_2 NAAQS,[182] we find that the cumulative impact on regional air quality from ozone could be significant.

56. Rio Grande has taken steps to mitigate ozone emissions. Pursuant to the state air quality rules under the CAA, Rio Grande assessed Best Available Control Technologies (BACT) for criteria air pollutants including ozone precursors VOC and NO_x for all of the terminal's emissions sources[183] There are a variety of mitigation measures described in detail in Rio Grande's Prevention of Significant Deterioration permit.[184] Given that the

[179] Commission staff calculated this figure by adding the ambient ozone level of 57 ppb to the 19.6 ppb increase from stationary and mobile emissions.

[180] Although this type of linear scaling is not as accurate as modeling ozone impacts, the use of NO_x emissions as a proxy for ozone emissions is an accepted methodology for purposes of NEPA. *See Concerned Citizens & Retired Miners Coal. v. United States Forest Serv.*, 279 F. Supp. 3d 898, 917 (D. Ariz. 2017) (explaining that an agency may focus on ozone precursors when assessing ozone); *Border Power Plant Working Group v. Department of Energy*, 260 F.Supp. 2d 997, 1022 (S.D. Cal. 2003) (finding that the agency acted reasonably by recognizing that nitrogen oxides and ozone will be closely and positively correlated, analyzing the project's nitrogen oxide emissions, and reasonably extrapolated from this the impact on ozone).

[181] *See supra* P 53.

[182] Note that NO_x is a mixture of NO_2 and other oxides of nitrogen.

[183] *Id.* at 4-261. These emission sources for NO_x and/or VOCs include: mixed refrigerant compressor turbines; propane compressor turbines; thermal oxidizers; flares; diesel engines; natural gas generators; condensate tanks; condensate loading operations; diesel tanks; and fugitive emissions. Rio Grande Supplemental Information, Revision 2 of the Terminal's Prevention of Significant Deterioration Air Permit Application (PSD Air Permit Application), at 5-1 (April 3, 2017).

[184] PSD Air Permit Application at 5-5 to 5-89.

Rio Grande LNG Terminal would be required to employ BACT,[185] we see no reason to require any additional mitigation to the project to reduce VOC and NO_x emissions.

c. Direct Emissions

57. Sierra Club next argues the Final EIS understated direct emissions of certain pollutants and fails to adequately respond to Sierra Club's comments.[186] For example, Sierra Club claims that the Final EIS: (1) assumes that thermal oxidizers will maintain 99.9 percent destruction efficiency for volatile organic compounds, even though Rio Grande only has to prove it is meeting this rate during an initial compliance performance; (2) failed to recognize that flares emit particulate matter; and (3) failed to recognize that Rio Grande underestimates emissions from tanker loading.[187]

58. As discussed in the Final EIS, these impacts are subject to state standards and were raised by Sierra Club in response to TCEQ's Draft Air Quality Permit for the Rio Grande LNG Terminal facility.[188] Although Sierra Club may disagree with TCEQ, state air quality rules govern the issuance of air permits and the applicable controls for these emission sources.[189] Moreover, Sierra Club cites several pages of its earlier comment but, as discussed, the Commission rejects attempts to incorporate by reference arguments from a prior pleading.[190] Such incorporation is improper and is grounds for dismissal.

d. Health Impacts

59. Sierra Club next argues that the Commission is mistaken in assuming that air pollution that does not violate NAAQS will not have health impacts and will therefore be insignificant. Sierra Club points to EPA's policy assessments that found adverse health

[185] Rio Grande submitted Revision 2 of the Terminal's PSD Air Permit Application on March 21, 2017, and the TCEQ issued an order granting the PSD permit on December 17, 2018. Final EIS at ES-12.

[186] Sierra Club Request for Rehearing and Stay at 29-30.

[187] *Id*. at 30.

[188] *See id.* at 30, nn.51-53, Final EIS at 4-254.

[189] Final EIS at 4-254.

[190] *See supra* P 58.

impacts associated with ozone exposure at 60 ppb, short-term NO_2 exposure at 53 ppb, and carbon monoxide emissions below the NAAQS threshold.[191]

60. The Final EIS appropriately relied on NAAQS thresholds to assess health impacts. NAAQS reflect the limits that the EPA believes are necessary to protect human health and welfare.[192] In assessing cumulative air emissions during concurrent operation at the Rio Grande LNG, Texas LNG, and Annova LNG Terminals, estimated peak concentrations for criteria pollutants and averaging periods were compared to the NAAQS.[193] For all pollutants, except for 1-hour NO_2 and ozone, cumulative impacts are predicted to be below the NAAQS and, as explained, exposure near the facilities is unlikely and the pollutants would disperse before reaching nearby population centers.[194] Based on the project's proposed mitigation measures and adherence to air quality control and monitoring permit requirements, the Final EIS determined, and we affirm here, that the projects would not have a significant adverse impact on human health.[195]

61. With regard to ozone, as described by EPA, people exposed to ground-level ozone close to or beyond the NAAQS threshold can experience a number of health effects such as decreased lung function and airway inflammation, with respiratory symptoms including coughing, throat irritation, chest tightness, wheezing or shortness of breath.[196] People with asthma are known to be especially susceptible to the effects of ozone exposure and tend to experience increased respiratory symptoms, increased medication usage, increased frequency of asthma attacks, and increased use of health care services.[197] Chronic Obstructive

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[191] Sierra Club Request for Rehearing and Stay at 30-31.

[192] *See* 42 U.S.C. § 7409(b) (2018).

[193] Final EIS at 4-475.

[194] *Id.* The predicted peak cumulative impact for NO_2 would occur in an uninhabited area located between the fence lines of the Rio Grande LNG and Texas LNG Terminals. *See supra* P 49.

[195] *Id.* at ES-13.

[196] EPA, *Health Effects of Ozone in the General Population*, https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population (last visited Jan. 9, 2020).

[197] EPA, *Health Effects of Ozone in Patients with Asthma and Other Chronic Respiratory Disease*, https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-patients-asthma-and-other-chronic (last visited Jan. 9, 2020).

Pulmonary Disease is the only other respiratory disease for which a relationship has been observed, based on a relatively few studies, between ozone and hospital admissions.[198]

62. As discussed above, the estimated potential cumulative ozone concentration of 76.5 ppb from all three Brownsville LNG Projects could exceed the current 8-hour ozone NAAQS of 70 ppb.[199] For context, the exceedance would be only slightly higher than the 2008 8-hour ozone NAAQS of 75 ppb. The Final EIS observed that the nearest residential areas are approximately 2.2 miles from the site of the Rio Grande LNG Terminal.[200] During exceedance events, people in the surrounding communities might experience the health effects of ozone exposure. In addition, people with asthma might experience exacerbated asthma symptoms. Below, we consider whether project-related ozone concentrations could result in disproportionately high and adverse health impacts for environmental justice populations.

6. Environmental Justice Impacts

63. Executive Order 12898 encourages independent agencies to identify and address, as part of their NEPA review, "disproportionately high and adverse human health or environmental effects" of their actions on minority and low-income populations.[201] The EPA recommends three steps to identify and address such effects: (1) determine the existence of minority and low-income populations, (2) determine if resource impacts are

[198] *Id*.

[199] *See supra* P 55.

[200] EIS at 4-237.

[201] Exec. Order No. 12898, §§ 1-101, 6-604, 59 Fed. Reg. 7629, at 7629, 7632 (1994). *See Sierra Club v. FERC*, 867 F.3d at 1368 (affirming the Commission's environmental justice analysis without determining whether "Executive Order 12,898 is binding on FERC"). Identification of a disproportionately high and adverse impact on a minority or low-income population "does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory." CEQ*, Environmental Justice: Guidance Under the National Environmental Policy Act*, at 10 (1997) (CEQ 1997 Environmental Justice Guidance), https://www.epa.gov/environmentaljustice/ceq-environmental-justice-guidance-under-national-environmental-policy-act; Federal Interagency Working Group for Environmental Justice and NEPA Committee, *Promising Practices for EJ Methodologies in NEPA Reviews* at 38 (2016) (quoting same), https://www.epa.gov/sites/production/files/2016-08/documents/nepa_promising_practices_document_2016.pdf.

high and adverse, and (3) determine if the impacts fall disproportionately on minority and low-income populations.[202]

64. The Final EIS fulfilled these steps. Commission staff concluded that within the census block groups intersected by a two-mile radius around the pipeline facilities and LNG terminal site, the minority population percentages in 24 of the 25 affected tracts exceed the EPA's categorical thresholds to be minority populations or low-income populations, or in most cases both.[203]

65. We note that there is no alternative to the projects that would achieve the projects' purpose and need while avoiding sites in environmental justice communities. The site of the Rio Grande LNG terminal and the other two Brownsville LNG terminals would be in an area currently zoned for commercial and industrial use along the existing, human-made Brownsville Shipping Channel.[204] Cameron County as a whole, which includes the Brownsville Shipping Channel, has a minority population percentage and poverty rate that exceed the EPA's thresholds to be a minority population and low-income population.[205] The other four counties crossed by the Rio Bravo Pipeline—Willacy, Kenedy, Kleberg, and Jim Wells Counties—also contain minority population percentages that exceed the EPA's categorical threshold to be minority populations.[206] Commission staff evaluated alternatives to avoid these areas—including a no-action alternative, system alternatives, and other siting and design alternatives—but concluded that none represented a significant environmental advantage to the proposed pipeline and LNG terminal.[207] Although the no-action alternative would avoid environmental impacts to project-affected minority and low-income

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[202] *See* EPA, *Final Guidance For Incorporating Environmental Justice Concerns In EPA's NEPA Compliance Analysis*, at §§ 3.2.1-3.2.2. (1998), https://www.epa.gov/sites/production/files/2015-02/documents/ ej_guidance_nepa_epa0498.pdf (EPA 1998 Environmental Justice Guidance).

[203] Final EIS at 4-235 to 4-236, Table 4.9.10-1. These categorical thresholds apply to an affected area if minority populations comprise over 50 percent of the population and if the poverty rate is 20 percent or greater. *Id*. at 4-234; EPA 1998 Environmental Justice Guidance at §§ 2.1.1 to 2.1.2; CEQ 1997 Environmental Justice Guidance at 25-26.

[204] Final EIS at ES-19.

[205] Specifically, Hispanic or Latino people make up 88.5 percent of the population and the population below the poverty threshold is 29.6 percent. *Id.* at 4-235, Table 4.9.10-1.

[206] *Id.* at 4-235 to 4-236, Table 4.9.10-1.

[207] *Id.* at 3-1 to 3-28.

communities, the unmet need for transportation and LNG export capacity could be developed elsewhere along the Texas Gulf Coast resulting in similar or greater impacts.[208]

66. Sierra Club contends that the EIS improperly chose Cameron County, Texas, as the comparison population for the identified minority and low-income populations rather than choosing a larger area with demographics of a more general character, such as the entire state of Texas.[209] Sierra Club faults the EIS for making an arbitrary intent-based inquiry into disproportionate impact rather than an objective inquiry based on an appropriate comparison population.[210]

67. Sierra Club emphasizes EPA's recommendation that an agency's NEPA analysis should consider how a project's impacts to resources could also impact the environmental justice communities that rely upon those resources as an economic base or a cultural value.[211] Sierra Club asserts that the EIS failed to determine whether minority or low-income populations are disproportionately susceptible to, and as a result are disproportionately burdened by, the project's impacts identified in the EIS to tourism, housing, and real property.[212]

68. Sierra Club also contends that the Commission violated NEPA by failing to take a hard look at whether the project's direct, indirect, and cumulative impacts to air quality, even if the relevant emissions would not exceed the NAAQS, would disproportionately affect environmental justice communities.[213]

69. In the EIS, Commission staff satisfied the EPA's recommended three-step approach to identifying and addressing impacts to environmental justice populations. Because all project-affected populations meet or exceed the categorical standards to be minority or low-income populations, or both, there was no need at the first step to determine their existence using any broader "reference community."[214] A broader "comparison group" can inform the

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[208] *Id.* at ES-18.

[209] Sierra Club Request for Rehearing and Stay at 33-34.

[210] *Id*. at 32.

[211] *Id*. at 36 n.74 (citing EPA Environmental Justice Guidance at § 2.2.2).

[212] *Id.* at 36-37.

[213] *Id*. at 34-35.

[214] Federal Interagency Working Group for Environmental Justice and NEPA Committee, *Promising Practices for EJ Methodologies in NEPA Reviews* at 25, 27-28 (2016) (describing the use of a "reference community"). The EIS did include the population traits of

overlapping second and third steps to detect whether a project's impacts to minority and low-income communities will be disproportionately high and adverse. Because here all project-affected populations are minority or low-income populations, or both, it is not possible that impacts will be disproportionately concentrated on minority and low-income populations versus on some other project-affected comparison group.[215] But it is possible, regardless of the uniformity, that a project's impacts to a minority or low-income population arising from some change to the environment or to the risk or rate of exposure to a pollutant would be disproportionately high and adverse if amplified by factors unique to that population like inter-related ecological, aesthetic, historical, cultural, economic, social, or health factors.[216] These factors are specific to the identified minority and low-income populations, but a relevant and appropriate comparison group can provide context for the analysis.[217] Sierra Club offers no evidence and no specific example to support its claims that the use in the EIS of Cameron County, Texas, as a comparison group "incorrectly characterized," masked," or "minimized" the impacts to minority and low-income communities.[218] To the contrary, as

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Cameron County and the state of Texas for context. Final EIS at 4-234, 4-235, Table 4.9.10-1.

[215] Federal Interagency Working Group for Environmental Justice and NEPA Committee, *Promising Practices for EJ Methodologies in NEPA Reviews* at 43-44 (suggesting that agencies "consider identifying the relevant and appropriate comparison group within the affected environment" and "consider the distribution of adverse and beneficial impacts between the general population and minority populations and low-income populations in the affected environment"); EPA 1998 Environmental Justice Guidance at § 5.0 "Methods and Tools for Identifying and Assessing" ("An analysis of disproportionate impacts will develop an understanding of how the total potential impacts vary across individual communities. This allows analysts to identify and understand what portion of the total impacts may be borne by minority or low-income communities … ."); *accord Communities Against Runway Expansion, Inc. v. FAA*, 355 F.3d 678, 689 (D.C. Cir. 2004) (upholding agency's reasonable methodology to compare demographics of the population affected by airport expansion to the demographics of the population affected by airport noise generally, rather than a larger geographic area beyond the limits of the airport's significant noise impacts).

[216] *Id*. at 39 (suggesting that agencies recognize that even where a project's impact "appears to be identical to both the affected general population and the affected minority populations and low-income populations," the impact might be amplified by population-specific factors "e.g., unique exposure pathways, social determinants of health, community cohesion" making the impact disproportionately high and adverse).

[217] *Id*. at 40.

[218] Sierra Club Request for Rehearing and Stay at 33-34.

discussed above, Cameron County is used because that is where the LNG facility is located and the pipeline will be built, and no other alternatives would meet the projects' purpose and need.[219]

70. Addressing Sierra Club's general criticism first, the EIS did not rely on an intent-based inquiry to detect disproportionately high and adverse impacts to minority and low-income populations. Given that all project-affected populations are minority or low-income populations, the EIS objectively concluded that impacts would not be disproportionate but would "apply to everyone" and would "not be focused on or targeted to any particular demographic group."[220] Although the EIS could have been more precise in its language, the phrase "not be focused on" has the intransitive meaning that impacts would not be disproportionately concentrated on minority and low-income populations versus on some other project-affected comparison group. The component of intent suggested in the phrase "not be … targeted to" does not suggest that the Commission relied on intent to detect disproportionately high and adverse impacts, but rather appropriately describes the absence of disproportionate impacts that inherently involve a component of intent. For example, the intentional exclusion of minority populations from a project's economic benefits is such an impact, and the EIS notes that contractors working on the project would be required to comply with applicable equal opportunity and non-discrimination laws and policies.

71. Turning to Sierra Club's specific challenges, Sierra Club offers no explanation how an impact identified in the EIS to tourism, housing, or real property might be disproportionately high and adverse to minority and low-income populations based on an unacknowledged sensitivity in these populations. The EIS acknowledged that tourism is an important source of employment and income for local communities in an area characterized by lower per capita income, higher poverty rates, and higher unemployment than the general population of Texas.[221] The EIS also concluded that the project would result in positive, permanent impacts on the local economy in the same context.[222] Sierra Club does not explain how a closer inquiry into whether minority or low-income populations rely disproportionately on tourism for employment might reveal a disproportionately high and adverse impact to these populations.

72. In the evaluation of housing, the EIS explained that the cumulative demand for housing from non-local construction workers during construction of the three Brownsville LNG projects might cumulatively result in increased rental rates and housing

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[219] *Supra* P 65.

[220] Final EIS at 4-237 and 4-468.

[221] *Id*. at 4-211, 4-213, 4-214.

[222] *Id.* at 4-213.

shortages.[223] Sierra Club notes that changes to housing availability would primarily impact individuals looking for housing.[224] But the EIS closely considered the available housing and the rental housing cost for the six project-area counties,[225] which all qualify as environmental justice populations based on minority population percentages and poverty rates very similar to the narrower project-affected populations. The available housing and the rental housing cost reflect the supply and demand for housing in the county populations. Sierra Club offers no basis to conclude, and we find none, that these factors would differ for the narrower project-affected populations in a way that might result in a disproportionately high and adverse impact.

73. The EIS also appropriately addressed the potential impacts to area property values and to pipeline-crossed lands. The cumulative impact of the three Brownsville LNG projects on property values is not reasonably foreseeable and was appropriately omitted from the EIS.[226] Sierra Club faults the Commission for failing to determine the demographic composition of landowners impacted by Rio Bravo's proposed pipeline. Rio Bravo's pipeline system would cross predominantly undeveloped land and no residences are closer than fifty feet from the pipeline right-of-way.[227] Sierra Club offers no explanation how landowners who belong to minority or low-income populations would have a disproportionate sensitivity to an economic impact to their real property. Thus, we find no reason to revisit the conclusion in the EIS that the impacts to landowners from the pipeline system would be similar on low-income residents in the counties crossed by the project.[228]

74. Next, we address Sierra Club's claim that the Commission inadequately considered whether the project's air quality impacts to minority and low-income communities would be disproportionately high and adverse. The impact pathways from a project's air emissions are primarily health-based. The EPA established the NAAQS to protect human health and public welfare for all communities, including sensitive subpopulations (e.g., asthmatics,

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[223] *Id.* at 4-461 to 4-463.

[224] Sierra Club Request for Rehearing and Stay at 37.

[225] Final EIS at 4-224 to 4-225.

[226] As noted in the EIS, the impact to a property's value is a matter of lost use of land, visibility impacts, and the public's perception of risk from one or more facilities. *Id*. at 4-232 to 4-233. Because these factors will vary widely by site and by potential buyer, the cumulative impact is not reasonably foreseeable.

[227] *Id*. at 4-468.

[228] *Id*.

children, and the elderly).[229] As noted above, the project's direct, indirect, and cumulative impacts to air quality, with the exception of ozone-related emissions, would not increase the concentration of criteria pollutants above the NAAQS.[230] Exposure to these emissions near the facilities is unlikely, and the pollutants would disperse before reaching nearby population centers.[231] Sierra Club offers no reason to expect that the identified environmental justice communities would be vulnerable to air quality impacts in a way that is not already accounted for in the establishment of the NAAQS thresholds. Without Sierra Club supporting its position, we will not disregard Commission staff's reasonable reliance on the NAAQS as a proxy for potential health impacts to area populations, including minority and low-income populations.

75. Because we estimate on rehearing that cumulative emissions of ozone precursors could result in ozone concentrations that would exceed the NAAQS, it is appropriate to consider whether the impact to minority and low-income populations could be disproportionately high and adverse. CEQ acknowledges that there is no standard formula for how environmental justice issues should be identified or addressed, but CEQ generally recommends that an agency consider readily available information about the potential for multiple or cumulative exposure to human health or environmental hazards in the affected population, including historical patterns of exposure.[232] CEQ and others recommend that an agency evaluate whether the impact from a significant environmental hazard to a minority or low-income population "appreciably exceeds or is likely to appreciably exceed" the impact to "the general population or other appropriate comparison group."[233]

76. Data from EPA's EJSCREEN tool indicates that in the project area the environmental justice index for ozone is equivalent to the 80th percentile in Texas (meaning that 80 percent of the populations in the state have an equal or lower environmental justice index for ozone), the 84th percentile in EPA's administrative Region 6, and the 89th percentile in the nation.[234]

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[229] *Id*. at 4-245.

[230] Final EIS at 4-470 to 4-479; *see supra* P 55.

[231] Final EIS at 4-474 to 4-478. For example, although the predicted peak cumulative concentration of NO_2 (96 ppb) would exceed the NAAQS (100 ppb), any exceedance would occur away from residential property within the Port of Brownsville between the Rio Grande and Texas LNG terminals. Final EIS at 4-475; *see supra* P 49.

[232] CEQ 1997 Environmental Justice Guidance at 9.

[233] *Id*. at 26; Federal Interagency Working Group for Environmental Justice and NEPA Committee, *Promising Practices for EJ Methodologies in NEPA Reviews* at 45-46.

[234] EJSCREEN Report Version 2019, EJSCREEN Tool, https://ejscreen.epa.gov/mapper/ (choose to "Select Location" using the polygon tool, next

Based on this information, we find that in the affected minority and low-income populations there is a potential for multiple or cumulative exposure to the environmental hazard of ozone and that this exposure is likely to appreciably exceed the exposure level in more general comparison groups.

77. As discussed above, the exposure to ozone during exceedance events can result in health impacts to the airways and lungs.[235] People with asthma are especially susceptible, and Chronic Obstructive Pulmonary Disorder has also been linked to ozone.[236] The project-affected minority populations are predominantly Hispanic or Latino with higher percentages of young children and older adults than the state population.[237] EPA and Texas have published data about the prevalence of asthma separated by race. Texas has also published data about mortality from chronic lower respiratory disease separated by county. Data from the EPA for 2007 to 2010 showed that the prevalence of asthma in the United States was 7.9 percent among Hispanic children and 8.2 percent for White non-Hispanic children.[238] Data from Texas for 2016 showed that the prevalence of asthma in the state was 5.1 percent among Hispanic children and 9.2 percent for White children.[239] The rate of hospitalizations for asthma in Texas was 8.7 per 10,000 children for Hispanic children and 8.8 per 10,000 children for White children.[240] The mortality rate from chronic lower respiratory disease in Cameron County, which includes the sites of the Brownsville LNG terminals

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place a polygon over the footprint of the three Brownsville LNG terminals and along the shipping route, next click on the polygon and add a 2-mile buffer, then click to "Explore Reports") (last visited Jan. 10, 2020).

[235] *See supra* PP 61-62.

[236] EPA, *Health Effects of Ozone in Patients with Asthma and Other Chronic Respiratory Disease*, https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-patients-asthma-and-other-chronic (last visited Jan. 9, 2020).

[237] Percentages of children under age five (9 percent) and adults over age 64 (17 percent) are higher than in the general state population (66th and 78th percentiles, respectively. *See supra* note 234.

[238] EPA, *America's Children and the Environment* at 218 (3rd ed. 2013), https://www.epa.gov/sites/production/files/2015-06/documents/ace3_2013.pdf. The most recent version of this report published in 2019 did not separate the asthma data by race/ethnicity.

[239] Texas Department of State Health Services, *2016 Child Asthma Fact Sheet* (2016), https://dshs.state.tx.us/asthma/Documents/2016-Texas-Fact-Sheet_Child-Asthma.pdf.

[240] *Id*. at 2.

and compressor station 3 on Rio Bravo's proposed pipeline, was 21 deaths per 100,000 people.[241] By contrast the mortality rate from chronic lower respiratory disease was 27 in the state's Public Health Region 11[242] and was 41.4 in the entire state.[243] This information does not show that the anticipated exposure to ozone in minority and low-income communities would result in a disproportionately high and adverse impact to these communities.[244]

7. Mitigation Measures

78. Sierra Club argues that the Commission violated NEPA by issuing the Final EIS without all mitigation plans complete.[245] Sierra Club asserts that the failure to develop these plans deprived the public of the opportunity to comment and claims that the EIS and

[241] Texas Department of State Health Services, *Health Facts Profiles*, http://healthdata.dshs.texas.gov/HealthFactsProfiles_14_15 (select "By County", Year 2015, Cameron County).

[242] Public Health Region 11 includes Cameron County and several other counties in southern Texas. The aggregate population in 2015 was about 83 percent Hispanic and about 28.3 percent people living below the poverty threshold, very similar to the communities closest to the three Brownsville LNG projects. The mortality rate in Public Health Region 11 from chronic lower respiratory disease of 27 deaths per 100,000 people was the lowest of any Public Health Region in the state.

[243] Texas Department of State Health Services, Health Facts Profiles, http://healthdata.dshs.texas.gov/HealthFactsProfiles_14_15 (select "Texas Only").

[244] The dissent argues that is unclear how the Commission reaches this conclusion, but this critique misunderstands the standard for disproportionately high and adverse impacts. As discussed, Hispanic and Latino populations are not more susceptible than the general population to asthma, and this area of Texas, which is predominantly Hispanic and Latino, is not more susceptible to chronic lower respiratory disease such that health impacts will be disproportionately high and adverse.

[245] Sierra Club Request for Rehearing and Stay at 38. Sierra Club lists the following plans that must be finalized before construction: Dredged material management plan; spill prevention, control, and countermeasures plan; stormwater pollution prevention plan; nighttime lighting plan, migratory bird conservation plan; and emergency response plans. *Id.*

November 22 Order provided no basis to determine that the pending mitigation plans would be feasible or effective.[246]

79. The inclusion in the November 22 Order of environmental conditions that require Rio Grande and Rio Bravo to file mitigation plans does not violate NEPA. NEPA "does not require a complete plan be actually formulated at the onset, but only that the proper procedures be followed for ensuring that the environmental consequences have been fairly evaluated."[247] Here, Commission staff published a Final EIS that identified baseline conditions for all relevant resources. Later-filed mitigation plans will not present new environmentally-significant information nor pose substantial changes to the proposed action that would otherwise require a supplemental EIS. As we have explained, practicalities require the issuance of orders before completion of certain reports and studies because large projects, such as this, take considerable time and effort to develop.[248] Moreover, in the case of pipelines, their development is subject to many variables whose outcomes cannot be predetermined and, in some instances, the pipeline company may be unable to access property in order to acquire the necessary information until it has obtained a certificate and with it the power of eminent domain.[249] Accordingly, post-certification studies may properly be used to develop site-specific mitigation measures. It was not unreasonable for the Final EIS to deal with sensitive locations in a general way, leaving specificities of certain resources for later exploration during construction.[250] What is important is that the agency make adequate provisions to assure that the certificate holder will undertake and identify appropriate mitigation measures to address impacts that are identified during construction.[251] The Commission has and will continue to demonstrate our commitment to assuring adequate mitigation.[252]

80. Sierra Club also argues that emergency response mitigation is inadequate, stating that it is unclear if Rio Grande has begun coordinating evacuation procedures with local

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[246] *Id.*

[247] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989).

[248] *See, e.g.*, *Algonquin Gas Transmission, LLC*, 154 FERC ¶ 61,048 at P 94*; East Tennessee Natural Gas Co*., 102 FERC ¶ 61,225 at P 23, *aff'd sub nom. Nat'l Comm. for the New River, Inc. v. FERC*, 373 F.3d 1323 (2004).

[249] *Midwestern Gas Transmission Co.*, 116 FERC ¶ 61,182, at P 92 (2006).

[250] *Mojave Pipeline Co.*, 45 FERC ¶ 63,005, at 65,018 (1988).

[251] *Id*.

[252] *Id*.

emergency planning groups, fire departments, and local law enforcement as part of the Emergency Response Plan (ERP), as required by the November 22 Order.[253] Sierra Club argues that if the City of South Padre Island has a serious concern with the plan or a related Cost-Sharing Plan, it is unclear how the City could act on these concerns or how the project could proceed if its concerns are not resolved.[254]

81. As discussed, for purposes of NEPA, our authorization can be conditioned on the development of mitigation plans. Accordingly, Sierra Club's concerns are compliance related. We note that on November 25, 2019, pursuant to Environmental Conditions 53 and 54 of the November 22 Order, Rio Grande submitted its proposed ERP and Cost-Sharing Plan as part of its Implementation Plan.[255] The Commission is currently reviewing the plans. As part of that review process, on January 8, 2020, staff requested additional information from Rio Grande regarding the extent to which coordination with the City of South Padre Island has occurred for consultation on the Emergency Response Plan and the Cost Sharing Plan.[256] We note that, under the conditions in the November 22 Order, initial site preparation will not begin before we approve the plans and that the plans must be updated on a regular basis.[257]

82. Sierra Club next argues that the Final EIS relied on Corps mitigation for wetlands to reduce impacts below significant levels, but details of Rio Grande's amended compensatory mitigation plan are still being reviewed by the Corps. Sierra Club claims that the Final EIS omits any discussion of mitigation location, types, methods, timing or ratios, and this information should be subject to comment by the public.[258]

83. The Final EIS explained that Rio Grande is developing mitigation to comply with Corps mitigation requirements under section 404 of the CWA, including a Conceptual Mitigation Plan, which identifies the potential to acquire and preserve wetlands in a portion

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[253] *Id.*

[254] *Id.*

[255] *See* Implementation Plan at Vol. 2-12 & Vol. 2-15 (Nov. 25, 2019) (privileged).

[256] Memorandum on Comments on Emergency Response Plan and Cost Sharing Plan at 3 (January 8, 2020) (asking whether coordination with Port Isabel and the City of South Padre Island has occurred for consultation on the Emergency Response Plan and the Cost Sharing Plan because LNG Carriers would be routed near these areas and documentation confirming coordination with each area should be provided).

[257] November 22 Order, 169 FERC ¶ 61,131 at Environmental Conditions 53-54.

[258] Sierra Club Request for Rehearing and Stay at 38.

of the Loma Ecological Preserve and to transfer the land to a land manager, such as the FWS.[259] Again, detailed mitigation measures do not need to be finalized in an EIS for purposes of NEPA, particularly when the EIS has disclosed the project's anticipated wetlands impacts, including wetlands loss,[260] and mitigation, including the compensatory mitigation implemented under CWA section 404. Although Sierra Club claims that the Commission is "passing the buck" on wetlands mitigation, an agency may rely on another agency that has jurisdiction over the area in question to implement appropriate mitigation.[261] Nonetheless, in compliance with Environmental Condition 10 of the Certificate Order, construction of the LNG Terminal would not start until Rio Grande's wetland mitigation plans are finalized and the Corps has issued its CWA 404 permits.[262]

8. Fish and Wildlife Service's Biological Opinion

84. Sierra Club claims that FWS's October 2, 2019 Biological Opinion is flawed because it fails to: (1) define the conservation measures that it relies on; and (2) set a clear limit on the amount of authorized take.[263] Accordingly, Sierra Club argues, the Biological Opinion violates the ESA. In addition, by relying on FWS's purportedly flawed Biological Opinion, Sierra Club contends that the Commission likewise violated the ESA.

85. As explained in the November 22 Order, FWS filed a Final Biological Opinion on October 2, 2019, concluding that the project is not likely to jeopardize the continued existence of the ocelot and jaguarundi. The Biological Opinion included an incidental take statement, which anticipates the incidental take of one endangered cat (ocelot or jaguarundi) for construction and the life of the project (i.e., 30 years).[264] In order to minimize the impact of incidental take on the ocelot and jaguarundi, the Biological Opinion included four reasonable and prudent measures requiring Rio Grande and Rio Bravo to:

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[259] Final EIS at ES-6.

[260] The Final EIS disclosed the wetland impacts associated with the Rio Grande LNG Terminal, explaining that project construction would affect a total of 327.7 acres of wetlands, of which 182.4 acres would be permanently converted to industrial land or open water within the footprint of the LNG Terminal, 107.3 acres would be maintained in an herbaceous wetland state within the permanent right-of-way for the pipelines, and the remaining 38.0 acres would be allowed to revert to pre-construction conditions. *Id.*

[261] *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353 (1989).

[262] November 22 Order, 169 FERC ¶ 61,131 at Environmental Condition 10.

[263] Sierra Club Request for Rehearing and Stay at 40-43.

[264] Biological Opinion at 1, 33.

(1) implement the voluntary conservation measures proposed in their biological opinion;[265] (2) notify FWS of any unauthorized take or if any endangered cat is found dead or injured during project implementation; (3) provide information and training on ocelot habitat requirements and avoidance measures to all project employees and contractors; and (4) monitor take of the ocelot and jaguarundi and provide periodic monitoring reports to FWS.[266] Finally, the Biological Opinion also prescribed six mandatory terms and conditions, which implement the reasonable and prudent measures described above and outline the applicants' reporting and monitoring requirements.[267] The November 22 Order adopted the measures required by FWS in the Biological Opinion.[268]

86. Sierra Club discounts the substantive and procedural responsibilities that section 7(a)(2) of the ESA[269] imposes and the interdependence of federal agencies acting under that section. Although a federal agency is required to ensure that its action will not jeopardize the continued existence of listed species or adversely modify their critical habitat, it must do so in consultation with the appropriate agency; in this case, FWS. Because FWS is charged with implementing the ESA, it is the recognized expert regarding matters of listed species and their habitats, and the Commission may rely on its conclusions.[270]

87. In reviewing whether the Commission may appropriately rely on the Biological Opinion, the relevant inquiry is not whether the document is flawed, but rather whether the Commission's reliance was arbitrary and capricious.[271] Therefore, an agency may rely on a Biological Opinion if a challenging party fails to cite new information that the consulting agency did not take into account that challenges the Opinion's conclusions. Here, the alleged defects that Sierra Club identifies do not rise to the level of new information that would cause the Commission to call into question the factual conclusions of FWS's

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[265] *See id.* at 4-5 (describing the voluntary conservation and mitigation measures proposed by Rio Grande and Rio Bravo).

[266] *Id.* at 34-35.

[267] *Id.* at 35-36.

[268] November 22 Order, 169 FERC ¶ 61,131 at P 91.

[269] 16 U.S.C. § 1536(a)(2) (2018).

[270] *City of Tacoma v. FERC*, 460 F.3d 53, 75 (D.C. Cir. 2006) (finding that expert agencies such as FWS have greater knowledge about the conditions that may threaten listed species and are best able to make factual determinations about appropriate measures to protect the species).

[271] *Id*.

Biological Opinion. Thus, it is appropriate for the Commission to rely on the judgment of FWS, the agency that Congress has determined in the ESA should be responsible for providing its expert opinion regarding whether authorizing the project is likely to jeopardize the continued existence of the ocelot or jaguarundi.

88. Sierra Club also claims that the Commission's reliance on the Biological Opinion is unlawful because the November 22 Order did not explicitly mandate compliance with the conservation measures identified in the Biological Opinion.[272] Specifically, Sierra Club states that the Commission's order did not incorporate into the project design or otherwise require Rio Grande and Rio Bravo to implement what the Biological Opinion characterizes as "Voluntary Conservation Measures,"[273] including acquiring off-site ocelot and jaguarundi habitat and realigning the pipeline to avoid ocelot and jaguarundi habitat.

89. The November 22 Order conditioned the project authorization on Rio Grande's and Rio Bravo's implementation of the mandatory measures contained in FWS's Biological Opinion.[274] FWS's Biological Opinion is a binding federal authorization, and where Biological Opinions contain reasonable and prudent alternatives or incidental take conditions we expect holders of NGA authorizations and certificates to implement those conditions. Accordingly, we reaffirm that Rio Grande and Rio Bravo are required to adhere to the incidental take statement, which includes implementing the reasonable and prudent measures and adopting all terms and conditions as represented in the FWS's Biological Opinion.

9. Ballast Water Impacts

90. Sierra Club argues that the Commission failed to adequately consider the impact that the unloading of ballast water by maritime vessels taking on LNG at the terminal may have by introducing foreign invasive species.[275] Sierra Club objects to the conclusion in the Final EIS that each vessel discharging ballast water at the project will only represent

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[272] Sierra Club Request for Rehearing and Stay at 43-44.

[273] Biological Opinion at 4-5 (describing the applicant-proposed "Voluntary Conservation Measures"). Despite use of the term "Voluntary Conservation Measures," we note that the Biological Opinion's first reasonable and prudent measure requires Rio Grande and Rio Bravo "to fully implement the Voluntary Conservation Measures." *See id.* at 34.

[274] November 22 Order, 169 FERC ¶ 61,131 at P 91 ("With imposition of the conditions required herein, *which include all measures required by FWS in its Biological Opinion*, we find construction and operation of the projects as approved will be an environmentally acceptable action and not inconsistent with the public interest.") (emphasis added).

[275] Sierra Club Request for Rehearing and Stay at 44.

0.1 percent of the approximately 25 billion gallons of water in the Brownsville Shipping Channel and will be subject to Coast Guard regulations to prevent the introduction of exotic species.[276] Sierra Club argues that ballast water would not be promptly mixed into the entire volume of the shipping channel but would accumulate near the terminal. Even a small amount of ballast water could introduce invasive species, such as lionfish and tiger shrimp, that prey on and transmit disease to native fish and shrimp populations.[277] Sierra Club thus claims that, combined with stress from ongoing industrial activities in the channel, invasive species will have more than the negligible impact found by the Final EIS, thereby increasing the prediction that the project will have a moderate harm on fisheries and tourism.[278]

91. While docked, ballast water would be offloaded into the Brownsville Shipping Channel as the ship takes on LNG. To reduce the potential for the introduction of invasive species and other foreign organisms, the Coast Guard requires that ballast water be completely exchanged in the open ocean at least 200 miles from U.S. waters.[279] This exchange is reported to reduce aquatic organisms by 88 to 99 percent.[280] Alternatively, a vessel may reduce organisms using an on-board ballast water treatment process.[281] The EIS acknowledged that although these measures may not eliminate all risks, they would minimize the risk of introducing invasive species into the project area,[282] particularly when project-related vessels would only represent a small fraction of the overall Brownsville Shipping Channel traffic. Having evaluated the possible environmental impacts of ballast water discharge into the Brownsville Shipping Channel, the Commission sees no reason to require more stringent conditions than those required by the Coast Guard, which is the agency responsible for establishing standards for the discharge of ballast water to protect against invasive species.[283]

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[276] *Id.* (citing EIS at 4-113).

[277] *Id.* at 45.

[278] *Id.*

[279] Final EIS at 4-42 to 4-43.

[280] *Id.* at 4-113.

[281] *Id.* at 4-43.

[282] *Id.* at 4-113.

[283] Final EIS at 4-43.

10. Sea Turtle Impacts

92. Sierra Club states that although the Final EIS and the November 22 Order acknowledged that moderate cumulative impacts are anticipated for sea turtles due to dredging, vessel traffic, and pile-driving,[284] the Final EIS failed to discuss additional mitigation methods or acknowledge what impacts will not be mitigated. Sierra Club objects to required mitigation, the National Marine Fisheries Service *Vessel Strike Avoidance Measures and Reporting for Mariners*, as insufficient for impacts from vessel traffic. According to Sierra Club, the measures recommend that vessels should reduce speed to 10 knots or less when cetaceans are observed, but the Final EIS acknowledges that sea turtles cannot actively avoid collisions with vessels traveling faster than 2.2 knots.[285] Sierra Club states that the Commission should have examined establishing a mandatory ship speed near the mouth of the Brownsville Shipping Channel and points to a December 20, 2019 personal communication with Lela Burnell Korab stating that some large vessels in the channel do not obey existing maritime speed limits.[286]

93. The Commission has no jurisdiction over the speed for any vessels at the mouth of the Brownsville Shipping Channel.[287] Nevertheless, the Commission fully considered impacts to and mitigation of vessel speed impacts to sea turtles. The Final EIS explained that sea turtles are rare visitors to the immediate project area and are more likely to be encountered along the LNG carrier transit routes in the Gulf of Mexico and nearshore waters,[288] but further assessed the potential for LNG vessels calling at the proposed project to result in collisions with sea turtles.[289] The Final EIS explained that Rio Grande is asking its carriers to comply with the *Vessel Strike Avoidance Measures and Reporting for Mariners*. The measures require more than reduced speeds and directs vessels, when sea turtles or small cetaceans are sighted, to attempt to maintain a distance of 50 yards or greater between the animal and the vessel whenever possible, and a distance of 100 yards or greater when groups

[284] Sierra Club Request for Rehearing and Stay at 45-46 (citing November 22 Order, 169 FERC ¶ 61,131 at P 118 (citing EIS at 4-451)).

[285] *Id.* at 46 (citing EIS at 4-136).

[286] *Id.*

[287] Final EIS at Vol. 3, Pt. 3, 114.

[288] *Id.* at 4-136.

[289] *Id.* at 4-136 to 4-137.

of cetaceans are sighted.[290] We find the measures described above adequate to address the risks to sea turtles from vessel traffic.

94. As for Sierra Club's claim that existing vessels are exceeding speed restrictions, this is new information collected by Sierra Club on December 20, 2019 and provided to the Commission for the first time on rehearing. Parties are not permitted to introduce new evidence for the first time on rehearing since such a practice would allow an impermissible moving target and would frustrate needed administrative finality.[291] Sierra Club had ample opportunity to collect and raise this new evidence during the proceeding. In light of its failure to do so, we dismiss its request as to this specific issue.

95. Sierra Club also claims that noise mitigation for pile driving and construction of the project facility is inconsistent with the nearby Annova LNG project, which, unlike this project, originally did not allow pile driving to begin during nighttime hours.[292] Each LNG terminal is unique in design and in resource impacts. Rio Grande modified its original construction plans to minimize the need for in-water pile-driving.[293] Rio Grande has stated that it would also reduce impacts on sea turtles from in-water activities by employing a dedicated biologist with stop-work authority that would monitor for species presence prior to pile-driving activities and during pile-driving and dredging activities, which would include maintenance dredging during operations.[294] The Commission is satisfied that Rio Grande's measures are adequate.

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[290] NOAA Fisheries, NMFS Southeast Region Vessel Strike Avoidance Measures and Reporting for Mariners; revised February 2008, https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance.

[291] *PaTu Wind Farm, LLC v. Portland General Electric Company, LLC*, 151 FERC ¶ 61,223, at P 42 (2015). *See also Potomac-Appalachian Transmission Highline, L.L.C.*, 133 FERC ¶ 61,152, at P 15 (2010).

[292] Sierra Club Request for Rehearing and Stay at 46.

[293] Final EIS at 4-137.

[294] *Id.* at 4-140.

11. Greenhouse Gas Emissions

a. Global Warming Potentials

96. Sierra Club contends that the Commission failed to adequately consider the project's greenhouse gas impacts,[295] alleging that the Commission relied on outdated global warming potentials for GHGs when it analyzed the projects' GHG emissions using the EPA's international GHG reporting rules rather than current science.[296]

97. The Commission appropriately relied on EPA's published global warming potentials,[297] which are the current scientific methodology used for consistency and comparability with other Commission jurisdictional projects as well as emissions estimates in the United States and internationally, including greenhouse gas control programs under the CAA. This frame of reference would be lost if other values were used.[298]

98. Sierra Club cites *Western Organization of Resource Councils v. Bureau of Land Management*[299] for the proposition that an agency violates NEPA when it exclusively relies on outdated science regarding global warming potentials in an EIS. But in that case, the district court ruled that the agency failed to justify using a global warming potential with a longer time horizon to assess methane emissions when it had that time horizon in another

[295] Mr. Young argues that the Commission is required to quantify emissions from the Rio Grande LNG Terminal. John Young Request for Rehearing at 7. The Commission provided this analysis. *See* November 22 Order, 169 FERC ¶ 61,131 at P 108 (citing EIS at 4-248 to 4-254). Mr. Young also asked about the status of EPA's previous endangerment finding for GHGs under the CAA, and presumably what that means for GHG regulation under the CAA, which is outside the scope of this proceeding. John Young Request for Rehearing at 7.

[296] Sierra Club Request for Rehearing and Stay at 47.

[297] Final EIS at 4-245.

[298] *Dominion Transmission, Inc.*, 158 FERC ¶ 61,029, at P 4 (2017).

[299] No. CV 16-21-GF-BMM, 2018 WL 1475470, at *15 (D. Mont. Mar. 26, 2018), *reconsideration denied*, No. CV 16-21-GF-BMM, 2018 WL 9986684 (D. Mont. July 31, 2018), and *appeal dismissed*, No. 18-35836, 2019 WL 141346 (9th Cir. Jan. 2, 2019).

EIS.[300] In contrast, as we have explained,[301] we have consistently used EPA's global warming potentials, including time horizons, in order to compare proposals with other projects and with GHG inventories.[302]

99. In any event, while Sierra Club faults the Commission's reliance on EPA's published guidance, Sierra Club does not offer an alternative in its rehearing request.[303] Sierra Club cites to an earlier comment, but such incorporation by reference is improper and is an alternative basis for dismissing Sierra Club's argument.[304]

b. Significance of the Projects' Greenhouse Gas Emissions under NEPA

100. Sierra Club argues that the Commission could have determined whether the projects' GHG emissions were significant by using the GHG emission reduction goals in the Paris Climate Accord, which were still in effect when the EIS and November 22 Order were issued.[305] Even if the Commission chose not to use the Paris Climate Accord emissions reduction targets, Sierra Club claims that other methodologies could be used to ascribe

[300] *Id.*

[301] *Dominion Transmission, Inc.*, 158 FERC ¶ 61,029 at P 4.

[302] *Supra* P 97.

[303] Sierra Club Request for Rehearing and Stay at 47.

[304] *San Diego Gas and Electric Co. v. Sellers of Market Energy*, 127 FERC ¶ 61,269, at P 295 (2009). *See Tennessee Gas Pipeline Co., L.L.C.*, 156 FERC ¶ 61,007 (2016) ("the Commission's regulations require rehearing requests to provide the basis, in fact and law, for each alleged error including representative Commission and court precedent. Bootstrapping of arguments is not permitted."); *see also ISO New England*, *Inc.*, 157 FERC ¶ 61,060 (2016) (explaining that the identical provision governing requests for rehearing under the Federal Power Act "requires an application for rehearing to 'set forth specifically the ground or grounds upon which such application is based,' and the Commission has rejected attempts to incorporate by reference grounds for rehearing from prior pleadings"); *Alcoa Power Generating, Inc*., 144 FERC ¶ 61,218, at P 10 (2013) ("The Commission, however, expects all grounds to be set forth in the rehearing request, and will dismiss any ground only incorporated by reference.") (citations omitted).

[305] Sierra Club Request for Rehearing and Stay at 47-48.

significance, including tools used by the U.S. Global Change Research Program (USGCRP) to assess impacts or the Social Cost of Carbon tool.[306]

101. Sierra Club's suggested methodologies would not help the Commission determine whether the projects' GHG emissions are significant. As discussed in the November 22 Order, the Commission does not see the utility in using the targets in the Paris Climate Accord, because the United States had announced its intent to withdraw from the accord at the time the Commission issued the November 22 Order.[307] But, even if the Commission were to consider those targets, without additional guidance, the Commission cannot determine the significance of the project's emissions in relations to the goals. For example, there are no industry sector or regional emission targets or budgets with which to compare project emissions, or established GHG offsets to assess the projects' relationship with emissions targets.

102. Similarly, the dissent argues that NEPA requires that the Commission determine whether GHG emissions will have a significant effect on climate change and that the Commission could make that determination using the Social Cost of Carbon or its own expertise as the Commission does for other aspects of its environmental review, including wetlands.

103. We disagree. The Social Cost of Carbon is not a suitable method for determining whether GHG emissions that are caused by a proposed project will have a significant effect on climate change and the Commission has no authority or objective basis using its own expertise to make such determination.

104. The Commission has provided extensive discussion on why the Social Cost of Carbon is not appropriate in project-level NEPA review and cannot meaningfully inform the Commission's decisions on natural gas infrastructure projects under the NGA.[308] It is not appropriate for use in any project-level NEPA review for the following reasons:

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[306] *Id.* at 48.

[307] *See* November 22 Order, 169 FERC ¶ 61,131 at P 108 & n.253. On November 4, 2019, President Trump began the formal process of withdrawing from the Paris Climate Accord by notifying the United Nations Secretary General of his intent to withdraw the United States from the Paris Climate Accord, which takes 12 months to take effect.

[308] *Mountain Valley*, 161 FERC ¶ 61,043 at P 296, *order on reh'g*, 163 FERC ¶ 61,197 at PP 275-297, *aff'd, Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199, at *2 ("[The Commission] gave several reasons why it believed petitioners' preferred metric, the Social Cost of Carbon tool, is not an appropriate measure of project-level climate change impacts and their significance under NEPA or the Natural Gas Act. That is all that is required for NEPA purposes."); *see also EarthReports, Inc. v. FERC*, 828 F.3d 949, 956

> (1) EPA states that "no consensus exists on the appropriate [discount] rate to use for analyses spanning multiple generations"[309] and consequently, significant variation in output can result;[310]
>
> (2) the tool does not measure the actual incremental impacts of a project on the environment; and
>
> (3) there are no established criteria identifying the monetized values that are to be considered significant for NEPA reviews.[311]

Sierra Club claims that the Commission has never offered a rational explanation for why the Social Cost of Carbon tool is appropriate for other agencies. Sierra Club is incorrect. We have repeatedly explained that while the methodology may be useful for other agencies' rulemakings or comparing regulatory alternatives using cost-benefit analyses where the same discount rate is consistently applied, it is not appropriate for estimating a specific project's impacts or informing our analysis under NEPA.[312] Moreover, Executive Order 13783,

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(D.C. Cir. 2016); *Sierra Club v. FERC*, 672 F. App'x 38, (D.C. Cir. 2016); *see also Citizens for a Healthy Cmty. v. U.S. Bureau of Land Mgmt.*, 377 F. Supp. 3d 1223, 1239-41 (D. Colo. 2019) (upholding the agency's decision to not use the Social Cost of Carbon); *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 77-79 (D.D.C. 2019) (upholding the agency's decision to not use the Social Cost of Carbon); *High Country Conservation Advocates v. U.S. Forest Serv.*, 333 F. Supp. 3d 1107, 1132 (D. Colo. 2018) ("[T]he *High Country* decision did not mandate that the Agencies apply the social cost of carbon protocol in their decisions; the court merely found arbitrary the Agencies' failure to do so without explanation.").

[309] *See* EPA, Fact Sheet: *Social Cost of Carbon* (November 2013), https://19january2017snapshot.epa.gov/climatechange/social-cost-carbon_.html.

[310] Depending on the selected discount rate, the tool can project widely different present day cost to avoid future climate change impacts.

[311] *See generally Adelphia Gateway, LLC.*, 169 FERC ¶ 61,220 (McNamee, Comm'r, concurrence) ("When the Social Cost of Carbon estimates that one metric ton of CO_2 costs $12 (the 2020 cost for a discount rate of 5 percent), agency decision-makers and the public have no objective basis or benchmark to determine whether the cost is significant. Bare numbers standing alone simply *cannot* ascribe significance.") (emphasis in original) (footnote omitted). Neither Sierra Club nor the dissent has specifically explained how to ascribe significance to calculated Social Cost of Carbon numbers.

[312] *Mountain Valley*, 161 FERC ¶ 61,043 at P 296.

Promoting Energy Independence and Economic Growth, has disbanded the Interagency Working Group on Social Cost of Greenhouse Gases and directed the withdrawal of all technical support documents and instructions regarding the methodology, stating that the documents are "no longer representative of governmental policy."[313]

105. Sierra Club also asks that the Commission consider using "tools used by the [USGCRP]" to assess different emission scenarios and consequently the incremental impact of the GHG emissions at issue in these projects.[314] Sierra Club itself acknowledges that such analysis of discrete physical impacts may be impossible,[315] but, in any event, such a vague request to use USGCRP tools without identifying a particular tool or further elaboration of the applicability or utility of such tools does not alert the Commission to what Sierra Club is asking us to reconsider on rehearing.[316] Sierra Club cites to earlier comments, but it is unclear what climate model it would like the Commission to use and, again, such incorporation by reference is improper and therefore an alternative basis for dismissing its request.[317]

106. We also disagree with the dissent's argument that the Commission can establish its own methodology for determining significance, pointing out that the Commission has determined the significance of effects on other environmental resources, such as wetlands, using its own expertise and without generally accepted significance criteria or a standard methodology. As an initial matter, it is important to note that when the Commission states it has no suitable methodology for determining the significance of GHG emissions, the Commission means that it has no objective basis for making such finding.

107. In contrast to the Commission's analysis of a project's impact on climate change, the Commission's findings regarding significance for vegetation, wildlife, and wetlands have an objective basis. For example, for wetlands, the Commission examined wetlands impacts by quantifying the acreage and types of wetlands using the applicants wetland delineation performed in accordance with the Corps' Wetlands Delineation Manual and the Atlantic and Gulf Coastal Plain regional supplement, aerial imagery, field delineation data from adjacent

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[313] Exec. Order No. 13,783, 82 Fed. Reg. 16093 (2017).

[314] Sierra Club Request for Rehearing and Stay at 48.

[315] *Id.*

[316] The NGA requires that issues be specifically raised on rehearing. 15 U.S.C. § 717r(a). We also note that Sierra Club omitted this request in its statement of issues in violation of Rule 713 of the Commission's Rules of Practices and Procedure. 18 C.F.R. § 385.713. *See also supra* P 8.

[317] *See supra* P 99.

parcels, and other available geographic information systems.[318] The Commission determined the project's effect on vegetation by using the applicant's materials to quantify the amount of acres that will be temporarily impacted by construction and permanently impacted by operation, and by considering the construction avoidance, mitigation, and restoration activities that Rio Grande and Rio Bravo committed to in its application.[319] Based on this information, the Commission made a reasoned finding that the project impacts on wildlife will not be significant. The Commission conducted a similar evaluation for wildlife and aquatic resources.[320]

108. Whereas here, the Commission has no reasoned basis to determine whether a project has a significant effect on climate change. To assess a project's effect on climate change, the Commission can only quantify the amount of project emissions. That calculated number cannot inform the Commission on climate change effects caused by the project, e.g., increase of sea level rise, effect on weather patterns, or effect on ocean acidification. Nor are there acceptable scientific models that the Commission may use to attribute every ton of GHG emissions to a physical climate change effect. Without adequate support or a reasoned target, the Commission cannot ascribe significance to particular amounts of GHG emissions. Courts require agencies to "consider[] the relevant factors and articulate[] a rational connection between the facts found and the choice made."[321] Simply put, stating that an amount of GHG emissions appears significant without any objective support fails to meet the agency's obligations under the Administrative Procedure Act.

c. Consideration of Greenhouse Gas Emissions

109. Sierra Club argues that the Commission failed to consider greenhouse gas emissions as part of its public interest determination in violation of *Sierra Club v. FERC*.[322] Sierra

[318] *See* Final EIS at ES-6, 4-55 to 4-67.

[319] *Id.* at 4-69 to 4-84.

[320] *Id.* at 4-84 to 4-120.

[321] *City of Tacoma v. FERC*, 460 F.3d 53, 76 (D.C Cir. 2006) (quoting *Ariz. Cattle Growers' Ass'n v. FWS*, 273 F.3d 1229, 1235-36 (9th Cir. 2001)); *see also American Rivers v. FERC*, 895 F.3d 32, 51 (D.C. Cir. 2018) (" . . . the Commission's NEPA analysis was woefully light on reliable data and reasoned analysis and heavy on unsubstantiated inferences and *non sequiturs*") (italics in original); *Found. for N. Am. Wild Sheep v. U.S. Dep't of Agr.*, 681 F.2d 1172, 1179 (9th Cir. 1982) ("The EA provides no foundation for the inference that a valid comparison may be drawn between the sheep's reaction to hikers and their reaction to large, noisy ten-wheel ore trucks.").

[322] 867 F.3d 1357, 1373 (D.C. Cir. 2017).

Club states that the Commission's failure to consider the significance of greenhouse gas emissions "preempts" its ability to assess whether the project is in the public interest.[323] Similarly, the dissent argues that because the Commission does not determine whether GHG emissions are "significant," the Commission's consideration of climate change "does not play a meaningful role in the Commission's public interest determination," and therefore, the dissent concludes that the Commission's public interest determination "systematically excludes the most important environmental consideration of our time" and is "contrary to law, arbitrary and capricious, and the not the product of reasoned decision making."

110. Sierra Club is mistaken. The Commission approved the projects under NGA sections 3 and 7 based on the record, which includes the GHG emissions analysis. The Final EIS discusses the GHG emissions from construction and operation of the projects,[324] the climate change impacts in the region,[325] and the regulatory structure for GHGs under the CAA.[326] Although the Commission is unable to ascribe significance to GHG emissions based on the lack of current science or standards, contrary to Sierra Club's claim, the Commission stated in the November 22 Order that it agreed with all the conclusions presented in the Final EIS and found that the projects, if constructed and operated as described in the Final EIS, are environmentally acceptable actions.[327]

111. Further, we disagree with the dissent that the Commission must determine whether GHG emissions are "significant" in order to determine whether the construction, operation, and siting of a NGA section 3 facility is inconsistent with the public interest. As we explained above, the Commission has no objective basis to determine whether a project has a significant effect on climate change and the dissent cites to none; however, the Commission clearly identifies that the benefits of the project show that the project is not inconsistent with the public interest and Congress has deemed export of natural gas to FTA countries to be in the public interest.

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[323] Sierra Club Request for Rehearing and Stay at 49.

[324] Final EIS at 4-256 to 4-271 (LNG Terminal including Compressor Station 3) and 4-271 to 4-288 (pipeline facilities).

[325] *Id.* at 4-480 to 4-481.

[326] *Id.* at 4-248 to 4-254.

[327] November 22, 2019 Order, 169 FERC ¶ 61,131 at P 133.

d. **Mitigation of GHG emissions**

112. The dissent contends that the Commission could mitigate any GHG emissions in the event that it made a finding that the GHG emissions had a significant impact on climate change and that NEPA requires a discussion of mitigation measures.

113. Even if the Commission were able to make a finding regarding the significance of GHG emissions, we do not believe it would be reasonable for the Commission to unilaterally establish measures to mitigate GHG emissions. Congress, through the CAA, assigned the EPA and the States authority to establish such measures. Congress designated the EPA as the expert agency "best suited to serve as primary regulator of greenhouse gas emissions," [328] not the Commission.

114. The CAA establishes an all-encompassing regulatory program, supervised by the EPA to deal comprehensively with interstate air pollution.[329] Congress entrusted the Administrator of the EPA with significant discretion to determine appropriate emissions measures. Congress delegated the Administrator the authority to determine whether pipelines and other stationary sources endanger public health and welfare; section 111 of the CAA directs the Administrator of the EPA "to publish (and from time to time thereafter shall revise) a list of categories of stationary sources. He shall include a category of sources in such list if in *his judgment* it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare"[330] and to establish standards of performance for the identified stationary sources.[331] The CAA requires the Administrator to conduct complex balancing when determining a standard of performance, taking into consideration what is technologically achievable and the cost to achieve that standard.[332]

115. In addition, the CAA allows the Administrator to "distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards."[333] The Act also permits the Administrator, with the consent of the Governor of the State in

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[328] *American Elec. Power Co., Inc. v. Conn.*, 564 U.S. 410, 428 (2011).

[329] *See id.* at 419.

[330] 42 U.S.C. § 7411(b)(1)(A) (2018).

[331] *Id.* § 7411(b)(1)(B).

[332] *Id.* § 7411(a)(1).

[333] *Id.* § 7411(a)(2).

which the source is to be located, to waive its requirements "to encourage the use of an innovative technological system or systems of continuous emission reduction."[334]

116. Congress also intended that states would have a role in establishing measures to mitigate emissions from stationary sources. Section 111(f) notes that "[b]efore promulgating any regulations . . . or listing any category of major stationary sources . . . the Administrator shall consult with appropriate representatives of the Governors and of State air pollution control agencies."[335]

117. Thus, for the Commission to undertake to establish GHG emission standards or mitigation measures out of whole cloth would impede the significant discretion and complex balancing that the CAA entrusts in the EPA Administrator, and would eliminate the role of the States.

12. Connected Actions

118. Sierra Club contends that the DOE review of whether to authorize exports to non-Free Trade Agreement (FTA) nations is a "connected action" that must be considered in the EIS,[336] claiming that the EIS should have considered gas production and use as indirect impacts of the non-FTA nation authorization, which DOE has acknowledged has reasonably foreseeable indirect impacts on gas production and use.[337]

119. Pursuant to CEQ regulations, "connected actions" include actions that: (a) automatically trigger other actions, which may require an EIS; (b) cannot or will not proceed without previous or simultaneous actions; or (c) are interdependent parts of a larger action and depend on the larger action for their justification.[338] In evaluating whether multiple actions are, in fact, connected actions, courts have employed a "substantial independent utility" test, which the Commission finds useful for determining whether the

[334] *Id.* § 7411(j)(1)(A).

[335] *Id.* § 7411(f)(3).

[336] Sierra Club Request for Rehearing and Stay at 6, 49-50.

[337] *Id.* at 51.

[338] 40 C.F.R. § 1508.25(a)(1) (2019).

three criteria for a connected action are met. The test asks "whether one project will serve a significant purpose even if a second related project is not built."[339]

120. The DOE authorization for Rio Grande to export to non-FTA nations is not a connected action to the Commission's authorization for the Rio Grande LNG Terminal and Rio Bravo Pipeline. As explained in the November 22 Order, as required by NGA section 3(c), in 2016, DOE issued an instant grant of authority to Rio Grande to export 1,318 billion cubic feet per year, which is approximately equivalent to 27 MTPA of LNG to free trade nations.[340] No additional trade authorizations are needed for the terminal to operate. Because the terminal already has a significant purpose and could proceed absent the pending authorization for non-FTA nations, the two are not connected actions.

121. Sierra Club disagrees and argues that, despite a full authorization for FTA nations, as a practical matter, the project is nonetheless dependent on non-FTA nation authorization to proceed.[341] As evidence, Sierra Club points out that no other large LNG export proposal has proceeded without non-FTA nation authorization, there may not be a large enough LNG market in FTA countries to support project exports, and Rio Grande's parent company, NextDecade, has a memorandum of understanding with an Irish importer to develop an LNG import terminal with a capacity of 3 MTPA and Ireland is not a FTA nation.[342] Sierra Club's claim that all LNG projects rely on non-FTA nation authorization is speculative and its claims about the size of the FTA nation LNG market is unsupported. As for Sierra Club's claim that the projects will serve a future import facility in a non-FTA nation, that future facility has yet to be approved and there is no indication that the projects will serve it, let alone are reliant on it, when Rio Grande previously secured FTA nation authorization for the Rio Grande LNG Terminal's full export capacity.

122. Sierra Club next contends that even if the Rio Grande LNG Terminal does not depend on non-FTA nation authorization, the two actions are connected because the non-FTA nation exports authorization does not have independent utility absent the Rio Grande LNG Terminal.[343] But under CEQ's definition of a connected action, Rio Grande must have an

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[339] *Coalition on Sensible Transp., Inc. v. Dole*, 826 F.2d 60, 69 (D.C. Cir. 1987). *See also O'Reilly v. U.S. Army Corps of Eng'rs*, 477 F.3d 225, 237 (5th Cir. 2007) (defining independent utility as whether one project "can stand alone without requiring construction of the other [projects] either in terms of the facilities required or of profitability").

[340] *See Rio Grande LNG, LLC*, DOE/FE Docket No. 15-190-LNG, Order No. 3869.

[341] Sierra Club Request for Rehearing and Stay at 49-50.

[342] *Id.* at 50.

[343] *Id.*

interdependent relationship with the non-FTA nation authorization.[344] Nothing about the Rio Grande LNG Terminal "triggers" or mandates non-FTA nation authorization and, as discussed, the Rio Grande LNG Terminal can proceed without such authorization. Moreover, Sierra Club does not make any showing that the delivery of natural gas to non-FTA nations, as opposed to FTA nations, has differing environmental effects.

13. Public Interest Determination

123. Sierra Club argues that the November 22 Order fails to provide a reasoned explanation for why the project is in the public interest under the NGA, when the project will have significant adverse impacts on the environment.[345] As discussed, the Commission determined that the NGA section 3 project was not inconsistent with the public interest and the NGA section 7 project was required by the public convenience and necessity based on all information in the record, including information presented in the Final EIS. Although the Final EIS identified some adverse environmental impacts, the Commission found that the project, if constructed and operated as described in the Final EIS with required conditions, is an environmentally acceptable action and, consequently, based on all the other factors discussed in the November 22 Order, the Rio Grande LNG Terminal is not inconsistent with the public interest and the Rio Bravo pipeline is in the public convenience and necessity.[346] We affirm that decision with the revised discussion of potentially significant ozone impacts and impacts on environmental justice communities.

C. Motion for Stay

124. Sierra Club requests that the Commission stay the November 22 Order pending issuance of an order on rehearing.[347] This order addresses and denies their requests for rehearing; accordingly, we dismiss the requests for stay as moot.

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[344] 40 C.F.R. § 1508.25(a)(1). *See also Del. Riverkeeper Network v. FERC*, 753 F.3d 1304, 1313 (D.C. Cir. 2014) (finding that four pipeline proposals were connected actions because the four projects would result in "a single pipeline" that was "linear and physically interdependent" and because the projects were financially interdependent).

[345] Sierra Club Request for Rehearing and Stay at 51.

[346] November 22 Order, 169 FERC ¶ 61,131 at P 133.

[347] Sierra Club Request for Rehearing and Stay at 51.

The Commission orders:

(A) Sierra Club's request for rehearing is hereby denied, as discussed in the body of this order.

(B) John Young's request for rehearing is hereby dismissed, as discussed in the body of this order.

(C) Sierra Club's request for stay is hereby dismissed as moot, as discussed in the body of this order.

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

(S E A L)

Kimberly D. Bose,
Secretary.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Rio Grande LNG, LLC	Docket Nos. CP16-454-001
Rio Bravo Pipeline Company, LLC	CP16-455-001

(Issued January 23, 2020)

GLICK, Commissioner, *dissenting*:

1. I dissent from today's order because it violates both the Natural Gas Act[1] (NGA) and the National Environmental Policy Act[2] (NEPA). Rather than wrestling with the Project's[3] adverse impacts on the environment and the surrounding community, today's order makes clear that those impacts are little more than a bump in the road to approving the Project.[4]

2. As an initial matter, the Commission continues to treat climate change differently than all other environmental impacts. The Commission steadfastly refuses to assess whether the impact of the Project's greenhouse gas (GHG) emissions on climate change is significant, even though it quantifies the GHG emissions caused by the Project. Claiming that the Project is "environmentally acceptable" while simultaneously refusing to assess its impact on the most important environmental issue of our time is arbitrary and capricious and not the product of reasoned decisionmaking.[5]

3. In addition, I am also deeply troubled by the environmental justice implications of today's order. All three of the Brownsville LNG facilities[6] are located in Cameron

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[1] 15 U.S.C. §§ 717b, 717f (2018).

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

[3] Today's order denies rehearing of the Commission's order authorizing both the Rio Grande LNG, LLC's (Rio Grande) LNG export facility and associated natural gas pipeline facilities (collectively, the Project) pursuant to section 3 and section 7 of the NGA, respectively.

[4] *Rio Grande LNG, LLC*, 170 FERC ¶ 61,046, at PP 108-109 (2020) (Rehearing Order); *Rio Grande LNG, LLC*, 169 FERC ¶ 61,131, at PP 104-105 (2019) (Certificate Order); Final Environmental Impact Statement at 4-256 – 4-288 (EIS).

[5] Rehearing Order, 170 FERC ¶ 61,046 at P 109.

[6] In addition to Rio Grand LNG, the Commission also simultaneously approved

County, Texas—a region of the country where roughly one third of the population is below the poverty line and the majority is made up of minority groups.[7] I fully appreciate that the jobs and economic stimulus that a facility like the Project can provide may be especially important in a community facing economic challenges. But we cannot lose sight of the cumulative environmental toll that new industrial development can take on communities such as Cameron County. Far from seriously considering those impacts, today's order shrugs them off, reasoning that because they fall almost entirely on low-income or minority communities, those impacts do not fall disproportionately on those communities. That conclusion is both unreasoned and an abdication of our responsibility to the public interest.

4. Finally, I am concerned about the Commission's cursory analysis and consideration of the Project's impacts on local air quality and endangered species as well as how to mitigate those impacts. Collectively, the Brownsville LNG facilities will have significant adverse consequences on the surrounding region that, in my view, demand a more thorough analysis under both NEPA and the NGA than they receive in today's order.

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

5. The NGA's regulation of LNG import and export facilities "implicate[s] a tangled web of regulatory processes" split between the U.S. Department of Energy (DOE) and the Commission.[8] The NGA establishes a general presumption favoring the import and export of LNG unless there is an affirmative finding that the import or export "will not be

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the Annova LNG facility, *Annova LNG Common Infrastructure, LLC*, 169 FERC ¶ 61,132 (2019), and the Texas Brownsville LNG facility, *Texas LNG Brownsville LLC*, 169 FERC ¶ 61,130 (2019). I will refer to these collectively as the Brownsville LNG facilities.

[7] Rehearing Order, 170 FERC ¶ 61,046 at P 64 ("Commission staff concluded that within the census block groups intersected by a two-mile radius around the pipeline facilities and LNG terminal site, the minority population percentages in 24 of the 25 affected tracts exceed the EPA's categorical thresholds to be minority populations or low-income populations, or in most cases both."); *id.* P 66 (similar); EIS at 4-235 (noting that the poverty rate in Cameron County is roughly a third); EIS at 4-236 (noting that three out of the four blocks of land that was studied around the LNG facility were made up of more than 50 percent minority populations).

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

consistent with the public interest."[9] Section 3 of the NGA provides for two independent public interest determinations: One regarding the import or export of LNG itself and one regarding the facilities used for that import or export.

6. DOE determines whether the import or export of LNG is consistent with the public interest, with transactions among free trade countries legislatively deemed consistent.[10] Separately, the Commission evaluates whether "an application for the siting, construction, expansion, or operation of an LNG terminal" is itself consistent with the public interest.[11] Pursuant to that authority, the Commission must approve a proposed LNG facility unless the record shows that the facility would be inconsistent with the public interest.[12] Today's order fails to satisfy that standard in multiple respects.

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[9] 15 U.S.C. § 717b(a); *see EarthReports, Inc. v. FERC*, 828 F.3d 949, 953 (D.C. Cir. 2016) (citing *W. Va. Pub. Servs. Comm'n v. Dep't of Energy*, 681 F.2d 847, 856 (D.C. Cir. 1982) ("NGA [section] 3, unlike [section] 7, 'sets out a general presumption favoring such authorization.'")). Under section 7 of the NGA, the Commission approves a proposed pipeline if it is shown to be consistent with the public interest, while under section 3, the Commission approves a proposed LNG import or export facility unless it is shown to be inconsistent with the public interest. *Compare* 15 U.S.C. §717b(a) *with* 15 U.S.C. §717f(a), (e).

[10] 15 U.S.C. § 717b(c). The courts have explained that, because the authority to authorize the LNG exports rests with DOE, NEPA does not require the Commission to consider the upstream or downstream GHG emissions that may be indirect effects of the export itself when determining whether the related LNG export facility satisfies section 3 of the NGA. *See Freeport*, 827 F.3d at 46-47; *see also Sierra Club v. FERC*, 867 F.3d 1357, 1373 (D.C. Cir. 2017) (*Sabal Trail*) (discussing *Freeport*). Nevertheless, NEPA requires that the Commission consider the direct GHG emissions associated with a proposed LNG export facility. *See Freeport*, 827 F.3d at 41, 46.

[11] 15 U.S.C. § 717b(e). In 1977, Congress transferred the regulatory functions of NGA section 3 to DOE. DOE, however, subsequently delegated to the Commission authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal, while retaining the authority to determine whether the import or export of LNG to non-free trade countries is in the public interest. *See EarthReports*, 828 F.3d at 952-53.

[12] *See Freeport*, 827 F.3d at 40-41.

A. The Commission's Public Interest Determination Does Not Adequately Consider Climate Change

7. In making its public interest determination, the Commission examines a proposed facility's impact on the environment and public safety, among other things. A facility's impact on climate change is one of the environmental impacts that must be part of a public interest determination under the NGA.[13] Nevertheless, the Commission maintains that it need not consider whether the Project's contribution to climate change is significant in this order because it lacks a means to do so—or at least so it claims.[14] However, the most troubling part of the Commission's rationale is what comes next. Based on this alleged inability to assess the significance of the Project's impact on climate change, the Commission concludes that the Project's environmental impacts would generally be reduced to "less-than-significant" levels and the Project is "environmentally acceptable."[15] Think about that. The Commission is saying out of one side of its mouth that it cannot assess the significance of the Project's impact on climate change[16] while, out of the other side of its mouth, assuring us that its environmental

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

[14] Rehearing Order, 170 FERC ¶ 61,046 at P 100 (claiming that the Commission cannot assess the significance of emissions because there are "industry sector or regional emission targets or budgets with which to compare project emissions"); *see also* Certificate Order, 169 FERC ¶ 61,131 at PP 105-106 (similar); EIS at 4-481 – 4-482 (similar).

[15] Rehearing Order, 170 FERC ¶ 61,046 at P 109 (asserting that the Project is environmentally acceptable even without determining whether its GHG emissions are significant or whether it will have a significant impact on climate change); Certificate Order, 169 FERC ¶ 61,131 at P 56 (concluding that the Project "would result in adverse environmental impacts, but that these impacts would be reduced to less-than-significant levels with the implementation of applicants' proposed, and Commission staff's recommended, avoidance, minimization, and mitigation measures"); EIS at ES-19.

[16] *See, e.g.*, Rehearing Order, 170 FERC ¶ 61,046 at PP 108-109; Certificate Order, 169 FERC ¶ 61,131 at PP 105-106; EIS 4-482 ("[W]e are unable to determine the significance of the Project's contribution to climate change.")."

impacts are generally not significant and the Project is environmentally acceptable.[17] That is ludicrous, unreasoned, and an abdication of our responsibility to give climate change the "hard look" that the law demands.[18]

8. It also means that the Project's impact on climate change does not play a meaningful role in the Commission's public interest determination, no matter how often the Commission assures us that it does.[19] Using the approach in today's order, the Commission will always conclude that a project will not have a significant environmental impact irrespective of that project's actual GHG emissions or those emissions' impact on climate change. If the Commission's conclusion will not change no matter how many GHG emissions a project causes, those emissions cannot, as a logical matter, play a meaningful role in the Commission's public interest determination. A public interest determination that systematically excludes the most important environmental consideration of our time is contrary to law, arbitrary and capricious, and not the product of reasoned decisionmaking.

9. The failure to meaningfully consider the Project's GHG emissions is all-the-more indefensible given the volume of GHG emissions at issue in this proceeding. The Project will directly release over 9 million tons of GHG emissions per year,[20] which is equivalent

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[17] Rehearing Order, 170 FERC ¶ 61,046 at P 109; Certificate Order, 169 FERC ¶ 61,131 at P 56 (stating that, with few exceptions and not considering cumulative impacts, the Project's environmental impact will be "reduced to less-than-significant levels").

[18] *See, e.g.*, *Myersville Citizens for a Rural Cmty., Inc. v. FERC*, 783 F.3d 1301, 1322 (D.C. Cir. 2015) (explaining that agencies cannot overlook a single environmental consequence if it is even "arguably significant"); *see also Michigan v. EPA*, 135 S. Ct. 2699, 2706 (2015) ("Not only must an agency's decreed result be within the scope of its lawful authority, but the process by which it reaches that result must be logical and rational." (internal quotation marks omitted)); *Motor Vehicle Mfrs. Ass'n, Inc. v. State Farm Mut. Auto. Ins. Co*., 463 U.S. 29, 43 (1983) (explaining that agency action is "arbitrary and capricious if the agency has . . . entirely failed to consider an important aspect of the problem, [or] offered an explanation for its decision that runs counter to the evidence before the agency").

[19] *Cf.* Rehearing Order, 170 FERC ¶ 61,046 at P 109 (claiming that the Commission relied on "GHG emissions analysis" in certificating the Project even though, by its own admission, it did not assess the impact that the GHG emissions might have).

[20] Certificate Order, 169 FERC ¶ 61,131 at P 105; EIS at 4-262 & Table 4.11.1-7 (estimating the Project's emissions from routine operation).

to the annual GHG emissions of roughly 2 million automobiles.[21] The Commission acknowledges that "GHGs emissions due to human activity are the primary cause of increased levels of all GHG [sic] since the industrial age,"[22] a result that the Commission has previously acknowledged (although notably not in the EIS accompanying today's order) will "threaten the public health and welfare of current and future generations through climate change."[23] In light of this undisputed relationship between anthropogenic GHG emissions and climate change, the Commission must carefully consider the Project's contribution to climate change when determining whether the Project is consistent with the public interest—a task that it entirely fails to accomplish in today's order.

B. The Commission's Consideration of the Project's Other Adverse Impacts Is Also Arbitrary and Capricious

10. As I explained in my dissent from the underlying order, the Commission "cannot turn a blind eye to the incremental impact that increased pollution will have on economically disadvantaged communities."[24] And while I "fully appreciate that the jobs and economic stimulus that a facility like the Project can provide may be especially important in a community facing economic challenges,"[25] a reasoned application of the public interest cannot recognize those benefits and at the same time fail to wrestle with the Project's adverse consequences for vulnerable communities. Carefully considering those adverse impacts is important both because vulnerable communities often lack the

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[21] This figure was calculated using the U.S. Environmental Protection Agency's (EPA) Greenhouse Gas Equivalencies Calculator. See U.S. Envtl. Prot. Agency, Greenhouse Gas Equivalencies Calculator, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator (last visited Jan. 22, 2020).

[22] EIS at 4-243.

[23] Environmental Assessment, Docket No. CP18-512-000 at 112 (Mar. 29, 2019); *see also id.* at 235 ("Construction and operation of the Project would increase the atmospheric concentration of GHGs in combination with past and future emissions from all other sources and contribute incrementally to future climate change impacts.").

[24] Certificate Order, 169 FERC ¶ 61,131 (Glick, Comm'r, dissenting at P 9).

[25] *Id.*; *see* Rehearing Order, 170 FERC ¶ 61,046 at P 18 (finding a market need for the Project, in part because gas "transportation will provide domestic public benefits, including . . . "supporting domestic jobs in gas production, transportation, and distribution, and domestic jobs in industrial sectors that rely on gas or support the production, transportation, and distribution of gas").

means to retain high-priced counsel to vindicate their interests and because of the long history in which these communities have "frequently experience[d] a disproportionate toll from the development of new industrial facilities."[26] Especially in a case such as this one, where the adverse impacts include the type of potentially serious impacts on human health that can have cascading consequences in economically disadvantaged areas, the failure to seriously wrestle with those adverse effects is both profoundly unfair and inimical to the public interest.

11. Nevertheless, the Commission barely bats an eye at the impacts its order will have on environmental justice[27] communities. Instead, today's order dismisses environmental justice concerns because, get this, no environmental justice communities are "disproportionately affected" by the Project since almost all the communities affected—96 percent of the relevant census tracts[28]—are either low-income or minority communities.[29] In other words, the Commission concludes that because the Project basically affects only low-income or minority populations, its effects do not fall disproportionately on those communities.[30] Similarly, the Commission rejects the Sierra Club's arguments,[31] reasoning that, because the communities affected by the Project are

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[26] Certificate Order, 169 FERC ¶ 61,131 (Glick, Comm'r, dissenting at P 9); *cf., e.g.*, *Friends of Buckingham v. State Air Pollution Control Bd.*, No. 19-1152, 2020 WL 63295, at *14 (4th Cir. Jan. 7, 2020) ("As Justice Douglas pointed out nearly fifty years ago, as often happens with interstate highways, the route selected was through the poor area of town, not through the area where the politically powerful people live." (internal quotation marks and alterations omitted)).

[27] "The principle of environmental justice encourages agencies to consider whether the projects they sanction will have a disproportionately high and adverse impact on low-income and predominantly minority communities." *Sabal Trail*, 867 F.3d at 1368 (internal quotation marks omitted).

[28] Rehearing Order, 170 FERC ¶ 61,046 at P 64.

[29] *See, e.g.*, *id.* P 66 ("Because here all project-affected populations are minority or low-income populations, or both, it is not possible that impacts will be disproportionately concentrated on minority and low-income populations versus on some other project-affected comparison group.").

[30] *See id.* P 67 ("Given that all project-affected populations are minority or low-income populations, the EIS objectively concluded that impacts would not be disproportionate but would 'apply to everyone' and would 'not be focused on or targeted to any particular demographic group.'" (quoting EIS at 4-237 and 4-468)).

[31] *E.g.*, Sierra Club Rehearing Request at 32 ("FERC only concluded that

all almost entirely environmental justice communities, those communities do not bear a disproportionate share of the Project's total adverse impacts.[32]

12. But those observations only underscore *my* point. Concerns about environmental justice are rooted in the fact that low-income and minority populations often bear the brunt of the environmental and human health impacts of new industrial development.[33] The Commission's observation that functionally all the areas adversely affected by the Project are home to those communities ought to be a reason to take a harder look at the Project's environmental justice implications, not to brush them off.[34] The Commission's position misses that point entirely. Arguing that environmental justice is relevant to the public interest only when a fraction of a Project's adverse impacts fall on environmental justice communities and not when substantively all of those impacts fall on environmental justice communities is both arbitrary and capricious and, frankly, hard to fathom.[35] After all, the upshot of the Commission's approach is to signal to developers that they can side step environmental justice concerns so long as they ensure that all, or substantially all, of a project's adverse impacts fall on low-income or minority communities.

13. Moreover, in the one instance in which the Commission delves into a specific environmental justice concern, its dismissal of that concern is equally unreasoned. On rehearing, the Commission for the first time recognizes the potential for the cumulative

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'everyone' would suffer impacts of the project, not whether the majority-minority or low income communities near the facility would be subject to more adverse impacts given their locale.").

[32] *E.g.*, Rehearing Order, 170 FERC ¶ 61,046 at P 69.

[33] *See* Certificate Order, 169 FERC ¶ 61,131 (Glick, Comm'r, dissenting at P 9); *cf., e.g.*, *Friends of Buckingham*, No. 19-1152, 2020 WL 63295, at *14 (4th Cir. Jan. 7, 2020) (noting the "'evidence that a disproportionate number of environmental hazards, polluting facilities, and other unwanted land uses are located in communities of color and low-income communities'" (quoting *Nicky Sheats, Achieving Emissions Reductions for Environmental Justice Communities Through Climate Change Mitigation Policy*, 41 Wm. & Mary Envtl. L. & Pol'y Rev. 377, 382 (2017)).

[34] Certificate Order, 169 FERC ¶ 61,131 (Glick, Comm'r, dissenting at P 9).

[35] Note that I am not arguing that the EIS was somehow inherently deficient, *cf. Sabal Trail*, 867 F.3d at 1368-71, but instead that it is arbitrary and capricious to dismiss environmental justice concerns under the Commission's public interest analysis on the basis that the Project will adversely affect only environmental justice communities.

effects of the Project and other sources in the region to contribute to a violation of the 8-hour National Ambient Air Quality Standards (NAAQS) for Ozone.[36] Ozone is linked to a number of serious health problems, such as asthma and respiratory disease, including chronic obstructive pulmonary disorder (COPD).[37] After reciting a string of general statistics about the incidence of asthma and respiratory disease among different racial and age groups in Texas, the Commission concludes that those numbers do not indicate that "the anticipated exposure to ozone in minority and low-income communities [around the Project] would result in a disproportionately high and adverse impact to these communities."[38]

14. But it is not at all clear from today's order how the Commission reaches that conclusion. As best I can tell, the Commission is suggesting that, because Hispanic and Latino populations are not more susceptible than the general population to asthma or respiratory disease, exposing the predominately Hispanic and Latino population surrounding the project to ozone levels that the U.S. Environmental Protection Agency (EPA) has deemed unsafe will not disproportionately affect those individuals.[39] In other words, the Commission is taking the position that there are no environmental justice concerns with a project that exclusively pollutes poor or minority communities unless the residents of those communities have a predisposition to suffer from those pollutants.

15. That is nonsense. Unsafe levels of ozone can sicken healthy people, even if those effects are not as severe as for individuals with asthma or other respiratory illnesses. The fact that Hispanic or Latino populations within Texas as a whole are relatively less likely to suffer from asthma or to die from respiratory disease than other racial groups[40] tells us nothing about the actual impacts that the elevated ozone levels caused by the Project will have on minority and low-income groups in the affected areas. For example, assume for the sake of argument that the ozone exposure caused by the Project doubles the incidence of COPD in the affected communities. The population-wide incidence of respiratory disease does nothing to help us assess whether and how this Project will

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[36] Rehearing Order, 170 FERC ¶ 61,046 at PP 55, 62. This includes the other Brownsville LNG facilities and the ships that would serve them.

[37] *See* Rehearing Order, 170 FERC ¶ 61,046 at P 61 (discussing health effects ozone exposure); *see generally* National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,292 (2015) (rule establishing current 8-hour ozone NAAQS).

[38] Rehearing Order, 170 FERC ¶ 61,046 at P 76.

[39] *Id.* at n.244.

[40] *Id.* P 76.

disproportionately affect the environmental justice communities in the surrounding area or what that means for the public interest.[41] That cursory and dismissive analysis is the perfect window into how seriously the Commission takes environmental justice concerns.

16. In addition, the cumulative effects of the Brownsville LNG facilities will have a significant adverse impact on endangered species, including the ocelot, the jaguarundi, and the aplomado falcon.[42] Although the Commission reports those impacts in its EIS[43] and mentions them briefly in the original order and in passing in today's order on rehearing,[44] it is far from clear whether and how they factor into the Commission's public interest analysis. Given the extent of those adverse impacts on endangered species—which appear to be more extensive than those caused by other energy infrastructure projects that the Commission has approved under NGA section 3 and section 7 in recent years[45]—we ought to do more than simply recite the potential harm and then proceed, post haste, to make a public interest determination without any further discussion.

II. The Commission Fails to Satisfy Its Obligations under NEPA

17. The Commission's NEPA analysis of the Project's GHG emissions is similarly flawed. As an initial matter, to seriously evaluate the environmental consequences of the Project under NEPA, the Commission must consider the harm caused by its GHG

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[41] For example, although asthma can aggravate the effects of ozone exposure, ozone can have serious health effects in non-asthmatics and can lead to other conditions, including COPD. *See* U.S. Envtl. Prot. Agency, *Health Effects of Ozone Pollution*, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution (last visited Jan. 22, 2020).

[42] *See* EIS at ES-19, 4-447 – 4-450 (ocelot and jaguarundi); *id.* at 4-445 (aplomado falcon).

[43] *See supra* note 42.

[44] *E.g.*, Rehearing Order, 170 FERC ¶ 61,046 at PP 87-88 (noting that the Commission conditioned approval of the Project on some, but not all, of the conservation measures proposed in the developer's submission to the Fish and Wildlife Service); Certificate Order, 169 FERC ¶ 61,131 at PP 56, 113, 115.

[45] For example, the EIS states "the primary threat to ocelot and jaguarundi populations in the United States is habitat loss, degradation, and fragmentation" noting that for ocelots in particular even "incremental habitat loss could be significant." EIS at 4-448. To my knowledge, there is no dispute that the Commission's approval of the Brownsville LNG facilities will result in considerable loss of habitat for those species.

emissions and "evaluate the 'incremental impact' that those emissions will have on climate change or the environment more generally."[46] As noted, the operation of the Project will emit more than 9 million tons of GHG emissions per year.[47] Although quantifying the Project's GHG emissions is a necessary step toward meeting the Commission's NEPA obligations, listing the volume of emissions alone is insufficient.[48] Identifying the potential consequences that those emissions will have for climate change is essential if NEPA is to play the disclosure and good government roles for which it was designed. The Supreme Court has explained that NEPA's purpose is to "ensure[] that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts" and to "guarantee[] that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision."[49] It is hard to see how hiding the ball by refusing to assess the significance of the Project's climate impacts is consistent with either of those purposes.

18. In addition, under NEPA, a finding of significance informs the Commission's inquiry into potential ways of mitigating environmental impacts.[50] An environmental

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[46] *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1216 (9th Cir. 2008); *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 51 (D.D.C. 2019) (explaining that the agency was required to "provide the information necessary for the public and agency decisionmakers to understand the degree to which [its] decisions at issue would contribute" to the "impacts of climate change in the state, the region, and across the country").

[47] Certificate Order, 169 FERC ¶ 61,131 at P 105; EIS at 4-262 & Table 4.11.1-7; *see* Rehearing Order, 170 FERC ¶ 61,046 at n.295 (noting that the Commission quantified the Project's direct emissions).

[48] *See Ctr. for Biological Diversity*, 538 F.3d at 1216 ("While the [environmental document] quantifies the expected amount of CO_2 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.").

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

[50] 40 C.F.R. § 1502.16 (2018) (NEPA requires an implementing agency to form a "scientific and analytic basis for the comparisons" of the environmental consequences of

review document must "contain a detailed discussion of possible mitigation measures" to address adverse environmental impacts.[51] "Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects" of a project, meaning that an examination of possible mitigation measures is necessary to ensure that the agency has taken a "hard look" at the environmental consequences of the action at issue.[52]

19. The Commission responds that it need not determine whether the Project's contribution to climate change is significant because "[t]here is no universally accepted methodology" for assessing the harms caused by the Project's contribution to climate change.[53] But the lack of a single consensus methodology does not prevent the Commission from adopting *a* methodology, even if it is not universally accepted. The Commission could, for example, select one methodology to inform its reasoning while also disclosing its potential limitations or the Commission could employ multiple methodologies to identify a range of potential impacts on climate change. In refusing to assess a project's climate impacts without a perfect model for doing so, the Commission sets a standard for its climate analysis that is higher than it requires for any other environmental impact.

20. In any case, the Commission has several tools to assess the harm from the Project's contribution to climate change. For example, by measuring the long-term damage done by a ton of carbon dioxide, the Social Cost of Carbon links GHG emissions

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its action in its environmental review, which "shall include discussions of . . . [d]irect effects and their significance.").

[51] *Robertson*, 490 U.S. at 351.

[52] *Id.* at 352.

[53] EIS at 4-481 – 4-482 (stating that "there is no universally accepted methodology to attribute discrete, quantifiable, physical effects on the environment to Project's incremental contribution to GHGs" and "[w]ithout either the ability to determine discrete resource impacts or an established target to compare GHG emissions against, we are unable to determine the significance of the Project's contribution to climate change"); *see* Certificate Order, 169 FERC ¶ 61,131 at P 106 ("The Commission has also previously concluded it could not determine whether a project's contribution to climate change would be significant."); *see also* Rehearing Order, 170 FERC ¶ 61,046 at P 100 (stating that the Commission cannot assess significance without "industry sector or regional emission targets or budgets with which to compare project emissions").

global problem like climate change, a measure for translating a single project's climate change impacts into concrete and comprehensible terms plays a useful role in the NEPA process by putting the harm in terms that are readily accessible for both agency decisionmakers and the public at large. Yet, the Commission continues to ignore the Social Cost of Carbon, relying instead on deeply flawed reasoning that I have previously critiqued at length.[54]

21. Furthermore, even without a formal tool or methodology, the Commission can consider all factors and determine, quantitatively or qualitatively, whether the Project's GHG emissions will have a significant impact on climate change. After all, that is precisely what the Commission does in other aspects of its environmental review, where the Commission makes several significance determinations without the tools it claims it needs to assess the significance of the Project's impact on climate change.[55] The Commission's refusal to similarly analyze the Project's impact on climate change is arbitrary and capricious.

22. The Commission responds that it lacks an "objective" basis for assessing the significance of GHG emissions.[56] New adjective, same problem. Nothing in today's order explains why assessing the significance of a project's impact on wetlands or vegetation based on the number of acres affected[57] is any different from assessing the significance of a project's impact on climate change based on the quantity of GHGs emitted. Simply labeling one inquiry "objective" and the other not is reasoned decisionmaking. In any case, even the recent Council on Environmental Quality draft NEPA guidance on consideration of GHG emissions—hardly a radical environmental manifesto—recognizes that the quantity of GHG emissions "may be used as a proxy for assessing potential climate effects."[58] And yet, contrary to even that guidance, today's

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

[55] *See, e.g.*, EIS at 4-191 – 4-198, 4-59 – 4-69, 4-76 – 4-84, 4-86 – 4-103, 4-107 – 4-112 (concluding that there will be no significant impact on recreational and special interest areas, wetlands, vegetation, wildlife, migratory bird populations, pollinator habitat, and aquatic resources due to cooling water intake, among other things).

[56] Rehearing Order, 170 FERC ¶ 61,046 at P 105.

[57] *See id.* P 106.

[58] Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions, 84 Fed. Reg. 30,097, 30,098 (2019) ("A projection of a proposed action's direct and reasonably foreseeable indirect GHG emissions may be used

order insists that a quantity of GHG emissions does not tell us anything about a project's effects on climate change or the significance thereof.[59] That proposition makes sense only if you do not believe that there is a direct relationship between GHG emissions and climate change.

23. And even if the Commission were to determine that the Project's GHG emissions are significant, that is not the end of the analysis. Instead, as noted above, the Commission could blunt those impacts through mitigation—as the Commission often does with regard to other environmental impacts. The Supreme Court has held that an environmental review must "contain a detailed discussion of possible mitigation measures" to address adverse environmental impacts.[60] As noted above, "[w]ithout such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects."[61] Consistent with this obligation, the EIS discusses mitigation measures to ensure that the Project's adverse environmental impacts (other than its GHG emissions) are reduced to less-than-significant levels.[62] And throughout today's order, the Commission uses its conditioning authority under section 3 and section 7 of the NGA[63] to implement these mitigation measures, which support its public interest finding.[64] Once again, however, the Project's climate impacts are treated

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as a proxy for assessing potential climate effects.").

[59] Rehearing Order, 170 FERC ¶ 61,046 at P 107 ("To assess a project's effect on climate change, the Commission can only quantify the amount of project emissions. That calculated number cannot inform the Commission on climate change effects caused by the project.")

[60] *Robertson*, 490 U.S. at 351.

[61] *Id.* at 351-52; *see also* 40 C.F.R. § 1508.20 (defining mitigation); *id.* § 1508.25 (including in the scope of an environmental impact statement mitigation measures).

[62] *See, e.g.*, Certificate Order, 169 FERC ¶ 61,131 at P 107 (discussing mitigation required by the Commission to address reliability and safety impacts from the Project); *id.* PP 101, 103 (discussing mitigation measures required to address air quality and noise); *id.* PP 77-78 (discussing mitigation measures required to address impacts on vegetation).

[63] 15 U.S.C. § 717b(e)(3)(A); *id.* § 717f(e); Certificate Order, 169 FERC ¶ 61,131 at P 129 ("[T]he Commission has the authority to take whatever steps are necessary to ensure the protection of environmental resources . . . , including authority to impose any additional measures deemed necessary.").

[64] *See* Certificate Order, 169 FERC ¶ 61,131 at P 129 (explaining that the

differently, as the Commission refuses to identify any potential climate mitigation measures or discuss how such measures might affect the magnitude of the Project's impact on climate change.

24. The Commission responds that it cannot possibly have any authority to mitigate GHG emissions because Congress assigned that responsibility to EPA and the states through the Clean Air Act (CAA).[65] And it is true that EPA and the states have that authority. But neither that fact nor the Commission's summary of the CAA can carry the weight that today's order would have them bear. As noted, the courts have repeatedly made clear that environmental considerations, including climate change, are relevant to the Commission's application of the NGA's sitting provisions and that they may be a basis for denying approval for a project[66]—a fact that my colleagues at least purport not to contest. It is illogical to conclude that the Commission can deny a proposed project based on its environmental impacts, but that it cannot condition approval of a project based on steps to avoid or lessen those same environmental impacts. After all, the Commission does not force developers to go ahead with a project if they do not believe it is worth it based on the Commission's conditions.

25. In addition, the CAA applies to all air pollutants, not just GHGs. And yet the Commission does not throw up its hands when faced with the prospect of mitigating the effects of those other pollutants. Indeed, as discussed further below, in this very order the Commission claims that it considered whether to impose additional mitigation measures for ozone beyond what Texas imposed, but elected not to do because Texas imposed mitigation that the Commission claims to find sufficient.[67] The order notably does not take the position that the Commission lacks the authority to mitigate the effects of ozone because only EPA and the states have that authority under the CAA. Taking the Commission's position seriously would mean that we lack any authority to impose mitigation of air pollutants beyond that imposed in the requisite state or federal permit—a position at odds with both today's order and past practice. Once again, the Commission is treating GHG emissions differently than all other air pollutants. And I think we all know why.

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environmental conditions ensure that the Project's environmental impacts are consistent with those anticipated by the environmental analyses, which found that the Project would not significantly affect the quality of the human environment).

[65] Rehearing Order, 170 FERC ¶ 61,046 at PP 112-113.

[66] *See supra* P 7 & n.13.

[67] Rehearing Order, 170 FERC ¶ 61,046 at P 56.

26. The Project's GHG emissions are not the only flawed aspect of the Commission's NEPA review. As noted, for the first time on rehearing the Commission concludes that the Project, in conjunction with other developments in the area, would cause a violation of the 8-hour NAAQS for ozone.[68] That cumulative impact would significantly exceed permissible levels by as much as 10 percent.[69]

27. Nevertheless, the Commission does not seriously revisit its determination not to require further mitigation of the Project's contribution to ozone levels.[70] Given the new finding regarding the impact of ozone in the area, and its potentially serious implications for human health,[71] I would think that reasoned decisionmaking requires, at the very least, that the Commission explicitly compare the current suite of mitigation measures with other options to determine the feasibility of avoiding a violation of the 8-hour ozone NAAQS or reducing the extent of that violation. Instead, today's order notes only that the Project developers "assessed Best Available Control Technologies . . . for all of the terminal's emissions sources" and received the requisite permits from the relevant Texas agencies.[72]

28. But it does not appear that Texas considered the 8-hour ozone NAAQS violation caused by the cumulative effect of the three Brownsville LNG facilities or whether any additional mitigation steps were appropriate in light of that violation.[73] Nor does it

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[68] Those developments include the other Brownsville LNG facilities and the ships that would serve them. On its own, the Project would cause ozone levels in the area to increase by more than 20 percent, which represents the majority of the cumulative increase in ozone in the area. *See id.* PP 52-53, 55.

[69] That level exceeds not only the current 8-hour ozone NAAQS, but also the previous 8-hour ozone NAAQS level, which the Environmental Protection Agency deemed insufficient to protect human health. *See Murray Energy Corp. v. EPA*, 936 F.3d 597, 606 (D.C. Cir. 2019).

[70] Rehearing Order, 170 FERC ¶ 61,046 at P 56.

[71] *Cf. id.* P 62 (recognizing that as a result of potential 8-hour ozone NAAQS exceedance, "people in the surrounding communities might experience the health effects of ozone exposure").

[72] *Id.* P 56.

[73] *See* Rio Grande Supplemental Information, Revision 2 of the Terminal's Prevention of Significant Deterioration Air Permit Application § 3 & Table 3-1 (Apr. 3, 2017) (including stationary source emissions from routine operation of the Rio Grande

appear that any entity involved in selecting the proposed pollution control technologies was aware of these cumulative impacts on human health and the environment when making those selections. In light of those facts, I do not believe that such a perfunctory response to a serious NAAQS violation—one with real potential to make people sick—is consistent with the Commission's responsibility to take a hard look under NEPA or to ensure the public interest under the NGA. After all, what is the point of doing the required cumulative impacts analysis on rehearing if the Commission is simply going to shrug its shoulders and point to state permits that did not consider those cumulative impacts?

29. Finally, the Commission's failure to consider the significance of the impact of the Project's GHG emissions is particularly mystifying because NEPA "does not dictate particular decisional outcomes."[74] NEPA "'merely prohibits uninformed—rather than unwise—agency action.'"[75] The Commission could find that a project contributes significantly to climate change, but that it is nevertheless in the public interest because its benefits outweigh its adverse impacts, including on climate change. That is, after all, exactly what today's order does with the finding that the Project may cause a violation of the ozone NAAQS, but is nevertheless consistent with the public interest. 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 satisfies the relevant public interest standard.

For these reasons, I respectfully dissent.

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Richard Glick
Commissioner

LNG Terminal and Compressor Station 3).

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

[75] *Id.* (quoting *Robertson*, 490 U.S. at 351).