170 FERC ¶ 61,140
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Annova LNG Common Infrastructure, LLC
Annova LNG Brownsville A, LLC
Annova LNG Brownsville B, LLC
Annova LNG Brownsville C, LLC

Docket No. CP16-480-001

ORDER ON REHEARING AND STAY

(Issued February 21, 2020)

1. On November 22, 2019, the Commission issued an order pursuant to section 3 of the Natural Gas Act[1] and Part 153 of the Commission's regulations[2] authorizing Annova LNG Common Infrastructure, LLC (Annova) and three affiliate entities to site, construct, and operate facilities for the liquefaction and export of domestically-produced natural gas at a proposed liquefied natural gas (LNG) terminal on the south side of the Brownsville Ship Channel in Cameron County, Texas (Annova LNG Brownsville Project).[3] Sierra Club, together with Texas RioGrande Legal Aid (on behalf of Shrimpers and Fisherman of the RGV and Vecinos para el Bienestar de la Comunidad Costera), Save RGV from LNG, Defenders of Wildlife, the City of South Padre Island, the City of Port Isabel, and the Town of Laguna Vista (collectively Sierra Club) filed a joint request for rehearing and stay of the Authorization Order. For the reasons discussed below, we deny the request for rehearing and dismiss the request for stay as moot.

[1] 15 U.S.C. § 717b (2018).

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

[3] *Annova LNG Common Infrastructure, LLC*, 169 FERC ¶ 61,132 (2019) (Authorization Order).

I. Background

2. The Annova LNG Brownsville Project is designed to export 6 million metric tonnes per annum (MTPA) of LNG.[4] The project facilities will occupy 731 acres of land[5] and include six liquefaction trains, each with a nameplate liquefaction capacity of 1 MTPA; two single-containment LNG storage tanks with a capacity of 160,000 cubic meters each; a single LNG carrier berth,[6] and other appurtenant facilities.[7] Annova will use electricity sourced from the grid to drive its liquefaction trains. The Annova LNG Brownsville Project will receive natural gas via an approximately 9-mile-long non-jurisdictional intrastate natural gas pipeline that would interconnect with the existing intrastate Valley Crossing Pipeline.[8]

3. In 2014, Annova received authorization from the Department of Energy, Office of Fossil Energy (DOE) to export up to 342 billion cubic feet (Bcf) per year (equal to approximately 6.8 MTPA) equivalent of natural gas in the form of LNG to countries with

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[4] Authorization Order, 169 FERC ¶ 61,130 at P 4. The project facilities would have a peak achievable capacity of 6.95 MTPA. *Id*. at P 4 n.5.

[5] Of the 731 acres, about 550 acres would be disturbed. The parcel is owned by the Brownsville Navigational District, a political subdivision of Texas that operates the Port of Brownsville. Annova entered an option agreement to lease the site. Authorization Order, 169 FERC ¶ 61,132 at P 5.

[6] Annova intends to accommodate up to 125 bulk LNG carriers each year. These bulk LNG carriers will have capacities between 138,000 and 177,000 cubic meters.

[7] Detailed descriptions of the project facilities are available in the public docket. *See, e.g*., Annova July 13, 2016 Application, Resource Report 1 at 1-1 to 1-24; Annova LNG Brownsville Project, Final Environmental Impact Statement, Sections 2.1 and 2.2 (Apr. 19, 2019) (Final EIS).

[8] Authorization Order, 169 FERC ¶ 61,130 at P 4. Valley Crossing Pipeline is a non-jurisdictional natural gas pipeline that extends southwest from a header system near the Agua Dulce natural gas hub to a jurisdictional border-crossing facility east of Cameron County, Texas, in the Gulf of Mexico.

which the United States has a Free Trade Agreement.[9] In addition, Annova 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 a Free Trade Agreement.[10]

4. On November 22, 2019, the Commission authorized Annova's proposal, subject to conditions.[11] On the same day, the Commission also authorized two other proposed LNG terminals on the Brownsville Shipping Channel: the Rio Grande LNG Terminal proposed by Rio Grande LNG, LLC (Rio Grande)[12] and the Texas LNG Project proposed by Texas LNG Brownsville LLC (Texas LNG).[13] In this order we refer to these projects collectively as the Brownsville LNG terminals.

II. Procedural Matters

A. Late Filed Request for Rehearing

5. NGA section 19(a) allows an aggrieved party to file a request for rehearing within 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.

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[9] *Annova LNG, LLC*, FE Docket No. 13-140-LNG, Order No. 3394 (Feb. 20, 2014), https://www.energy.gov/sites/prod/files/2014/06/f16/ord3394.pdf; *Annova LNG Common Infrastructure, LLC*, FE Docket No. 14-004-COC, Order No. 3464 (July 17, 2014) (transferring the authorization to Annova LNG Common Infrastructure, LLC), https://www.energy.gov/sites/prod/files/2014/08/f18/ord3464.pdf.

[10] *Annova LNG, LLC*, FE Docket No. 19-34-LNG, https://www.energy.gov/fe/annova-lng-common-infrastructure-llc-annova-19-34-lng-long-term-nftans.

[11] Authorization Order, 169 FERC ¶ 61,132.

[12] *Rio Grande LNG, LLC*, 169 FERC ¶ 61,131 (2019), *on reh'g and stay*, 170 FERC ¶ 61,046 (2020). In the same 2019 order the Commission authorized the Rio Bravo Pipeline Project proposed by Rio Bravo Pipeline Company, LLC.

[13] *Texas LNG Brownsville LLC*, 169 FERC ¶ 61,130 (2019).

[14] 15 U.S.C. § 717r(a) (providing that any aggrieved party "may apply for a rehearing within thirty 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 30 days after issuance of any final decision or other final order in a proceeding.").

[15] 18 C.F.R. § 375.101(c) (2019).

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]

6. Requests for rehearing of the Authorization Order were due by 5:00 p.m. on December 23, 2019. On that date, Sierra Club's request for rehearing was received at 5:45 p.m., after the 5:00 p.m. deadline.[18] However, the Commission's eFiling system could not accept filings starting at 4:40 p.m. and function was not restored until after 5:00 p.m. Accordingly, Sierra Club's filing is deemed to have been timely filed.

B. Party Status

7. Under NGA section 19(a) and Rule 713(b) of the Commission's Rules and Practice and Procedure, only a party to a proceeding has standing to request rehearing of a final Commission decision.[19] Any person seeking to become a party must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedure.[20] Shrimpers and Fisherman of the RGV never sought to intervene in this proceeding and, accordingly, they may not join in the rehearing request filed by Sierra Club.

C. Answer to Request for Rehearing

8. On January 7, 2020, Annova filed a motion for leave to answer and an answer to Sierra Club's request for rehearing. Rule 713(d)(1) of the Commission's Rules of Practice and Procedure prohibits answers to a request for rehearing.[21] Accordingly, we deny Annova's motion and reject its answer.

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[16] *See, e.g.*, *Cameron LNG, LLC & Cameron Interstate Pipeline, 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 30 day limit but was incorrectly time stamped due to an error in the Commission's eFiling system).

[18] Sierra Club December 23, 2019 Request for Rehearing and Stay.

[19] 15 U.S.C. § 717f(a); 18 C.F.R. § 385.713(b).

[20] 18 C.F.R. § 385.214(a)(3).

[21] *Id*. § 385.713(d)(1).

D. Stay

9. Sierra Club requests that the Commission stay the Authorization Order pending issuance of an order on rehearing.[22] On January 7, 2020, Annova filed an answer opposing the request for stay.

10. Because this order addresses and denies Sierra Club's request for rehearing, we dismiss the request for stay as moot.

III. Discussion

A. Connected Actions

11. 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 Environmental Impact Statement (EIS) prepared by Commission staff for this project,[23] 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.[24]

12. 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.[25] 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

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[22] Sierra Club Request for Rehearing and Stay at 37. Sierra Club argues in a footnote that the Secretary of the Commission lacks delegated authority to toll the time for action on Sierra Club's request for rehearing because it is paired with a motion for stay. *Id*. at 37 n.119. Sierra Club cites the preamble to the Commission's 1995 rulemaking on delegations of authority. *Id*. Our regulations delegate authority to the Secretary to "Toll the time for action on rehearing" without qualification. 18 C.F.R. § 375.302(v). The unambiguous language of the regulation is controlling. *See Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 569-70 (D.C. Cir. 2002); *Entergy Servs., Inc. v. FERC*, 375 F.3d 1204, 1209 (D.C. Cir. 2004).

[23] Sierra Club Request for Rehearing and Stay at 35.

[24] *Id.*

[25] 40 C.F.R. § 1508.25(a)(1) (2019).

whether the 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."[26]

13. The DOE authorization for Annova to export to non-FTA nations is not a connected action to the Commission's authorization for the Annova LNG Brownsville Project. As explained in the Authorization Order,[27] as required by NGA section 3(c), DOE granted authority to Annova to export 342 billion cubic feet per year, which is approximately equivalent to 6.8 MTPA of LNG to free trade nations.[28] No additional trade authorizations are needed for the terminal to operate. Because the terminal already has a significant purpose and could proceed absent the authorization for non-FTA nations,[29] the two are not connected actions.

14. 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.[30] As evidence, Sierra Club points out that no other large LNG export proposal has proceeded without non-FTA nation authorization and there may not be a large enough LNG market in FTA countries to support project exports.[31] 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.

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[26] *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").

[27] Authorization Order, 169 FERC ¶ 61,132 at P 8.

[28] *Annova LNG, LLC*, FE Docket No. 13-140-LNG, Order No. 3394 at 8 (Feb. 20, 2014), https://www.energy.gov/sites/prod/files/2014/06/f16/ord3394.pdf; *Annova LNG Common Infrastructure, LLC*, FE Docket No. 14-004-COC, Order No. 3464 (July 17, 2014) (transferring the authorization to Annova LNG Common Infrastructure, LLC), https://www.energy.gov/sites/prod/files/2014/08/f18/ord3464.pdf.

[29] *Annova LNG Common Infrastructure, LLC*, DOE/FE Docket No. 19-34-LNG, Order No. 4491 (Feb. 10, 2020) (authorizing the export of 360 billion cubic feet per year to non-FTA nations).

[30] Sierra Club Request for Rehearing and Stay at 35.

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

15. Sierra Club next contends that even if the Annova LNG Brownsville Project 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 Annova LNG Brownsville Project.[32] But under CEQ's definition of a connected action, our action regarding the Annova LNG Brownsville Project must have an interdependent relationship with the non-FTA nation authorization.[33] Nothing about our authorization of the Annova LNG Brownsville Project "triggers" or mandates non-FTA nation authorization and, as discussed, the Annova LNG Brownsville Project can proceed without such authorization.

B. Commercial Fishing and Tourism Impacts

1. Commercial Fishing and Shrimping Impacts

16. Sierra Club asserts that the Final EIS failed to take a hard look at the impacts of LNG vessel transit on commercial fishing and shrimping operations using the Brownsville Shipping Channel.[34] 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.[35] Sierra Club states that LNG vessel arrivals and departures will block fishing and other traffic, but the Final EIS did not evaluate how those delays will impact commercial fishers.[36]

17. We deny rehearing. The Final EIS acknowledged that because large vessel traffic in the Brownsville Shipping Channel is one-way and because LNG carriers are subject to a Coast Guard-enforced security zone, the LNG carriers in transit to the three Brownsville LNG terminals could preclude other vessel traffic.[37] Current vessel traffic is

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[32] Sierra Club Request for Rehearing and Stay at 35-36.

[33] 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).

[34] Sierra Club Request for Rehearing and Stay at 4-8.

[35] *Id*. at 6.

[36] *Id*. 6-8.

[37] Final EIS at 4-157, 4-158, 4-320. The Final EIS explained that smaller vessels like commercial fishing and shrimping boats traveling in the opposite direction to an

about 1,059 vessels per year, not including commercial and recreational fishing boats.[38] During the concurrent construction of the three Brownsville LNG terminals, the number of barges transiting the channel would noticeably increase, but the Final EIS concluded that impacts on other users of the waterway would be consistent with existing use of the waterway.[39] During operation, the cumulative LNG carrier transits to and from the three Brownsville LNG terminals would result in up to a 48% increase in vessel traffic.[40] This would likely result in delays for commercial fishing and shrimping vessels that transit the Brownsville Shipping Channel to reach the Gulf of Mexico or fishing destinations in the Laguna Madre.[41] LNG vessel operators would reduce the impacts on other users in the channel by notifying the U.S. Coast Guard and harbormaster 96 hours in advance of the LNG vessel's expected arrival to ensure that the timing of LNG vessel transits are aligned with other shipping schedules.[42] For this reason,

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LNG carrier must wait for an LNG carrier to pass. *Id*. at 4-157. Small vessels heading in the same direction as a larger vessel can travel in front of or well behind the larger vessel, usually with little or no delay as long as they remain outside the LNG carrier safety zone. *Id*. at 4-158.

[38] Final EIS at 4-156 tbl.4.9.10-4, 4-320.

[39] *Id*. at 4-320. The Final EIS anticipates the transit of 36 barges per year during construction of the Annova LNG Brownsville Project. This traffic would be equivalent to 4.9 percent of the current average 732 barge trips per year, which the Final EIS anticipated to be a negligible incremental increase with minimal impacts on other vessel traffic. *Id*. at 4-158, 4-320.

[40] *Id*. at 4-321. Annova anticipates 125 LNG carrier visits to the Annova LNG Brownsville Project per year, which would account for about 24% of the anticipated cumulative delay, at about 0.5 to 1.5 hours delay per LNG carrier transit. *Id*. at 4-159, 4-321. To minimize interference with existing vessel traffic in the Brownsville Shipping Channel, Annova has designed the size, location, and orientation of its marine transfer facilities to ensure safe navigable approach and departure conditions and safe distances from the influence of passing vessels. *Id*. at 4-158. The Final EIS concluded that the LNG carrier transits to and from Annova's terminal would result in minor impacts on other large vessels and moderate impacts on other small vessels including commercial fishing and shrimping boats. *Id*. at 4-159.

[41] *Id*. at 4-321.

[42] *Id*. at 4-320. For example, the Final EIS explains that commercial vessel traffic in the Brownsville Shipping Channel is managed by the harbormaster. *Id*. at 4-157. Through the required coordination of multiple vessels, the harbormaster can allow smaller vessels like commercial fishing and shrimping boats sufficient time to

the Final EIS concluded that cumulative impacts on commercial fisheries would be permanent and moderate.[43] Thus, the Final EIS appropriately considered the impacts of LNG vessel transit on commercial fishing and shrimping operations.

18. Additionally, Sierra Club asserts that the Final EIS does not address how aquatic life mortality caused by the LNG project will impact commercial fishing.[44] We disagree. The Final EIS evaluated the project's impacts on aquatic resources and found that during construction, the project will have minor effects on aquatic resources, including managed species and essential fish habitat, due to temporary degradation of water quality and direct mortality of some immobile species during dredging.[45] The Final EIS stated that noise from limited in-water pile driving would also result in temporary and minor impacts on fish.[46] Additionally, spills of hazardous materials could affect water quality and affect aquatic organisms during construction and operation, but potential effects to aquatic resources will be minimized with the implementation of Annova's Spill, Prevention, Control, and Countermeasure Plan and Project-specific Plan and Procedures.[47] The Final EIS found that during operation, the Project would have minor effects on aquatic resources, including managed species and essential fish habitat, due to maintenance dredging and increased vessel traffic.[48] The Final EIS also evaluated the impacts of concurrent operation of the projects and found that combined engine withdrawal of cooling water by LNG carriers would have a minor impact on ichthyoplankton within the Brownsville Shipping Channel.[49] Accordingly, we find that the project is not expected to significantly impact the yield of commercial fisheries in the project area.

19. Further, the Final EIS evaluated the cumulative impacts on aquatic resources caused by construction and operation of the Annova, Texas LNG, and Rio Grande LNG

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enter or exit the channel between the transits of large vessels or can minimize impacts by scheduling a caravan of multiple commercial vessels. *Id*. at 4-157 to 4-158.

[43] Final EIS at 4-332.

[44] Sierra Club Request for Rehearing and Stay at 5-6.

[45] Final EIS at 5-5.

[46] *Id*. at 5-5.

[47] *Id*. at 5-5.

[48] *Id*.at 5-6.

[49] Final EIS at 4-311.

terminals and found that the impacts on aquatic resources would be additive.[50] As stated above, in addition to the Annova LNG Brownsville Project, the Texas LNG and Rio Grande LNG Projects will also adversely 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.[51] Thus, we find that the cumulative impacts of the projects on essential fish habitat would be minor. 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.[52] 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.[53] However, the Final EIS explained that these effects would be moderate but temporary, ending once construction ceases.[54] The Final EIS evaluated the effects of concurrent pile-driving activities and found, with mitigation measures, the effects of pile-driving on aquatic species would be minor.[55] The Final EIS found, and we agree, that although Annova's project will contribute to the cumulative impacts on aquatic resources, the impact would not be significant.[56]

2. Tourism Impacts

20. Sierra Club states that the Final EIS determined that the Annova LNG Brownsville Project would have no significant impacts on tourism,[57] but failed to explain how impacts

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[50] *Id*. at 4-304 – 4-305.

[51] *See* Rio Grande LNG Terminal Final EIS in Docket No. CP16-480-000 at 4-440 (Rio Grande Final EIS); Texas LNG Project Final EIS in Docket No. CP16-116-000 at 4-310 (Texas LNG Final EIS).

[52] Final EIS at 4-305.

[53] *Id*. at 4-56.

[54] *Id*. at 4-304 – 4-305.

[55] *Id*. at 4-305.

[56] *Id*. at 4-304 – 4-306.

[57] Sierra Club Request for Rehearing and Stay at 9 (citing Final EIS at 4-134, 4-321).

on wildlife,[58] recreational fishing,[59] short-term rentals,[60] and industrial development would impact tourism. [61]

21. We disagree. The Final EIS evaluated how project impacts would affect tourism. The Final EIS explained that tourists using recreational sites in the project area may be aware of construction and operation activities and increased traffic.[62] Construction of the project would produce dust during the initial phase of site clearing and grading; Annova will implement dust control measures as necessary to reduce dust emissions.[63] Additionally, tourists could experience increases in ambient sound.[64] During project operation, tourists would experience impacts from increased vessel traffic and visibility of project facilities.[65] However, the Final EIS states that most popular tourist activities and destinations in the project vicinity would not be directly affected by the Annova LNG Brownsville Project.[66]

22. The Final EIS evaluated recreation sites near the Annova LNG Brownsville Project. The Final EIS found that construction and operation of the project would not affect most visitors in the Laguna Atascosa National Wildlife Refuge, because most activities, trails, and facilities are located in the northern half of the refuge, approximately 5.4 miles away from the project site.[67] On the southern portion of the refuge, the project would likely be visible to anglers, birders, and others using this part of the refuge.[68] The Final EIS found that at the Laguna Atascosa National Wildlife Refuge, impacts from

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[58] *Id*. at 9-10.

[59] *Id*. at 10-11.

[60] *Id*. at 11-12.

[61] *Id*. at 12.

[62] Final EIS at 4-101.

[63] *Id*. at 4-101.

[64] *Id*. at 4-101.

[65] *Id*. at 4-153 – 4-154.

[66] *Id*. at 4-153.

[67] Final EIS at 4-103.

[68] *Id*. at 4-103.

construction noise would be periodic, but noticeable, due to pile driving, and impacts resulting from operational noise would be minor and limited.[69] At the Lower Rio Grande Valley National Wildlife Refuge, the Final EIS explained that the refuge does not have any trails or visitor facilities in close proximity to the project site. The Final EIS did not anticipate any impacts on visitors to the refuge's beaches because the beaches do not face the project site.[70]

23. Additionally, the Final EIS determined that concurrent operation of the Annova, Rio Grande, and Texas LNG projects will have a significant impact on visual resources from recreational areas, including the Laguna Atascosa and Lower Rio Grande Valley National Wildlife Refuges, the Loma Ecological Preserve, and the South Bay Coastal Preserve and South Bay Paddling Trail.[71] However, the projects are not anticipated to have an impact on beach visitors, because the South Padre Island beaches face eastward toward the Gulf of Mexico, away from the project site.[72]

24. We also disagree with Sierra Club's claim that the Final EIS did not address how impacts to recreational fishing would affect the tourism industry.[73] The Final EIS determined that overall, the Annova LNG Brownsville Project would not have significant impacts on recreational fishing.[74] The Final EIS determined that construction and operation of the Annova LNG Brownsville Project would not permanently affect access to the majority of recreational fishing locations in the vicinity of the project site.[75] During project operation, the Final EIS stated that anglers who use fishing boats in the Brownsville Shipping Channel may experience delays from LNG carriers navigating to and from the project site.[76] However, the Final EIS found that these delays are not expected to significantly affect recreational fishing in the shipping channel.[77] The Final

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[69] *Id*. at 4-48.

[70] *Id*. at 4-104

[71] *Id*. at 4-326, 5-372.

[72] *Id*. at 4-332.

[73] Sierra Club Request for Rehearing and Stay at 10-11.

[74] Final EIS at 4-108 – 4-109.

[75] Final EIS at 4-108.

[76] *Id*. at 4-108.

[77] *Id*. at 4-109.

EIS also found that operation of the Texas LNG, Annova, and Rio Grande LNG terminals will result in permanent and moderate cumulative impacts to tourism and recreational fishing, because a 48% increase in LNG vessel traffic will cause delays in recreational fishing vessel access to the Brownsville Shipping Channel to reach the Gulf of Mexico.[78]

25. We also disagree with Sierra Club's assertion that the Final EIS did not consider how impacts on commercial fishing can affect tourism and vice versa.[79] As explained above, the majority of the commercial fisheries in the region are based offshore in the Gulf of Mexico.[80] The Final EIS determined that construction of the project will temporarily impact commercial fishers as in-water dredging- displaces commercial fishers to other areas of the Brownsville Shipping Channel or to the Gulf of Mexico.[81] As indicated above, we also analyzed the impacts to tourism and recreational fishing. Overall, the Final EIS anticipated that concurrent construction and operation of the projects would have permanent and moderate cumulative impacts on tourism and commercial fisheries.[82]

26. Sierra Club argues that the Final EIS did not consider how an increased demand for short-term rentals by construction workers for the Annova, Texas LNG, and Rio Grande LNG terminals would impact tourism.[83] The Final EIS stated that within the affected area, approximately 3,200 hotel rooms are usually unoccupied in Cameron County, including an estimated 680 units in Brownsville, with several thousand available recreational vehicle sites.[84] The Final EIS found and we agree that construction of the project will not displace tourists or seasonal visitors.[85] We find that the proposed construction schedules for the Annova, Texas LNG, and Rio Grande LNG Terminal, and Rio Bravo Pipeline projects could coincide with other demands for housing and

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[78] *Id*. at 4-321.

[79] Sierra Club Request for Rehearing and Stay at 13.

[80] Final EIS at 4-134.

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

[82] *Id*. at 4-321.

[83] Sierra Club Request for Rehearing and Stay at 11-12.

[84] Final EIS at 4-139.

[85] *Id*. at 4-139.

temporary accommodations for tourism.[86] However, given the number of hotel rooms in the vicinity of the projects, we do not anticipate serious disruptions to short-term tourism housing.[87]

27. Sierra Club states that industrial development will discourage future investment in tourism industries.[88] Sierra Club's assertion is unsupported and speculative. The Final EIS acknowledged that, although the land proposed to be developed for the Annova, Texas LNG, and Rio Grande LNG terminals is 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 a change of the landscape character.[89] 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.[90] 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 sites, neither construction or operation would be expected to significantly impact tourism at these locations.[91] 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 that the projects will impact the most popular tourist activities and destinations in the region.[92] Accordingly, we find that the projects would not result in significant impacts on tourism.

3. Mitigation

28. Sierra Club asserts that the Final EIS failed to include appropriate mitigation measures to compensate for the impacts of the Annova LNG Brownsville Project on commercial fishing and tourism.[93] Sierra Club alleges that other LNG projects, such as the Northeast Gateway Deepwater Port and the Neptune Port, were approved "only

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[86] *Id*. at 4-318.

[87] *Id*. at 4-139.

[88] Sierra Club Request for Rehearing and Stay at 12.

[89] Final EIS at 4-321.

[90] *Id*. at 4-321.

[91] *See* Annova LNG Brownsville Project Final EIS at 4-132 to 4-134.

[92] Final EIS at 4-321.

[93] Sierra Club Request for Rehearing and Stay at 14.

contingent upon mitigation packages" that required companies to provide funds to commercial fisherman, public interest trusts, and marine habitat and mammal protection.[94]

29. We do not find Sierra Club's reliance on mitigation packages required in the Northeast Gateway Deepwater Port and the Neptune Port persuasive here. Both those projects are located in federal waters and are thus subject to U.S. Coast Guard and U.S. Maritime Administration authority,[95] not Commission authority.

30. As discussed above, the Final EIS found that the Annova LNG Brownsville Project is not anticipated to significantly impact commercial fishing during project construction and would result in only minor impacts on large vessels and moderate impacts on small vessels transiting the Brownsville Shipping Channel.[96] Additionally, the project would not significantly impact aquatic resources.[97] The Final EIS found that construction of the project will have minor effects on aquatic resources, including managed species and essential fish habitat, due to temporary degradation of water quality and direct mortality of some immobile species during dredging, and temporary and minor impacts on fish due to in-water pile driving.[98] During operation, the Final EIS found that the Project would have minor effects on aquatic resources, including managed species and essential fish habitat, due to maintenance dredging and increased vessel traffic.[99] Thus, we do not anticipate that the project will significantly impact commercial fisheries in the project area. Accordingly, we will not require mitigation measures beyond those proposed by the applicant.[100]

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[94] *Id*. at 14.

[95] Pursuant to the Deepwater Port Act, as amended, 33 U.S.C. §§ 1501-1524 (2018), the Secretary of Transportation has exclusive jurisdiction over the licensing, ownership, construction and operation of deepwater ports. The Secretary of Transportation delegated the responsibility to license deepwater ports to the Maritime Administrator, with the U.S. Coast Guard and U.S. Maritime Administration sharing responsibility for the processing of applications for such licenses.

[96] Final EIS at 4-154.

[97] Final EIS at 5-5.

[98] *Id*. at 5-5.

[99] *Id*. at 5-6.

[100] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350-51 (1989) (an agency need not conclude that all impacts require mitigation; NEPA does not constrain

31. The Final EIS also determined that Annova's terminal would have a low to moderate impact on visual resources.[101] Annova undertook a Visual Impact Assessment for 10 Key Observation Points at representative visually sensitive areas, including areas used for recreation and wildlife viewing, key travel routes, and other public gathering areas.[102] Potential visual impacts occurred at all Key Observation Points and ranged from low to moderate at most locations.[103] However, the visual impacts at Key Observation Point 8 at the State Highway 48 pull-off near Bahia Grande Channel would be moderately high.[104] Overall, the Final EIS concluded that project construction and operation would not result in significant impacts to visual resources.[105] Accordingly, we do not find that additional mitigation is necessary.

32. Further, operation of the LNG terminal would generate noise continually throughout the life of the project.[106] However, the predicted sound levels for operation and maintenance at all noise sensitive areas would be below the Commission's 55-dBA L_{dn} criterion or would be equal to existing noise levels.[107] To ensure noise sensitive areas are not significantly affected by operational noise, Environmental Conditions 21 and 22 require Annova to file noise surveys shortly after placing each liquefaction unit as well as the entire project into service.[108] Annova must mitigate higher noise levels to below an L_{dn} of 55 dBA.[109] The increased noise from LNG carriers and from biennial maintenance

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an agency from concluding that other values outweigh the environmental costs of a proposed action).

[101] Final EIS at 5-7.

[102] Authorization Order, 169 FERC ¶ 61,132 at P 62; Final EIS at 4-111 to 4-126.

[103] *Id*.

[104] Authorization Order, 169 FERC ¶ 61,132 at P 62; Final EIS at 4-122 – 4-124.

[105] Final EIS at 5-7.

[106] Authorization Order, 169 FERC ¶ 61,132 at P 74.

[107] *Id*. P 74; Final EIS at 4-200 – 4-201.

[108] Authorization Order, 169 FERC ¶ 61,132 at P 74, Environmental Conditions 21 and 22.

[109] Authorization Order, 169 FERC ¶ 61,132 at P 74; Final EIS at 4-201.

dredging would be imperceptible to most listeners.[110] Therefore, Authorization Order agreed with the Final EIS' conclusion that noise impacts due to operation of the project would not be significant.[111] We agree and find these measures sufficient to mitigate noise on tourism and do not find additional mitigation necessary.

C. Environmental Justice Impacts

33. 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.[112] 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 high and adverse, and (3) determine if the impacts fall disproportionately on minority and low-income populations.[113]

34. The EPA's categorical thresholds for minority and low-income populations apply to a project-affected area if minority populations comprise over 50% of the total

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[110] Authorization Order, 169 FERC ¶ 61,132 at P 74; Final EIS at 4-202 to 4-204.

[111] Authorization Order, 169 FERC ¶ 61,132 at P 74; Final EIS at 4-204.

[112] 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.

[113] *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).

population or if the population with incomes below the poverty level is 20% or greater.[114] The Final EIS concluded that in the two census block groups intersected by a one-mile radius around the Annova LNG Brownsville Project, the population of Hispanic origin comprises 72% to 98% of the total population and the population with incomes below the poverty level ranges from 31% to 43%.[115] These census block groups are minority and low income populations. The Final EIS noted that the populations in the two larger census tracts, which contain the two block groups, and more broadly in Cameron County, Texas, also exceed the EPA's categorical thresholds for minority and low-income populations.[116] In Cameron County, the population of Hispanic origin comprises 88% of the population and the poverty rate is about 31%.[117]

35. We note that there is no alternative to the project that would achieve the project's purpose and need while avoiding a site in environmental justice communities. The site of the Annova LNG Brownsville Project 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.[118] The thirteen southernmost counties in Texas, including Cameron County where all three Brownsville LNG terminals would be sited along the Brownsville Shipping Channel, have minority population percentages and, except in three counties, poverty rates that meet the EPA's categorical thresholds to be minority and low-income populations.[119] The Final EIS evaluated alternatives that would avoid these areas—including a no-action alternative and system alternatives—but concluded that none represented a significant environmental advantage to the proposed

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[114] Final EIS at 4-143 to 4-144; EPA 1998 Environmental Justice Guidance at §§ 2.1.1 to 2.1.2; CEQ 1997 Environmental Justice Guidance at 25-26.

[115] Final EIS at 4-146 Table 4.9.9-1.

[116] *Id*. at 4-144.

[117] *Id*. at 4-156.

[118] Final EIS at 4-146, 4-313 to 4-315.

[119] The thirteen counties include the seven southernmost counties along the coast—Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, and Refugio Counties—and eight inland counties—Hidalgo, Starr, Brooks, Jim Hogg, Zapata, Jim Wells, Duval, and Webb Counties. Only the coastal Kenedy, San Patricio, and Refugio Counties have poverty rates below the 20% threshold. U.S. Census Bureau, QuickFacts, https://www.census.gov/quickfacts/fact/table/US/PST045219 (last accessed Jan. 25, 2020).

LNG terminal.[120] Although the no-action alternative would avoid impacts on the project-affected minority and low-income communities, the Final EIS found that other LNG export projects could be developed at a similar scope and magnitude and likely result in environmental impacts of comparable significance, especially for those projects in a similar regional setting.[121]

36. Sierra Club contends that the Final EIS improperly chose Cameron County, which could itself qualify as a minority and low-income population, as a comparison population and thus masked, incorrectly characterized, and inappropriately minimized the Annova LNG Brownsville Project's impacts on affected environmental justice communities.[122]

37. 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.[123] 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.[124]

38. 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.[125]

39. Sierra Club misunderstands the use of another population for comparison in an environmental justice analysis. A "reference community" is sometimes necessary to

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[120] Final EIS at 3-3 to 3-16. Although Annova intends to source natural gas from the South Texas Gulf Coast region, the EIS considered system alternatives and site alternatives across the entire Texas Gulf Coast. *Id*. at 3-4; *id*. 3-4 to 3-12.

[121] *Id.* at 3-3.

[122] Sierra Club Request for Rehearing and Stay at 14-16.

[123] Sierra Club Request for Rehearing and Stay at 18 n.69 (citing EPA 1998 Environmental Justice Guidance at § 2.2.2).

[124] *Id.* at 18-19.

[125] *Id*. at 16-18.

identify which project-affected populations are minority or low-income populations.[126] Because here all project-affected populations meet or exceed the categorical standards to be minority or low-income populations, and in most cases both, there was no need to determine their existence using any broader reference community.[127] A "comparison group" can inform the inquiry to whether a project's impacts on minority and low-income communities will be disproportionately high and adverse.[128] 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.[129] 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 the affected population like inter-related ecological, aesthetic, historical, cultural, economic, social, or health factors.[130] 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.[131] Sierra Club offers no evidence and no specific examples to support its claims that the use in the EIS of Cameron County as a

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[126] 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").

[127] The EIS did include the population traits of Cameron County and the state of Texas for context. Final EIS at 4-155 to 4-156, Table 4.9.9-1, Table 4.9.9-2.

[128] Federal Interagency Working Group for Environmental Justice and NEPA Committee, *Promising Practices for EJ Methodologies in NEPA Reviews* at 43-46.

[129] 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").

[130] *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).

[131] *Id*. at 40.

comparison group masked, incorrectly characterized, or inappropriately minimized the impacts to minority and low-income communities.[132] To the contrary, as discussed above, Cameron County is used because that is where the LNG facility will be located, and no other alternatives would meet the projects' purpose and need.[133]

40. Sierra Club offers no explanation how the Annova LNG Brownsville Project's impacts 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 selected the Brownsville-Harlingen-Raymondville Consolidated Statistical Area, which includes Cameron County and Willacy County to the north, as the primary socioeconomic impact area for the Annova LNG Brownsville Project.[134] Both counties have minority population percentages and poverty rates similar to those traits in the census block groups adjacent to the project area.[135] In Cameron County, the top economic sectors by employment are healthcare (20%), government (17%), and retail trade (12%).[136] The EIS noted that 4.5 percent of total employment in Cameron County is related to travel.[137] Although the Annova LNG Brownsville Project is not expected to affect regional tourism patterns or the overall level of visitation to the region,[138] the Final EIS concluded that the combination of the Annova LNG Brownsville Project with the other two Brownsville LNG terminals and other actions would cumulatively result in permanent and moderate impacts on tourism via cumulative impacts on recreation areas, visual resources, and vessel traffic in the Brownsville Shipping Channel.[139] The EIS concluded that the Annova LNG Brownsville Project would directly and indirectly support employment and income in the local economy.[140] The EIS also concluded that the expenditures and workforce associated with construction and operation of the three Brownsville LNG

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[132] Sierra Club Request for Rehearing and Stay at 16.

[133] *Supra* P 35.

[134] Final EIS at 4-128.

[135] *Id.* at 4-156 Table 4.9.9-1 and Table 4.9.9-2.

[136] *Id*. at 4-130 Table 4.9.2-1.

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

[138] *Id*. at 4-134.

[139] *Id*. at 4-321.

[140] *Id*. at 4-130 to 4-131 Table 4.9.2-2 and Table 4.9.2-3.

terminals would result in cumulative positive, short-term, and permanent impacts on the local economy.[141] Sierra Club does not support its assertion that the Commission was required to determine whether minority or low-income populations are primarily reliant on tourism-based industries for employment.[142] And Sierra Club does not explain how further inquiry would potentially reveal a level of impact that was not already captured in the EIS's close analysis of socioeconomic impacts in Cameron County.

41. 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 terminals might result in increased rental rates and housing shortages but that this impact would be temporary and minor.[143] Sierra Club notes that changes to housing availability would primarily impact individuals looking for housing.[144] But the EIS closely considered the available housing and the rental housing cost for the City of Brownsville, for Cameron County more broadly, and for Willacy County.[145] The available housing in Cameron County, which is higher than the state average, and the rental housing cost in Cameron County reflect the supply and demand for housing in a county where the minority population percentages and the poverty rate are similar to those traits in the census block groups adjacent to the project area.[146] 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.

42. The EIS also appropriately addressed the potential impacts on area property values. The EIS acknowledged that property values can be influenced by the presence of similar industrial or commercial uses, the distance to the potentially affected property, visual impacts, noise, traffic congestion, and odors.[147] The EIS explained that the project site is located more than two miles from the nearest residences, and is separated from

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[141] *Id*. at 4-317.

[142] Sierra Club Request for Rehearing and Stay at 18-19.

[143] Final EIS at 4-318.

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

[145] Final EIS at 4-138 Table 4.9.6-1.

[146] *Id.* at 4-156, Table 4.9.9-1 and Table 4.9.9-2.

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

these residences by the Lower Rio Grande Valley National Wildlife Refuge.[148] For these reasons, the EIS concluded that the project is not expected to affect residential property values.[149] Sierra Club criticizes the Commission for failing to analyze the cumulative impact of the three Brownsville LNG terminals on nearby property values.[150] But due to uncertainty in the many factors that can influence potential impacts on property values, the cumulative impact is not reasonably foreseeable and was appropriately omitted from the EIS.

43. Next, we address Sierra Club's claim that the Commission inadequately considered whether the project's air quality impacts on minority and low-income communities would be disproportionately high and adverse.[151] 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, children, and the elderly).[152] The Annova LNG Brownsville Project's direct, indirect, and cumulative impacts on air quality, with the exception of ozone-related emissions, would not increase the concentration of criteria pollutants above the NAAQS.[153] Exposure to these emissions near the facilities is unlikely, and the pollutants would disperse before reaching nearby population centers.[154] 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 on area populations, including minority and low-income populations.

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[148] *Id*. at 4-135 to 4-136.

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

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

[151] Sierra Club Request for Rehearing and Stay at 16-18.

[152] Final EIS at 4-169 to 4-171.

[153] *Id*. at 4-178 to 4-190; 4-323 to 4-329.

[154] *Id*. at 4-327. For example, although the predicted peak cumulative concentration of NO_2 (196 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. *Id*.; *id.* at 4-328 Table 4.13.3-3.

44. In the order on rehearing for the Rio Grande LNG terminal proceeding, the Commission estimated that cumulative emissions of ozone precursors from that project, the Annova LNG Brownsville Project, and the Texas LNG Project could result in ozone concentrations of 76.5 ppb that would exceed the current ozone NAAQS of 70 ppb.[155] It is appropriate to consider whether the impact on 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.[156] 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."[157]

45. 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% 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.[158] 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.

46. During exceedance events, people in the surrounding communities might experience a number of health effects such as decreased lung function and airway inflammation, with respiratory symptoms including coughing, throat irritation, chest

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[155] *Rio Grande LNG, LLC*, 170 FERC ¶ 61,046, at PP 51-56, 61-62 (2020).

[156] CEQ 1997 Environmental Justice Guidance at 9.

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

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

tightness, wheezing or shortness of breath.[159] 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.[160] Chronic Obstructive 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.[161]

47. The project-affected minority populations are predominantly Hispanic or Latino with higher percentages of young children and older adults than the state population.[162] 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.[163] 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.[164] 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.[165] The mortality

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[159] 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).

[160] 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).

[161] *Id*.

[162] Percentages of children under age five (9 percent) and adults over age 64 (17%) are higher than in the general state population (66th and 78th percentiles, respectively. *Supra* note 155.

[163] 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.

[164] 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.

[165] *Id*. at 2.

rate from chronic lower respiratory disease in Cameron County, which includes the sites of the Brownsville LNG terminals and compressor station 3 on Rio Bravo's proposed pipeline, was 21 deaths per 100,000 people.[166] By contrast the mortality rate from chronic lower respiratory disease was 27 in the state's Public Health Region 11[167] and was 41.4 in the entire state.[168] This information does not support a conclusion that the anticipated exposure to ozone in minority and low-income communities would result in a disproportionately high and adverse impact on these communities.

D. Ballast Water Impacts

48. 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. Sierra Club argues that the Commission used the wrong geographic scope to assess ballast water impacts, stating that ballast water would not be promptly mixed into the entire volume of the shipping channel but would accumulate near the terminal.[169] According to Sierra Club, even a small amount of ballast water could introduce invasive species, such as lionfish and tiger shrimp, that travel in and transmit disease to native fish and shrimp populations.[170] Sierra Club claims that the Final EIS improperly relied on Coast Guard and EPA regulations to minimize and avoid impacts on marine resources without evaluating any evidence of the efficacy and timeline of these new regulations generally or in particular for the sensitivity of local conditions in the Brownsville area to non-native species.[171] Finally, Sierra Club

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

[167] Public Health Region 11 includes Cameron County and several other counties in southern Texas. The aggregate population in 2015 was about 83% Hispanic and about 28.3 percent people living below the poverty threshold, very similar to the communities closest to the three Brownsville LNG terminals. 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.

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

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

[170] *Id.*

[171] *Id*. at 30.

claims that this failure to adequately assess impacts affects the Commission's conclusion that harm to fisheries and tourism is only moderate.[172]

49. Sierra Club's arguments ignore the Final EIS's discussion of ballast water mitigation. While docked, ballast water would be discharged 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.[173] This exchange is reported to reduce aquatic organisms by 88% to 99%.[174] Alternatively, a vessel may reduce organisms using an on-board ballast water treatment process.[175] The EIS concluded these measures would minimize the risk of introducing invasive species into the project area.[176] Accordingly, we see no need to either reevaluate the Final EIS's analysis of ballast water impacts on fisheries and tourism, or require more stringent conditions than those required by the Coast Guard.[177]

E. Sea Turtle Impacts

50. Sierra Club states that although the Authorization Order acknowledged that cumulative impacts are anticipated for sea turtles due to dredging, vessel traffic, and pile-driving,[178] 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's *Vessel Strike Avoidance Measures and Reporting for Mariners*, as insufficient for impacts from vessel traffic. According to Sierra Club, the

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[172] *Id.* at 31.

[173] *Rio Grande LNG, LLC*,170 FERC ¶ 61,046, at P 91 (2020) (citing Final EIS at 4-42 to 4-43).

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

[175] Final EIS at 2-24.

[176] *Id.* at 4-27.

[177] *EarthReports, Inc. v. FERC*, 828 F.3d 949, 957 (D.C. Cir. 2016) (holding that the Commission "fairly evaluated" possible environmental impacts of ballast water where it acknowledged the risk of introduction of foreign invasive species and concluded that "the currently-required measures for all ships entering U.S. waters, including offshore ballast water exchange, provide best management practices to minimize risks from invasive species and contamination from non-U.S. ports").

[178] Sierra Club Request for Rehearing and Stay at 31.

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.[179] 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.[180]

51. The Commission has no jurisdiction over the speed for any vessels at the mouth of the Brownsville Shipping Channel. Nevertheless, the Commission fully considered the potential impacts on and mitigation of vessel speed impacts to sea turtles. The EIS acknowledged the increase in the risk of collision with sea turtles, but concluded that the addition 125 LNG ships would represent a small addition to the already high volume of commercial and recreational vessel traffic in the BSC and Gulf of Mexico transit corridor. [181] In addition, the threat of collision is also low within the channel as LNG vessels, barges, and support vessels would transit at speeds no greater than 8 knots, which allows sea turtles to more readily avoid such vessels, particularly when an LNG carrier creates bow waves to push water and floating objects, including sea turtles out of the vessel path.[182] The Final EIS explained that Annova is encouraging LNG carriers which will visit its facility to comply with the *Vessel Strike Avoidance Measures and Reporting for Mariners*.[183] The measures require more than reduced speeds and directs vessels, when sea turtles are sighted, to attempt to maintain a distance of 50 yards or greater between the animal and the vessel whenever possible.[184] We find the measures described above adequate to address the risks to sea turtles from vessel traffic.

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[179] Sierra Club Request for Rehearing and Stay at 31.

[180] *Id.*

[181] Final EIS at 4-185.

[182] Texas LNG Terminal Final EIS at Appendix C, Biological Assessment, C-116 change this and check page #)(CP16-116-000).

[183] Final EIS at 4-85.

[184] 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.

52. As for Sierra Club's claim that existing vessels are exceeding speed restrictions,[185] we dismiss this is new information provided to the Commission for the first time on rehearing.[186] Nonetheless, we note that Sierra Club does not explain the relevance of speed violations by existing vessels and, in any event, the Coast Guard establishes and enforces speed limits in the Brownsville Shipping Channel.

53. Sierra Club next claims that the Commission should have coordinated the mitigation for the three Brownsville LNG terminals and considered whether a vibratory hammer during pile driving would further mitigate harm to all aquatic life, as Rio Grande proposed to do during construction.[187] Due to the limited duration of in-water pile driving, i.e. five days,[188] and the long construction schedules for the projects, it is unlikely that there would be in-water pile driving overlap. In the event of any overlap, we note that the only other project where in-water pile driving could occur concurrently is the Texas LNG Terminal Project, which would minimize impacts on aquatic resources from pile driving by driving most piles into the tidal flats rather than open water and utilizing soft starts.[189] In light of these impacts, no additional mitigation measures are necessary.

F. Fish and Wildlife Service's Biological Opinion

54. Sierra Club contends that the Commission violated the Endangered Species Act (ESA) by relying on Fish and Wildlife Service's (FWS) purportedly flawed Biological Opinion.[190]

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[185] Sierra Club Request for Rehearing and Stay at 31, n.16.

[186] *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).

[187] Sierra Club Request for Rehearing and Stay at 32.

[188] Final EIS at 4-86.

[189] Texas LNG Terminal Final EIS at 4-311 (CP16-116-001).

[190] Sierra Club Request for Rehearing and Stay at 20-23. Sierra Club also claims that FWS' October 21, 2019 Biological Opinion for the project is flawed and violates the ESA because it fails to define the conservation measures that it relies on and fails to set a clear limit on the amount of authorized take. Sierra Club's challenges to the Biological Opinion are appropriately directed to FWS, as explained below.

55. Sierra Club discounts the substantive and procedural responsibilities that section 7(a)(2) of the ESA[191] 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.[192]

56. 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.[193] 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 Biological 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 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.

57. Sierra Club also claims that the Commission's reliance on the Biological Opinion is unlawful because the Authorization Order did not explicitly mandate compliance with the "Voluntary Conservation Measures" proposed by Annova and identified in the Biological Opinion.[194] Specifically, Sierra Club states that the Commission did not incorporate into the project design or otherwise require Annova to implement offsite habitat mitigation.[195]

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[191] 16 U.S.C. § 1536(a)(2) (2018).

[192] *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).

[193] *Id*.

[194] Sierra Club Request for Rehearing and Stay at 23-24; Biological Opinion at 4-5 (describing seven "Voluntary Conservation Measures" proposed by Annova).

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

58. 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 to implement those conditions. The Biological Opinion requires that non-discretionary measures, including the "Voluntary Conservation Measures" which are noted in the Biological Opinion's first Reasonable and Prudent Measure,[196] be undertaken by the Commission and Annova and that such measures "become binding conditions of the project in order for the exemption [to the prohibition on take] to apply … ."[197] Sierra Club is correct that the Authorization Order did not explicitly condition the project authorization on Annova's implementation of the mandatory measures contained in FWS's Biological Opinion. However, we clarify that Annova is required in this order to comply with all non-discretionary requirements of the FWS's Biological Opinion, including all measures that Annova voluntarily committed to undertake which were subsequently required in the FWS's Biological Opinion. This includes the measures outlined in the Incidental Take Statement, the Reasonable and Prudent Measures, and the Terms and Conditions.

G. Cultural Resource Impacts

59. In consultation with the State Historic Preservation Office (SHPO) for Texas, Commission staff concluded that the only non-archaeological historic property within the project's area of potential effect, the Palmito Ranch Battlefield National Historic Landmark, would not be directly or indirectly affected by the project.[198] The EIS and the Authorization Order acknowledged that consultation under section 106 of the National Historic Preservation Act (NHPA) is incomplete in some areas of sensitive vegetation and geology, for one archaeological site, and for three architectural sites.[199] The Authorization Order adopted the condition recommended in the Final EIS that Annova file survey reports, site evaluation reports, and avoidance/treatment plans,

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[196] Biological Opinion at 30.

[197] *Id*. at 29-30.

[198] Final EIS at, 4-160 to 4-167. Annova, as a non-federal applicant, assisted the Commission in meeting our obligations to comply with Section 106 of the National Historic Preservation Act (NHPA), 54 U.S.C. § 306108 (2018), by preparing necessary information, analyses, and recommendations as well as communicating with consulting parties including the SHPO. 36 C.F.R. § 800.2(a)(3) (2019) (allowing delegation). The Commission remains responsible for all formal determinations of site eligibility for the National Register of Historic Places and of project effects on an identified site. *Id*.

[199] Final EIS at 4-160 to 4-167; Authorization Order, 169 FERC ¶ 61,132 at P 68.

including comments on these documents from the SHPO and National Park Service, before Annova may begin construction.[200]

60. Sierra Club asserts that the Commission violated the NHPA and NEPA by failing to complete the consultation process under section 106 of the NHPA before authorizing the Annova LNG Brownsville Project.[201] Sierra Club points to two consequences: the public is unable to comment on all relevant information, and the Commission and the consulting parties cannot make an informed judgment concerning which adverse impacts are likely to occur and how to resolve them.[202]

61. The Commission's conditional approval process complies with the dictates of the NHPA and NEPA.[203] The prohibition on construction in the Authorization Order's

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[200] Authorization Order, 169 FERC ¶ 61,132 at P 68; *id*. app. Environmental Condition 19. Under this condition, Annova cannot begin construction activities until:

> a. Annova files with the Secretary:
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> (i) remaining cultural resources survey report(s);
>
> (ii) site evaluation report(s) and avoidance/treatment plan(s), as required; and
>
> (iii) comments on all cultural resources reports and plans from the Texas State Historic Preservation Office, and National Park Service for reports and plans that affect National Park Service properties.
>
> b. the Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties would be adversely affected; and
>
> c. Commission staff reviews and the Director of OEP approves the cultural resources reports and plans, and notifies Annova in writing that treatment plans/mitigation measures (including archaeological data recovery) may be implemented and/or construction may proceed.

[201] Sierra Club Request for Rehearing at 25-26.

[202] *Id*. at 26.

[203] *See City of Grapevine, Tex. v. Dept. of Transp.*, 17 F.3d 1502, 1509 (D.C. Cir. 1994) *cert. denied*, 513 U.S. 1043 (1994) (upholding Federal Aviation Administration's

Environmental Condition 19 ensures that there can be no effect on historic properties until there has been full compliance with the NHPA.[204] The Commission's approach appropriately respects the integration of the various requirements for natural gas infrastructure, including the NGA, the NHPA, and NEPA. As we have stated before, it is also a practical response to the reality that, in spite of the best efforts of those involved, it may be impossible for an applicant to obtain all reviews necessary to construct and operate a natural gas project in advance of the Commission's issuance of its authorization without unduly delaying the project.[205] To rule otherwise could preclude companies from engaging in what are sometimes lengthy pre-construction activities while awaiting state or federal agency action and would likely delay the in-service date of natural gas infrastructure projects to the detriment of consumers and the public in general.

62. The timing of section 106 consultation has not deprived the public of a meaningful opportunity to review and comment on the Annova LNG Brownsville Project's potential effects on cultural resources. Public involvement has included an applicant-sponsored open house in April 2015, public scoping including a local meeting, and public comment on the Draft EIS including a local meeting.[206] The Draft EIS and Final EIS provided a summary of the cultural investigations undertaken for the project including: consultation with the Texas SHPO, the National Park Service, and Indian tribes; the selection of the area of potential effect; the results of inventories, testing, and surveys; and the status of

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approval of a runway conditioned upon the applicant's completion of compliance with the NHPA); *Pub. Util. Comm'n of the State of Cal. v. FERC*, 900 F.2d 269, 282 (D.C. Cir. 1990) (under NEPA, an agency can make "even a final decision so long as it assessed the environmental data before the decision's effective date"). *See also supra, Robertson*, 490 U.S. at 352. *See also Del. Riverkeeper Network v. FERC*, 857 F.3d 388, 397 (D.C. Cir. 2017) ("Because the Certificate Order expressly conditioned FERC's approval of potential discharge activity on Transco first obtaining the requisite § 401 certification, and was not itself authorization of any potential discharge activity, the issuance of the Certificate Order before Pennsylvania's issuance of its § 401 certificate did not violate § 401 of the [Clean Water Act].").

[204] *See City of Grapevine, Tex.*, 17 F.3d at 1509.

[205] *See, e.g.*, *Broadwater Energy LLC*, 124 FERC ¶ 61,225, at P 59 (2008); *Crown Landing LLC*, 117 FERC ¶ 61,209, at P 26 (2006); *Millennium Pipeline Co., L.P.*, 100 FERC ¶ 61,277 at PP 225-231.

[206] Final EIS at ES-2 to ES-3, 1-10 to 1-14.

compliance with the NHPA.[207] This information is sufficient to enable the public to understand and consider the issues raised by the project. The existing information provided substantial evidence for the Commission to authorize the Annova LNG Brownsville Project, as conditioned. The combination of the existing information with any further information as Annova completes section 106 consultation will enable the Commission and consulting parties to make informed judgments concerning which adverse impacts are likely to occur and how to resolve them.

63. Sierra Club repeats concerns raised by the National Park Service in comments on the Draft EIS that Commission staff's chosen "area of potential effect" is insufficient to evaluate project-related impacts to nearby historic properties via visible structures and lighting, noise, and traffic.[208] Sierra Club asserts that the Commission does not appear to consider whether the cumulative impact on historic properties in the area from the Annova LNG Brownsville Project, the other two Brownsville LNG terminals, the SpaceX launch facility, and other projects would result in an adverse effect.[209]

64. Commission staff responded in the Final EIS to the same criticism from Sierra Club and the National Park Service.[210] Commission staff explained that the chosen area of potential effect was based on visual simulations, landscape, existing vegetation, distance, and other factors.[211] Commission staff also explained that the Final EIS addresses potential impacts to historic properties in the separate sections about Recreational Resources (4.8.4.2), Visual Resources (4.8.5), and Noise (4.11.2).[212] The comments from the National Park Service prompted Commission staff to revise the Final EIS to clarify and expand the discussion of potential cumulative visual and noise impacts

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[207] Office of Energy Projects Annova LNG Brownsville Project Draft EIS at 4-154 to 4-160, 4-321 to 4-322 (December 2018); Final EIS at 4-157 to 4-163, 4-334.

[208] Sierra Club Request for Rehearing and Stay at 27-29 (citing Department of Interior March 13, 2019 Comments at 13-17).

[209] *Id*. at 28-29 (citing Department of Interior March 13, 2019 Comments at 16-17).

[210] Final EIS, app. L at L-16 to L-20 (responding to National Park Service); *id*. at L-142 to L-147 (responding to Sierra Club).

[211] *Id*. app. L at L-17, Response FA04-51.

[212] *Id*. app. L at L-16, Response FA04-47. The section on Recreational Resources discusses anticipated traffic impacts at Palmito Ranch Battlefield National Historic Landmark and Palo Alto Battlefield National Historic Park. *Id*. at 4-104 to 4-105.

to national historic landmarks.[213] Consultations between Annova, the National Park Service, and Commission staff will continue and must be complete before the Commission will authorize Annova to begin construction activities.

H. Greenhouse Gas Emissions

1. Global Warming Potentials

65. Sierra Club contends that the Commission failed to adequately consider the project's greenhouse gas (GHG) impacts, 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.[214]

66. The Commission appropriately relied on EPA's published global warming potentials,[215] 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 Clean Air Act (CAA). This frame of reference would be lost if other values were used.[216]

67. Sierra Club cites *Western Organization of Resource Councils v. Bureau of Land Management*[217] 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

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[213] *Id*. app. L at L-19, Responses FA04-65 and FA04-66; *id*. at 4-316 to 4-317 (cumulative visual impacts), 4-323 (cumulative visual impacts), 4-333 to 4-338 Table 4.13.3-6 (cumulative construction noise impact to Location CP-1 at Palmito Ranch Battlefield National Historic Landmark), 4-339 to 4-340 (cumulative operation noise impact at location CP-1).

[214] Sierra Club Request for Rehearing and Stay at 32-33.

[215] Final EIS at 4-169.

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

[217] 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).

horizon in another EIS.[218] In contrast, as we have explained, we have consistently used EPA's global warming potentials, including time horizons, in order to compare proposals with other projects and with GHG inventories.[219]

68. 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.[220] 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.[221]

2. Significance of the Project's Greenhouse Gas Emissions

69. 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 Authorization Order were issued.[222] 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 significance, including tools used by the U.S. Global Change Research Program (USGCRP) to assess impacts or the Social Cost of Carbon tool.[223]

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[218] *Id.*

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

[220] Sierra Club Request for Rehearing and Stay at 33.

[221] *San Diego Gas and Electric Co. v. Sellers of Market Energy*, 127 FERC ¶ 61,269, at P 295 (2009). *See Tenn. 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).

[222] Sierra Club Request for Rehearing and Stay at 33.

[223] *Id*. at 33.

70. Sierra Club's suggested methodologies would not help the Commission determine whether the projects' GHG emissions are significant. As discussed in the Authorization 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 Authorization Order.[224] 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 project's relationship with emissions targets.

71. 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.[225] It is not appropriate for use in any project-level NEPA review for the following reasons:

> (1) EPA states that "no consensus exists on the appropriate [discount] rate to use for analyses spanning multiple generations"[226] and consequently, significant variation in output can result;[227]

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[224] *See* Authorization Order, 169 FERC ¶ 61,132 at P 76 & n.206. 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.

[225] *Mountain Valley Pipeline, LLC,* 161 FERC ¶ 61,043, at P 296 (2017), *order on reh'g*, 163 FERC ¶ 61,197, at PP 275-297 (2018), *aff'd, Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199, at *2 (D.C. Cir. Feb. 19, 2019) ("[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.").

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

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

> (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.

72. 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, but not the Commission.[228] 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.[229] Moreover, Executive Order 13783, 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."[230]

73. 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.[231] Sierra Club itself acknowledges that such analysis of discrete physical impacts may be impossible,[232] 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.[233] Sierra Club cites to earlier comments, but it is unclear what climate model it would like the

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

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

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

[231] Sierra Club Request for Rehearing and Stay at 34.

[232] *Id.*

[233] 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.

Commission to use and, again, such incorporation by reference is improper and therefore an alternative basis for dismissing its request.[234]

3. Consideration of Greenhouse Gas Emissions

74. 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*.[235] Sierra 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.[236]

75. Sierra Club is mistaken. The Commission approved the Annova LNG Brownsville Project under NGA section 3 based on the record, which includes the GHG emissions analysis.[237] The Final EIS discusses the GHG emissions from construction and operation of the project,[238] the climate change impacts in the region,[239] and the regulatory structure for GHGs under the CAA.[240] 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 Authorization 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.[241]

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[234] *Supra* P 68 & n.219.

[235] 867 F.3d 1357, 1373 (D.C. Cir. 2017).

[236] Sierra Club Request for Rehearing and Stay at 34.

[237] Authorization Order, 169 FERC ¶ 61,132 at PP 75-77; Final EIS at 4-168 to 4-169, 4-172 to 4-185, 4-326, 4-330 to 4-332, 5-14.

[238] Final EIS at 4-172 to 4-185.

[239] *Id.* at 4-326, 4-330 to 4-332.

[240] *Id.* at 5-14.

[241] Authorization Order, 169 FERC ¶ 61,132 at P 90.

I. Mitigation Measures

76. Sierra Club argues that the Commission violated NEPA by issuing the Final EIS without all mitigation plans complete.[242] Sierra Club asserts that the failure to develop these plans deprived the public of the opportunity to comment and claims that the EIS and Authorization Order provided no basis to determine that the pending mitigation plans would be feasible or effective.[243]

77. The inclusion in the Authorization Order of environmental conditions that require Annova 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."[244] 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.[245] Accordingly, post-authorization studies may properly be used to develop site-specific mitigation measures.[246] It was not unreasonable for the Final EIS to deal with sensitive locations in a general way, leaving specificities of certain resources for

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[242] Sierra Club Request for Rehearing and Stay at 19-20. 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.* at 20.

[243] *Id.*

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

[245] *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).

[246] Under NGA section 3(e)(3)(A), the Commission may issue an order approving an import or export application "in whole or part, with such modifications and upon such terms and conditions as the Commission may find necessary or appropriate." 15 U.S.C. § 717b(e)(3)(A).

later exploration during construction.[247] What is important is that the agency make adequate provisions to assure that the applicant will undertake and identify appropriate mitigation measures to address impacts that are identified during construction.[248] The Commission has and will continue to demonstrate our commitment to assuring adequate mitigation.[249]

78. Sierra Club also argues that emergency response mitigation is inadequate, stating that it is unclear if Annova has begun coordinating evacuation procedures with local emergency planning groups, fire departments, and local law enforcement as part of the Emergency Response Plan (ERP), as required by the Authorization Order.[250] 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.[251]

79. As discussed, for purposes of NEPA, our authorization can be conditioned on the development of mitigation plans.[252] Accordingly, Sierra Club's concerns are compliance related. We note that on January 15, 2020, Annova stated its intention to comply with Condition 33 that requires Annova to develop an emergency response plan and coordinate procedures with the U.S. Coast Guard; state, county, and local emergency planning groups; fire departments; state and local law enforcement; and appropriate

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

[248] *Id*.

[249] *Id*.

[250] Sierra Club Request for Rehearing and Stay at 20.

[251] *Id.*

[252] *Robertson*, 490 U.S. at 352.

federal agencies.[253] Once filed, the Commission will review Annova's plan. We note that, under the conditions in the Authorization Order, initial site preparation will not begin before we approve the plans and that the plans must be updated on a regular basis.[254]

J. Public Interest Determination

80. Sierra Club argues that the Authorization 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.[255] As discussed, the Commission determined that the project was not inconsistent with the public interest 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 Authorization Order, the Annova LNG Brownsville Project is not inconsistent with the public interest.[256] We affirm that decision with the revised discussion of impacts on environmental justice communities.

The Commission orders:

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

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

(C) Shrimpers and Fisherman of the RGV's request for rehearing is rejected, as discussed in the body of this order.

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[253] *See* Annova Initial Implementation Plan, at 33 (filed Jan. 15, 2020) (privileged); Authorization Order, 169 FERC ¶ 61,132 at Environmental Conditions 33.

[254] Authorization Order, 169 FERC ¶ 61,132 at Environmental Conditions 33-34.

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

[256] Authorization Order, 169 FERC ¶ 61,132 at PP 25, 90.

(D) Annova's answer to Sierra Club's request for rehearing is rejected, as discussed in the body of this order.

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

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Annova LNG Common Infrastructure, LLC Docket No. CP16-480-001
Annova LNG Brownsville A, LLC
Annova LNG Brownsville B, LLC
Annova LNG Brownsville C, LLC

(Issued February 21, 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 adverse impacts to the environment and the surrounding community, today's order makes clear that the Commission will not allow these impacts to get in the way of its outcome-oriented desire to approve the Project.

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 purports to quantify those GHG emissions.[3] 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.[4]

3. In addition, I am also deeply troubled by the environmental justice implications of today's order. All three of the Brownsville LNG facilities[5] 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] *Annova LNG Common Infrastructure, LLC*, 169 FERC ¶ 61,132, at P 75 (2019) (Certificate Order); Environmental Impact Statement at Tables 4.11.1-3 – 4.11.1-6, 4.11.1-9 (EIS).

[4] *Annova LNG Common Infrastructure, LLC*, 170 FERC ¶ 61,140 at PP 75, 80 (2020) (Rehearing Order).

[5] In addition to the Annova LNG facility, the Commission also simultaneously approved the Rio Grande LNG facility, *Rio Grande LNG, LLC*, 169 FERC ¶ 61,131 (2019), and the Texas Brownsville LNG facility, *Texas LNG Brownsville LLC*, 169

County, Texas—a region of the country where roughly one third of the population is below the poverty line and the vast majority is made up of minority groups.[6] 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 they are all but inevitable and that, because they fall almost entirely on low-income or minority communities, they 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 have received from the Commission.

I. The Commission's Public Interest Determination 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.[7] The NGA establishes a general presumption favoring the import and export of LNG unless there is an affirmative finding that the import or export "will not be consistent with the public interest."[8] Section 3 of the NGA provides for two independent

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FERC ¶ 61,130 (2019). I will refer to these collectively as the Brownsville LNG facilities.

[6] Rehearing Order, 170 FERC ¶ 61,046 at P 34 ("The Final EIS concluded that in the two census block groups intersected by a one-mile radius around the Annova LNG Brownsville Project, the population of Hispanic origin comprises 72 to 98 percent of the total population and the population with incomes below the poverty level ranges from 31 to 43 percent."); *see also id.* ("The Final EIS noted that the populations in the two larger census tracts, which contain the two block groups, and more broadly in Cameron County, Texas, also exceed the EPA's categorical thresholds for minority and low-income populations. In Cameron County, the population of Hispanic origin comprises 88 percent of the population and the poverty rate is about 31 percent." (footnotes omitted)).

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

[8] 15 U.S.C. § 717b(a); *see EarthReports, Inc. v. FERC*, 828 F.3d 949, 953 (D.C.

public interest determinations: One regarding the import or export of LNG itself and one regarding the facilities used for that import or export. DOE determines whether the import or export of LNG is consistent with the public interest, with transactions among free trade countries legislatively deemed "consistent."[9] 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.[10] 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.[11] Today's order fails to satisfy that standard in multiple respects.

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

6. As part of its public interest determination, the Commission examines a proposed facility's impact on the environment and public safety, among other things. A facility's

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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).

[9] 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.

[10] 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.

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

impact on climate change is one of the environmental impacts that must be part of a public interest determination under the NGA.[12] 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.[13] 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 be "environmentally acceptable" and generally reduced to "less than significant levels."[14] 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[15] while, out of the other side of its mouth, assuring us that its impacts are "environmentally acceptable."[16] That is ludicrous, unreasoned, and an abdication of our responsibility to give climate change the "hard look" that the law demands.[17]

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[12] *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").

[13] Rehearing Order, 170 FERC ¶ 61,046 at PP 69-70; Certificate Order, 169 FERC ¶ 61,132 at P 76; EIS at 4-331 – 4-332.

[14] Rehearing Order, 170 FERC ¶ 61,046 at P 75; EIS at ES-14; *see* Certificate Order, 169 FERC ¶ 61,132 at P 21.

[15] Rehearing Order, 170 FERC ¶ 61,046 at P 70; Certificate Order, 169 FERC ¶ 61,132 at P 76; EIS 4-32 ("[W]e are unable to determine the significance of the Project's contribution to climate change.")."

[16] Rehearing Order, 170 FERC ¶ 61,046 at P 75; Certificate Order, 169 FERC ¶ 61,132 at P 21 (stating that, with few exceptions and not considering cumulative impacts, the Project's impacts "would not be significant").

[17] *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*

7. 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. Using the approach in today's order, the Commission will always be able to 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.

8. 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. As noted, the Project will directly release over 367,000 metric tons of GHG emissions per year, plus an additional 2 million metric tons of GHG resulting from the electricity used to power its on-site compressors.[18] The Commission has previously stated that "GHGs emissions due to human activity are the primary cause of increased levels of all GHG since the industrial age,"[19] (although notably not in today's order and accompanying environmental analysis) and it acknowledges in today's order that such GHGs "may endanger public health and welfare through climate change."[20] 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.

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").

[18] *See infra* PP 17-20. The Commission refuses to consider the GHG emissions caused by the Project's electricity consumption as direct effects even though it possesses models for calculating and quantifying those emissions, uses those models elsewhere in the EIS for *this* project, *see infra* P 18, and there is no dispute that those emissions represent the Project's principal contribution to climate change.

[19] Environmental Impact Statement, Docket No. CP16-116-000, at 4-164 (Mar. 15, 2019).

[20] EIS at 4-172.

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

9. 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."[21] And, as I noted at the outset, although 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,"[22] 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 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."[23] 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.

10. Nevertheless, the Commission barely bats an eye at the impacts its actions will have on environmental justice[24] communities. Instead, it dismisses environmental justice concerns because, get this, all the surrounding communities are either low-income or minority communities and so environmental justice communities are not disproportionately affected relative to other communities affected by the Project.[25] In

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[21] Certificate Order, 169 FERC ¶ 61,132 (Glick, Comm'r, dissenting at P 9).

[22] *Id.*

[23] *Id.*; *cf., e.g.*, *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 87 (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)).

[24] "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).

[25] *See, e.g.*, Rehearing Order, 170 FERC ¶ 61,046 at P 39 ("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

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.

11. But that observation only highlights the environmental justice implications of the Project. 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.[26] 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.[27] Suggesting 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 those communities is both arbitrary and capricious and, frankly, hard to fathom.[28] 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.

12. The Commission responds to these concerns by stating that, based on Annova's definition of the Project's purpose, it can only be built in environmental justice communities.[29] That hardly helps the matter. Following the Commission's reasoning, if a project developer defines its project such that in can only be built in environmental justice communities, then that will, for all intents and purposes, be the end of the

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populations versus on some other project-affected comparison group.").

[26] *See* Certificate Order, 169 FERC ¶ 61,132 (Glick, Comm'r, dissenting at P 9); *cf., e.g.*, *Friends of Buckingham*, 947 F.3d at 87 (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))).

[27] Certificate Order, 169 FERC ¶ 61,132 (Glick, Comm'r, dissenting at P 9).

[28] 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.

[29] Rehearing Order, 170 FERC ¶ 61,140 at P 35.

Commission's environmental justice analysis. That is hardly a rational result for a line of inquiry that is supposed to recognize and respond to the fact that vulnerable communities have long born a disproportionate share of the impact from industrial development. An analytical framework that permits the Commission to write environmental justice out of the analyses in which it would seem to be most relevant is arbitrary and capricious.

13. So far as I can tell, the Commission's perspective is that a project located in an overwhelmingly poor or minority community raises environmental justice concerns only if the individuals in that community have some sort of predisposition or susceptibility to the project's adverse impacts.[30] For example, in its rehearing order regarding the Rio Grande LNG facility, the Commission recognized the potential for the cumulative 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.[31] Ozone is linked to a number of serious health problems, such as asthma and respiratory disease, including chronic obstructive pulmonary disorder (COPD).[32] Nevertheless, 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 on these communities."[33]

14. The implication appears to be 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 in comparison to those of other ethnic groups.

15. That is nonsense. 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

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[30] *Id.* at P 39.

[31] Rehearing Order, 170 FERC ¶ 61,140 at P 44. This includes the other Brownsville LNG facilities—although principally the Rio Grande facility, which would be powered by onsite gas turbines—and the ships that would serve the three facilities.

[32] *See* Rehearing Order, 170 FERC ¶ 61,140 at P 46 (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).

[33] Rehearing Order, 170 FERC ¶ 61,140 at P 47.

than other racial groups[34] 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 disproportionately affect the environmental justice communities in the surrounding area or what that means for the public interest.[35] The bottom line is that environmental justice considerations must play an important role in our public interest analysis, especially when the impacts on poor and minority communities are as significant and concentrated as they are here. Instead, the Commission basically shrugs its shoulders, concludes that the impacts on environmental justice communities are inevitable, and moves on. That simply is not a serious consideration of the Project's environmental justice implications.

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.[36] Although the Commission reported those impacts in its EIS[37] and mentioned them briefly in the original order,[38] it is far from clear whether and how they factor into the Commission's public interest analysis.[39] Given the extent of those adverse impacts—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[40]—we ought to do more than simply recite the potential harm

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[34] *Id.*

[35] 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 Feb. 20, 2020).

[36] EIS at 4-306 –3-308 (ocelot and jaguarundi); *id.* at 4-309 (aplomado falcon).

[37] *See supra* note 3736.

[38] Certificate Order, 169 FERC ¶ 61,132 at P 84.

[39] Rehearing Order, 170 FERC ¶ 61,140 at P 80 (summarily stating that the Commission finds the Project not inconsistent with the public interest).

[40] For example, the EIS notes that "loss, degradation, and fragmentation of habitat have been cited by the [Fish and Wildlife Service] in its 2010 Recovery Plan, as the

and then proceed, post haste, to make a public interest determination without further discussion.

II. The Commission Fails to Satisfy Its Obligations under NEPA

17. The Commission's NEPA analysis 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 emissions and "evaluate the 'incremental impact' that those emissions will have on climate change or the environment more generally."[41] As noted, the Commissions states that the operation of the Project will directly emit more than 367,000 metric tons of GHGs annually.[42] But that drastically understates the actual GHG emissions attributable to the Project. Unlike many of the LNG facilities that the Commission has approved the last year, the Project is powered with electricity from the grid rather than onsite natural gas turbines.[43] Apparently on that basis, the Commission omits the resulting GHG emissions from its environmental analysis.

18. But the GHG emissions caused by the Project's substantial electricity consumption are reasonably foreseeable effects of the Project. The Project will connect to the grid via a new transmission line built and owned by South Texas Electric Cooperative,[44] which would tie into South Texas Electric Cooperative's existing system. That known tie-in makes it possible for the Commission to estimate the incremental generation likely to be dispatched to serve the Project—and the resulting GHG emissions—using one of many well-accepted models, such as the Environmental Protection Agency's eGrid database or Avoided Emissions and Generation Tool (AVERT). Deploying one or both of those

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primary threat to U.S. ocelot and jaguarundi populations." EIS at 4-308.

[41] *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").

[42] Certificate Order, 169 FERC ¶ 61,132 at P 76; EIS at 4-190 Table 4.11.1-9.

[43] EIS at 2-2.

[44] *Id.* at 1-17.

models would have been precisely the sort of "'reasonable forecasting'" aided by "'educated assumptions'" that NEPA requires.[45]

19. In fact, the EIS uses these very models to quantify GHG emissions from the Project when evaluating alternative designs for the Project, concluding that its electricity consumption would result in an additional 1.77 to 2.42 million tons of GHG emissions.[46] And the Commission relies on that modeling to conclude that on-site generation would not provide a significant environmental advantage over using electricity from the grid.[47] Nonetheless, the Commission fails to include or consider those emissions when quantifying the GHG emissions caused by the Project. Nothing in the EIS, the Certificate Order, or today's order explains why that modeling is good enough to rely on when justifying Annova LNG's preferred project design, but not good enough to rely on for the purpose of identifying and quantifying the Project's adverse impacts.[48]

20. The Commission's failure to consider these reasonably foreseeable GHG emissions is especially unreasonable given the other sources of GHG emissions that it did consider in the EIS. For example, the EIS reports the direct GHG emissions resulting from mobile sources associated with the Project.[49] Indeed, it goes so far as to estimate the GHG emissions that will result from different forms of mobile sources used to serve

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[45] *Sabal Trail*, 867 F.3d at 1374 (quoting *Del. Riverkeeper Network v. FERC*, 753 F.3d 1304, 1310 (D.C. Cir. 2014)).

[46] EIS at Table 3.6.1-1. In addition, as discussed further below, Annova has stated its goal of procuring 100 percent of electricity from zero-emissions renewable resources. *See infra* P 27. If successful, that could dramatically reduce—or even eliminate—the reasonably foreseeable adverse impacts associated with the electricity used to power its motors.

[47] *Id.* at 3-21.

[48] To the extent that the Commission believes those models, and their underlying assumptions, may not be perfect solutions, it can still use the models, but disclose its concerns so that readers can take the results "with the appropriate grain of salt." *Sabal Trail*, 867 F.3d at 1374 ("We understand that emission estimates would be largely influenced by assumptions rather than direct parameters about the project, but some educated assumptions are inevitable in the NEPA process. And the effects of assumptions on estimates can be checked by disclosing those assumptions so that readers can take the resulting estimates with the appropriate amount of salt." (internal citations and quotation marks omitted)).

[49] EIS at 4-183 – 4.184.

the facility (e.g., boats and commuter traffic).[50] I fail to see how the Commission can reasonably refuse to use well-established models—ones that it is perfectly comfortable relying on in a similar context—to quantify and consider the GHG emissions from electricity consumption, but then confidently ascribe and consider estimated GHG emissions levels for different types of boats.

21. In any case, 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.[51] 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."[52] 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.

22. In addition, under NEPA, a finding of significance informs the Commission's inquiry into potential ways of mitigating environmental impacts.[53] An environmental review document must "contain a detailed discussion of possible mitigation measures" to

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[50] *Id.* Table 4.11.1-5.

[51] *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.").

[52] *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)).

[53] 40 C.F.R. § 1502.16 (2018) (NEPA requires an implementing agency to form a "scientific and analytic basis for the comparisons" of the environmental consequences of its action in its environmental review, which "shall include discussions of . . . [d]irect effects and their significance.").

address adverse environmental impacts.[54] "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.[55]

23. 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.[56] 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.

24. 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 to the harm caused by climate change, thereby facilitating the necessary "hard look" at the Project's environmental impacts that NEPA requires. Especially when it comes to a global problem like climate change, a measure for translating a single project's climate change impacts into concrete and comprehensible terms plays a useful role in the NEPA process by putting the harm in terms that are readily accessible for both agency decisionmakers and the public at large. Yet, the Commission continues to ignore the

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

[55] *Id.* at 352.

[56] EIS at 4-331 – 4-332 (stating "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 ¶ 61,132 at P 76 ("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 70 (stating that the Commission cannot evaluate significance without "industry sector or regional emission targets or budgets with which to compare project emissions").

Social Cost of Carbon, relying instead on deeply flawed reasoning that I have previously critiqued at length.[57]

25. 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 explicit tools it claims it needs to assess the significance of the Project's impact on climate change.[58] The Commission's refusal to similarly analyze the Project's impact on climate change is arbitrary and capricious.

26. 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.[59] 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."[60] 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.[61] And throughout today's order, the Commission uses its conditioning authority under the

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

[58] *See, e.g.*, EIS at 4-298, 4-315 – 4-317 (concluding that there will be a significant cumulative impact on surface water resources associated with shoreline erosion and turbidity from increased vessel traffic, and significant cumulative impact on visual resources noting that the aesthetic impacts looking in certain directions would be moderate to high).

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

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

[61] *See, e.g.*, Certificate Order, 169 FERC ¶ 61,132 at PP 38-39 (discussing mitigation measures to address soil impacts); *id.* P 48 (discussing mitigation plans to address impacts on vegetation); *id.* P 58 (discussing mitigation measures to address traffic impacts).

NGA[62] to implement these mitigation measures, which support its public interest finding.[63] Once again, however, the Project's climate impacts are treated 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.

27. The Commission's refusal to even discuss ways of potentially mitigating the Project's impact on climate change is especially glaring here because Annova LNG is voluntarily taking steps in that direction. Annova LNG has entered power purchase agreements with multiple utilities in the region with the stated goal of satisfying its electricity demand with zero-emissions renewable resources.[64] Because the Project is powered with electric motors, those agreements could dramatically lower the Project's direct GHG emissions, one of its principal adverse environmental impacts.[65] Unfortunately, the Commission's dismissive approach to climate change leaves us no place to consider those agreements or their impact on our public interest determination. As I have previously explained, there is a path for us to potentially reach consensus on many issues related to climate change—a result that would benefit all interested parties, but especially project developers. Nevertheless, we cannot take even the first tentative steps in that direction so long as the Commission insists on treating climate change differently than all other environmental impacts.

28. The Commission's failure to consider the significance of the impact of the Project's GHG emissions and possible mitigation measures is even more mystifying

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[62] *E.g.*, *id.* P 88 ("[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.").

[63] *See id.* (explaining that the 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).

[64] *See Annova LNG Earns FERC Approval* (Nov. 22, 2019), https://annovalng.com/annova-lng-earns-ferc-approval/ (noting that Annova LNG "plans to source its electricity through 100 percent carbon-free renewable energy resources"); Sergio Chapa, *Annova LNG plans to get all of its power from renewables*, Houston Chron., Sept. 23, 2019, *available at* https://www.houstonchronicle.com/business/energy/article/Annova-LNG-plans-to-get-all-of-its-power-from-14461106.php.

[65] As noted, today's order considers only a fraction of the reasonable foreseeable GHG emissions caused by the Project, *see supra* PP 17-20.

because NEPA "does not dictate particular decisional outcomes."[66] NEPA "'merely prohibits uninformed—rather than unwise—agency action.'"[67] 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.[68] 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.

29. Finally, the Project's GHG emissions are not the only flawed aspect of the Commission's NEPA review. As noted, the Commission's recent rehearing order regarding the Rio Grande LNG facility acknowledged for the first time that the cumulative effect of the three Brownsville LNG facilities along with the ships that serve them would cause a potential violation of the 8-hour Ozone NAAQS.[69] Today's order, however, refers to that potential violation only in the context of its cursory environmental justice review.[70] Even though the Annova LNG facility and the associated boat traffic will potentially contribute to a significant NAAQS violation—one that neither the EIS nor the underlying order considered—today's order is completely silent on the consequences that violation may have for human health as well as what the Commission could or should do about it.[71] It should go without saying that the ignoring a potential NAAQS violation is arbitrary and capricious.

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

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

[68] 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. *See infra* P 29.

[69] *Rio Grande LNG, LLC*, 170 FERC ¶ 61,046, at PP 53, 55 (2020).

[70] *See* Rehearing Order, 170 FERC ¶ 61,140 at PP 43-47.

[71] I recognize that the Rio Grande LNG facility, with its onsite natural gas turbines, would likely account for a much larger share of the increase in ozone attributable to the Brownsville LNG facilities. *See Rio Grande LNG, LLC*, 170 FERC ¶ 61,046 at PP 52-53, 55. But the fact that the Annova LNG facility and the related ship traffic is unlikely to be the primary cause of an ozone NAAQS violation is no reason to ignore its role altogether.

For these reasons, I respectfully dissent.

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Richard Glick
Commissioner

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Annova LNG Common Infrastructure, LLC
Annova LNG Brownsville A, LLC
Annova LNG Brownsville B, LLC
Annova LNG Brownsville C, LLC

Docket No. CP16-480-001

(Issued February 21, 2020)

McNAMEE, Commissioner, *concurring*:

1. Today's order denies Sierra Club's[1] rehearing request of the Commission's November 22, 2019 Order (2019 Order)[2] authorizing pursuant to section 3 of the Natural Gas Act (NGA) the siting, construction, and operation of the Annova LNG Brownsville Project (Project).[3]

2. Because the 2019 Order complies with the Commission's statutory responsibilities under the NGA and the National Environmental Policy Act (NEPA), I fully support today's order denying rehearing and affirming the 2019 Order. The 2019 Order determines that the siting, construction, and operation of the Project is not inconsistent with the public interest.[4] The 2019 Order also finds that the Project is an environmentally acceptable action.[5] Further, consistent with the holding in *Sierra Club v. FERC* (*Sabal Trail*),[6] the 2019 Order and the Environmental Impact Statement (EIS) for the Project

[1] Sierra Club filed its rehearing request together with Texas RioGrande Legal Aid (on behalf of Shrimpers and Fisherman of the RGV and Vecinos para el Bienestar de la Comunidad Costera), Save RGV from LNG, Defenders of Wildlife, the City of South Padre Island, the City of Port Isabel, and the Town of Laguna Vista.

[2] *Annova LNG Common Infrastructure*, 169 FERC ¶ 61,132 (2019) (2019 Order).

[3] 170 FERC ¶ 61,140 (2020) (2020 Rehearing Order).

[4] 2019 Order, 169 FERC ¶ 61,132 at P 25.

[5] *Id.* P 90.

[6] 867 F.3d 1357 (D.C. Cir. 2017).

quantified and considered the direct and indirect greenhouse gases (GHGs) emitted during the construction and operation of the Project.[7]

3. Although I fully support today's order denying rehearing, I write separately to address what I perceive to be a misinterpretation of the Commission's authority under the NGA and NEPA. There have been contentions that the NGA authorizes the Commission to establish measures to mitigate project-related GHG emissions, and that the Commission violates the NGA and NEPA by not determining whether GHG emissions significantly affect the environment. I disagree.

4. I believe that the Commission can consider project-related emissions in its NGA section 3 public interest determination and is required to consider them in its NEPA analysis. However, the Commission has no objective basis to determine whether GHG emissions will have a significant effect on climate change nor the authority to establish its own basis for making such a determination. Further, the Commission does not have the authority to unilaterally establish measures to mitigate GHG emissions. It is my intention that my discussion below will assist the Commission, the courts, and other parties in their arguments regarding the Commission's consideration of a project's effect on climate change.

I. The Commission has no reliable objective standard for determining whether GHG emissions significantly affect the environment

5. Sierra Club argues that the Commission violates the NGA and NEPA by not determining the significance of GHG emissions that are effects of the Project.[8] My colleague has made similar arguments.[9] He has challenged the Commission's explanation that it cannot determine significance because there is no standard for determining the significance of GHG emissions.[10] He has argued that the Commission can adopt the Social Cost of Carbon[11] to determine whether GHG emissions are

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[7] 2019 Order, 169 FERC ¶ 61,132 at P 76; EIS at 4-185 tbl. 4.11.1-4, 4-186 tbl. 4.11.1-5.

[8] Sierra Club Request for Rehearing at 32.

[9] See paragraphs 2, 5, and 14-15 of Commissioner Glick's dissent of the 2019 Order. *See* 2019 Order, 169 FERC ¶ 61,132 (Glick, Comm'r, dissenting) (2019 Order Dissent).

[10] 2019 Order Dissent P 16.

[11] *Id.* P 17.

significant or rely on its own expertise as it does for other environmental resources, such as visual resources and surface water resources.[12] He has suggested that the Commission does not make a finding of significance in order to find that a project is not inconsistent with the public interest.[13]

6. I disagree with these contentions. 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 a determination.

A. Social Cost of Carbon is not a suitable method to determine significance

7. The Commission has found, and I agree, that the Social Cost of Carbon is not a suitable method for the Commission to determine significance of GHG emissions.[14] Because the courts have repeatedly upheld the Commission's reasoning,[15] I will not restate the Commission's reasoning here.

8. However, I will address the suggestion that the Social Cost of Carbon can translate a project's impact on climate change into "concrete and comprehensible terms" that will help inform agency decision-makers and the public at large.[16] The Social Cost of Carbon, described as an estimate of "the monetized damages associated with an

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[12] *Id.* P 18.

[13] *Id.* P 5.

[14] *Fla. Se. Connection, LLC*, 162 FERC ¶ 61,233, at P 48 (2018).

[15] *Appalachian Voices*, 2019 WL 847199, *2; *EarthReports, Inc. v. FERC*, 828 F.3d 949, 956 (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.").

[16] 2019 Order Dissent P 17.

incremental increase in carbon emissions in a given year,"[17] may appear straightforward. On closer inspection, however, the Social Cost of Carbon and its calculated outputs are not so simple to interpret or evaluate.[18] 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),[19] agency decision-makers and the public have no objective basis or benchmark to determine whether that cost is significant. Bare numbers standing alone simply *cannot* ascribe significance.

B. The Commission has no authority or objective basis to establish its own framework

9. Some argue that the lack of externally established targets does not relieve the Commission from establishing a framework or targets on its own. Some have suggested that the Commission can make up its own framework, citing the Commission's framework for determining return on equity (ROE) as an example. However, they overlook the fact that Congress designated the U.S. Environmental Protection Agency (EPA), not the Commission, with exclusive authority to determine the amount of emissions that are harmful to the environment. In addition, there are no available resources or agency expertise upon which the Commission could reasonably base a framework or target.

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[17] Interagency Working Group on the Social Cost of Greenhouse Gases, *Technical Support Document – Technical Update of the Social Cost of Carbon for Regulatory impact Analysis – Under Executive Order 12866* at 1 (Aug. 2016), https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf (2016 Technical Support Document).

[18] In fact, the website for the Climate Framework for Uncertainty Negotiation and Distribution (FUND) – one of the three integrated assessment models that the Social Cost of Carbon uses – states "[m]odels are often quite useless in unexperienced hands, and sometimes misleading. No one is smart enough to master in a short period what took someone else years to develop. Not-understood models are irrelevant, half-understood models are treacherous, and mis-understood models dangerous." FUND-Climate Framework for Uncertainty, Negotiation and Distribution, http://www.fund-model.org/ (LAST VISITED Nov. 18, 2019).

[19] *See* 2016 Technical Support Document at 4. The Social Cost of Carbon produces wide-ranging dollar values based upon a chosen discount rate, and the assumptions made. The Interagency Working Group on Social Cost of Greenhouse Gases estimated in 2016 that the Social Cost of one ton of carbon dioxide for the year 2020 ranged from $12 to $123. *Id.*

10. As I explain below, Congress enacted the Clean Air Act to establish an all-encompassing regulatory program, supervised by the EPA to deal comprehensively with interstate air pollution. Section 111 of the Clean Air Act directs the Administrator of the EPA to identify stationary sources that "in his judgment cause[], or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare"[20] and to establish standards of performance for the identified stationary sources.[21] Thus, the EPA has exclusive authority for determining whether emissions from pipeline facilities will have a significant effect on the environment and for establishing an emissions control regime.

11. Further, the Commission is not positioned to unilaterally establish a standard for determining whether GHG emissions will significantly affect the environment when there is neither federal guidance nor an accepted scientific consensus on these matters.[22] This inability to find an acceptable methodology is not for a lack of trying. The Commission reviews the climate science, state and national targets, and climate models that could inform its decision-making.[23]

12. Moreover, assessing the significance of project effects on climate change is unlike the Commission's determination of ROE. Establishing ROE has been one of the core

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[20] 42 U.S.C. § 7411(b)(1)(A) (2018).

[21] *Id.* § 7411(b)(1)(B).

[22] The Council on Environmental Quality's 2019 Draft Greenhouse Gas Guidance states, "[a]gencies need not undertake new research or analysis of potential climate effects and may rely on available information and relevant scientific literature." CEQ, *Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions*, 84 Fed. Reg. 30,097, 30,098 (June 26, 2019); *see also* CEQ FINAL GUIDANCE FOR FEDERAL DEPARTMENTS AND AGENCIES ON CONSIDERATION OF GREENHOUSE GAS EMISSIONS AND THE EFFECTS OF CLIMATE CHANGE IN NATIONAL ENVIRONMENTAL POLICY ACT REVIEWS at 22 (Aug. 1, 2016) ("agencies need not undertake new research or analysis of potential climate change impacts in the proposed action area, but may instead summarize and incorporate by reference the relevant scientific literature"), https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf.

[23] *Fla. Se. Connection, LLC*, 162 FERC ¶ 61,233, at P 36; *see also WildEarth Guardians*, 738 F.3d 298, 309 (D.C. Cir. 2013) ("Because current science does not allow for the specificity demanded by the Appellants, the BLM was not required to identify specific effects on the climate in order to prepare an adequate EIS.").

functions of the Commission since its inception under the FPA as the Federal Power Commission.[24] And, setting ROE has been an activity of state public utility commissions, even before the creation of the Federal Power Commission.[25] The Commission's methodology is also founded in established economic theory.[26] In contrast, assessing the significance of GHG emissions is not one of the Commission's core missions and there is no suitable methodology for making such determination.

13. It has been argued that the Commission can establish its own methodology for determining significance, pointing out that the Commission has determined the significance of effects on visual resources and surface water resources using its own expertise and without generally accepted significance criteria or a standard methodology.

14. I disagree. 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. The Commission's findings regarding significance for visual resources and surface water resources have an objective basis. For example for general impacts to visual resources, the Commission determined the visual character of the project area by referencing the application, as supplemented, and using publicly available resources and databases, such as those established by Texas Parks and Wildlife Department.[27] The Commission determined the Project's effect on visual resources by referencing the Visual Impact Assessment for the Project that applied selected procedures of the Bureau of Land Management's Visual Resource Management System and Annova's supplemental

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[24] *Hope*, 320 U.S. 591 (1944); *FPC v. Nat. Gas Pipeline Co. of America*, 315 U.S. 575 (1942).

[25] *See, e.g., Willcox v. Consol. Gas Co.*, 212 U.S. 19, 41 (1909) (finding New York State must provide "a fair return upon the reasonable value of the property at the time it is being used for the public.").

[26] *Inquiry Regarding the Commission's Policy for Determining Return on Equity*, 166 FERC ¶ 61,207 (2019) (describing the Commission's use of the Discounted Cash Flow model that was originally developed in the 1950s as a method for investors to estimate the value of securities).

[27] Annova LNG Brownville Project Final Environmental Impact Statement at 4-109 to 4-111.

simulations evaluating visual effects on resources identified by the National Park Service.[28] As the Final EIS states,

> The analysis documented existing visual conditions for each [key observation point (KOP)] and assessed visual impacts by determining the amount of visual contrast the Project would introduce into the landscape and the expected response of viewers to those changes. The contrast rating for each KOP was based on a photo simulation of the with-Project condition at that KOP. The photo simulations included the tallest and most prominent features of the LNG terminal, including the LNG storage tanks, flare stack, gas-fired heaters, and buildings, and in one simulation an LNG carrier at dock. The contrast ratings were combined with an assessment of visual sensitivity (i.e., a measure of viewer exposure to changes in the landscape and viewer sensitivity to those changes) to determine the level of visual impact at each KOP.[29]

15. Based on this information, the Commission made a reasoned finding that the Project's effect on visual resources will be of moderate impact. Similarly, the Commission conducted an objective evaluation of impacts on surface water resources.

16. In contrast, the Commission has no reasoned basis to determine whether a project has a significant effect on climate change. The Commission can only quantify the amount of project emissions. That calculated number cannot inform the Commission on the specific physical 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.

17. Without adequate support or a reasoned target, the Commission cannot ascribe significance to particular amounts of GHG emissions. To do so would not only exceed our agency's authority, but would risk reversal upon judicial review. Courts require agencies to "consider[] the relevant factors and articulate[] a rational connection between the facts found and the choice made."[30] Simply put, stating that an amount of GHG

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[28] *Id.* 4-111 to 4-126.

[29] *Id.* 4-111.

[30] *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

emissions appears significant without any objective support fails to meet the agency's obligations under the Administrative Procedure Act (APA).

II. The NGA does not contemplate the Commission establishing mitigation for GHG emissions from LNG Facilities

18. There have also been contentions that the Commission should require the mitigation of GHG emissions related to the authorized facilities.[31] I understand these suggestions as proposing a carbon emissions fee, offsets or tax (similar to the Corps' compensatory wetland mitigation program), technology requirements (such as scrubbers), or emission caps. Some argue that the Commission can require such mitigation under NGA section 3(e)(3)(A), which provides "the Commission may approve an application . . . in whole or in part, with such modifications and upon such terms and conditions the Commission find necessary or appropriate."[32]

19. I disagree. The Commission cannot interpret NGA section 3(e)(3)(A) to allow the Commission to unilaterally establish measures to mitigate GHG emissions because Congress, through the Clean Air Act, assigned the EPA and the States exclusive authority to establish such measures. Congress designated the EPA as the expert agency "best suited to serve as primary regulator of greenhouse gas emissions," [33] not the Commission.

20. The Clean Air Act establishes an all-encompassing regulatory program, supervised by the EPA to deal comprehensively with interstate air pollution.[34] 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 Clean Air Act directs the Administrator of the EPA "to publish (and

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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.").

[31] 2019 Order Dissent P 19.

[32] 15 U.S.C. § 717b(e)(3)(A) (2018).

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

[34] *See id.* at 419.

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"[35] and to establish standards of performance for the identified stationary sources.[36] The Clean Air Act 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.[37]

21. In addition, the Clean Air Act allows the Administrator to "distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards."[38] The Act also permits the Administrator, with the consent of the Governor of the State in 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."[39]

22. 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."[40]

23. Thus, the text of the Clean Air Act demonstrates it is improbable that NGA section 3(e)(3)(A) allows the Commission to establish GHG emission standards or mitigation measures out of whole cloth. To argue otherwise would defeat the significant discretion and complex balancing that the Clean Air Act entrusts in the EPA Administrator, and would eliminate the role of the States.

24. Furthermore, to argue that the Commission may use its NGA conditioning authority to establish GHG emission mitigation—a field in which the Commission has no expertise—and address climate change—an issue that has been subject to profound

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[35] 42 U.S.C. § 7411(b)(1)(A) (2018) (emphasis added).

[36] *Id.* § 7411(b)(1)(B).

[37] *Id.* § 7411(a)(1).

[38] *Id.* § 7411(a)(2).

[39] *Id.* § 7411(j)(1)(A).

[40] *Id.* § 7411(f)(3).

debate across our nation for decades—is an extraordinary leap. The Supreme Court's "major rules" canon advises that agency rules on issues that have vast economic and political significance must be treated "with a measure of skepticism" and require Congress to provide clear authorization.[41] The Court has articulated this canon because Congress does not "hide elephants in mouseholes"[42] and "Congress is more likely to have focused upon, and answered, major questions, while leaving interstitial matters to answer themselves in the course of the statute's daily administration."[43]

25. Courts would undoubtedly treat with skepticism any attempt by the Commission to establish out of whole cloth measures to mitigate GHG emissions. Congress has introduced climate change bills since at least 1977,[44] over four decades ago. Over the last 15 years, Congress has introduced and failed to pass 70 legislative bills to reduce GHG emissions—29 of those were carbon emission fees or taxes.[45] For the Commission to suddenly declare such power resides in the long-extant NGA and that Congress's efforts were superfluous strains credibility. Requiring pipelines to pay a carbon emissions fee or tax, or to invest in GHG mitigation would be a major rule, and Congress has made no

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[41] *Util. Air Regulatory Grp. v. EPA*, 573 U.S. 302, 324 (2014); *Brown & Williamson,* 529 U.S. at 160 ("Congress could not have intended to delegate a decision of such economic and political significance to an agency in so cryptic a fashion."); *see also Gonzales v. Oregon*, 546 U.S. 243, 267-68 (2006) (finding regulation regarding issue of profound debate suspect).

[42] *Whitman v. American Trucking Ass.,* 531 U.S. 457, 468 (2001).

[43] *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 12, 159 (quoting Justice Breyer, *Judicial Review of Questions of Law and Policy*, 38 ADMIN. L. REV. 363, 370 (1986)); *see also* Abbe R. Gluck & Lisa Schultz Bressman, *Statutory Interpretation from the Inside—An Empirical Study of Congressional Drafting, Delegation, and the Canons: PART I*, 65 STAN. L. REV. 901, 1004 (2013) ("Major policy questions, major economic questions, major political questions, preemption questions are all the same. Drafters don't intend to leave them unresolved.")

[44] National Climate Program Act, S. 1980, 95th Cong. (1977).

[45] CONGRESSIONAL RESEARCH SERVICE, MARKET-BASED GREENHOUSE GAS EMISSION REDUCTION LEGISLATION: 108TH THROUGH 116TH CONGRESSES at 3 (Oct. 23, 2019), https://fas.org/sgp/crs/misc/R45472.pdfhttps://fas.org/sgp/crs/misc/R45472.pdf. Likewise, the CEQ issued guidance on the consideration of GHG emissions in 2010, 2014, 2016, and 2019. None of those documents require, let alone recommend, that an agency establish a carbon emissions fee or tax.

indication that the Commission has such authority.

26. Some may make the argument that the Commission can require mitigation without establishing a standard. I disagree. Establishing mitigation measures requires determining how much mitigation is required – i.e., setting a limit, or establishing a standard, that quantifies the amount of GHG emissions that will adversely affect the environment. Some may also argue that the Commission has unilaterally established mitigation in other contexts, including wetlands, soil conservation, and noise. These examples, however, are distinguishable. Congress did not exclusively assign the authority to establish avoidance or restoration measures for mitigating effects on wetlands or soil to a specific agency. The Corps and the EPA developed a wetlands mitigation bank program pursuant to section 404 of the Clean Water Act.[46] Congress endorsed such mitigation.[47] As for noise, the Clean Air Act assigns the EPA Administrator authority over determining the level of noise that amounts to a public nuisance and requires federal agencies to consult with the EPA when its actions exceed the public nuisance standard.[48] The Commission complies with the Clean Air Act by requiring project noise levels in certain areas to not exceed 55 dBA Ldn, as required by EPA's guidelines.[49]

27. Accordingly, there is no support that the Commission can use its NGA section 3 authority to establish measures to mitigate GHG emissions from LNG facilities.

III. Conclusion

28. In sum, the Commission has no objective basis for determining whether GHG emissions are significant that would satisfy the Commission's APA obligations. Nor

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[46] 33 U.S.C. § 1344 (2018).

[47] *See* Water Resources Development Act, Pub. L. 110-114, § 2036(c), 121 Stat. 1041, 1094 (2007); National Defense Authorization Act, Pub. L. 108-136, § 314, 117 Stat. 1392, 1430 (2004); Transportation Equity Act for the 21st Century, Pub. L. 105-178, § 103 (b)(6)(M), 112 Stat. 107, 133 (1998); Water Resources Development Act of 1990, Pub. L. 101-640, § (a)(18)(C), 104 Stat. 4604, 4609 (1990).

[48] 42 U.S.C. § 7641(c) ("In any case where any Federal department or agency is carrying out or sponsoring any activity resulting in noise which the Administrator determines amounts to a public nuisance or is otherwise objectionable, such department or agency shall consult with the Administrator to determine possible means of abating such noise.").

[49] *See Williams Gas Pipelines Cent., Inc.*, 93 FERC ¶ 61,159, at 61,531-52 (2000).

does the Commission have the ability to establish measures to mitigate GHG emissions. Pursuant to the Clean Air Act, Congress exclusively assigned authority to regulate emissions to the EPA and the States.

29. I recognize that some believe the Commission should do more to address climate change. The Commission, an energy agency with a limited statutory authority, is not the appropriate authority to establish a new regulatory regime.

For these reasons, I respectfully concur.

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Bernard L. McNamee