

ATTACHMENT AA

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Corpus Christi Liquefaction, LLC
CCL Midscale 8-9, LLC

Docket No. PF22-10-000

Scoping Comments for Docket No. PF22-10-000

I. Introduction

Commenters submit these comments in response to the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) November 17, 2022 Notice of Scoping Period Requesting Comments on Environmental Issues for the Planned Corpus Christi Liquefaction (“CCL”) Midscale Trains 8 & 9 Project (“Project” or “Stage IV”). While there is currently a dearth of information on the Project, the public documents that are available suggest that the Project is not in the public interest. These comments are not exhaustive. FERC must perform a wide-ranging and detailed environmental review of all the possible environmental impacts associated with the Project including, *inter alia*, impacts to surrounding environmental justice communities, local water supply, wetlands, water quality, air quality, and the climate.

FERC plays a crucial role in the environmental review of the Project. While the applicants must acquire permits and approvals from several federal and state agencies in addition to the FERC approvals requested here, FERC is the lead agency for coordinated NEPA review.¹ Other federal agencies participate in this process as “cooperating agenc[ies],”² while FERC is responsible for “supervis[ing] the preparation of [the] environmental impact statement.”³ As a result, the analysis FERC performs during this review will help ensure that the totality of environmental impacts will be considered across all the various agency approvals and permitting processes.⁴ Accordingly, FERC must take a hard look at the many

¹ *Sierra Club v. FERC*, 827 F.3d 36, 41 (D.C. Cir. 2016).

² 40 C.F.R. § 1501.8(b).

³ 40 C.F.R. § 1501.7(a).

⁴ *E.g.*, in many cases where the United States Army Corps of Engineers (“Corps”) considers an application for a section 404 permit for an LNG export facility, the alternatives analysis performed by FERC as part of the NEPA process often provides the information for the Corps’ determination of the least environmentally damaging practicable alternative as required by the 404(b)(1) Guidelines. *See Holy Cross Wilderness Fund v. Madigan*, 960 F.2d 1515, 1526 n. 17 (10th Cir. 1992).

environmental impacts presented by the Project to comply with its NEPA obligations.

II. So Far, FERC Has Failed to Follow Appropriate Procedures

A. The Request for Scoping Comments is Untimely Because there is Inadequate Information for the Public to Comment

NEPA requires agencies to “[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures.”⁵ Central to the NEPA process is “the policy that the public is entitled to the fullest information regarding the decisionmaking processes of the Federal Government.”⁶

Thus far, FERC has failed to make the diligent efforts necessary to facilitate public participation in this process. At the threshold there is not yet an actual application for the Project. In initiating this scoping period before CCL has submitted a project application, FERC deprived the public of vital information. In absence of a project application, the public is not adequately informed about the project and cannot comment on all potential issues that the project will raise. FERC is therefore asking commenters to speculate on the nature of the project and its environmental impacts. This contravenes NEPA’s mandate that the public should receive the “fullest information” necessary for effective public participation.⁷

The lack of publicly accessible information undermines the purpose of this scoping period and environmental review of the Project in general. The scoping process identifies “serious problems with a proposal” and ensures that the subsequent environmental review of the proposal is “balanced and thorough.”⁸ Scoping is also a “useful tool for discovering alternatives to a proposal, or significant impacts that may have been overlooked.”⁹ The environmental review process itself is designed to ensure that agencies, “other officials, Congress, and the public can

⁵ 40 C.F.R. § 1506.6(a).

⁶ 40 C.F.R. § 1517.1.

⁷ *Id.*

⁸ CEQ, Memorandum for General Counsels, NEPA Liaisons and Participants in Scoping at 3-4 (April 30, 1981), available at https://www.energy.gov/sites/default/files/CEQ_Scoping_Guidance.pdf (attached).

⁹ CEQ, 40 Most Asked Questions Concerning the CEQ’s National Environmental Policy Act Regulations at 10-11 (March 16, 1981), available at <https://www.energy.gov/sites/default/files/2018/06/f53/G-CEQ-40Questions.pdf> (attached).

evaluate the environmental consequences” of a proposal.¹⁰ None of these underlying purposes are being furthered here. Without the relevant information that would be in a project application, stakeholders are unable to fully evaluate the proposal or assist FERC in identifying the project-specific issues that FERC must evaluate in its environmental review.

These shortcomings are especially worrisome here given the importance of adequate scoping and effective early outreach in ensuring that environmental justice is adequately considered. As the Council on Environmental Quality explained, “[w]hen the scoping process is used to develop an EIS or EA, an agency should seek input from low income populations, minority populations, or Indian tribes as early in the process as information becomes available.”¹¹ The purpose of seeking this early input is to generate meaningful involvement, meaning, inter alia, well informed involvement, and it has not been achieved here.¹²

B. The Scoping Comments and Scoping Period are not Adequate to Ensure Proper Environmental Justice Community Participation and Analysis

To properly analyze environmental justice, FERC must obtain “meaningful community representation in the process.”¹³ FERC must “be aware of the diverse constituencies within any particular community,” including any impacted tribes, and “have complete representation of the community as a whole.”¹⁴ It is essential that community participation “occur as early as possible if it is to be meaningful.”¹⁵ Therefore, after FERC has collected the necessary information to ensure adequate participation, FERC must go beyond its typical public outreach practices to ensure meaningful environmental justice community participation. It must determine the necessary “adaptive or innovative approaches to overcome linguistic, institutional, cultural, economic, historical, or other potential barriers to effective participation”

¹⁰ *Columbia Basin Land Protection Ass’n v. Schlesinger*, 643 F.2d 585, 592 (9th Cir. 1981).

¹¹ CEQ, Environmental Justice: Guidance Under the National Environmental Policy Act at 11 (1997), available at <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf> [hereinafter “CEQ 1997 Guidance”] (attached).

¹² See, e.g., EPA, Guidance on Considering Environmental Justice During the Development of Regulatory Actions at 33-34 (2015), available at <https://www.epa.gov/sites/default/files/2015-06/documents/considering-ej-in-rulemaking-guide-final.pdf> (attached) [hereinafter “EPA 2015 Guidance”].

¹³ CEQ 1997 Guidance at 9.

¹⁴ *Id.*

¹⁵ *Id.*

in its decisionmaking process.¹⁶ These approaches can include translation of major documents, opportunities to comment through other means than written communication, and creating materials specifically designed to garner the involvement of different constituencies.¹⁷

Here, the proposed project will have significant impacts on environmental justice communities.¹⁸ The City of Gregory, the closest city to the project area, is 89% Hispanic/Latino¹⁹ and 50% of the population is considered low income.²⁰ Corpus Christi, the nearest major Texas city, is 64% Hispanic/Latino²¹ and 36% low income.²² Similarly, the population of San Patricio County, where the project site is located, is 58% Hispanic/Latino²³ and 38% low income.²⁴ By comparison, only 40.2% of the State's population is Hispanic/Latino²⁵ and 33% of the entire population of Texas is considered low income.²⁶

Despite this, FERC has so far failed to utilize the public outreach and engagement practices necessary to ensure adequate participation of the impacted environmental justice communities. For one, FERC failed to host a town hall style

¹⁶ *Id.* at 13. *Accord* EPA 2015 Guidance at 32-35.

¹⁷ CEQ 1997 Guidance at 13.

¹⁸ An area may contain an environmental justice population (1) if more than 50% of the population is in a potentially affected area are people of color or the percentage of people of color in a specific area exceed the percentage of the general population, or (2) if there are affected populations with incomes below the statistical poverty thresholds. CEQ 1997 Guidance at 25.

¹⁹ US EPA, EJSCREEN ACS Summary Report: Gregory, Texas, available at <https://ejscreen.epa.gov/mapper/> (last accessed Nov. 30, 2022) (attached).

²⁰ A household is considered "low income" when the household income is less than or equal to twice the federal "poverty level." US EPA, Overview of Socioeconomic Indicators in EJScreen, available at <https://www.epa.gov/ejscreen/overview-socioeconomic-indicators-ejscreen> (last accessed Nov. 30, 2022) (attached). US EPA, EJScreen Report (Version 2.1): Gregory, Texas, available at <https://ejscreen.epa.gov/mapper/> (last accessed Nov. 30, 2022) (attached).

²¹ US EPA, EJSCREEN ACS Summary Report: Corpus Christi, Texas, available at <https://ejscreen.epa.gov/mapper/> (last accessed Nov. 30, 2022) (attached).

²² US EPA, EJSCREEN Report (Version 2.1): Corpus Christi, Texas, available at <https://ejscreen.epa.gov/mapper/> (last accessed Nov. 30, 2022) (attached).

²³ US EPA, EJSCREEN ACS Summary Report: San Patricio County, Texas, available at <https://ejscreen.epa.gov/mapper/> (last accessed Nov. 30, 2022) (attached).

²⁴ US EPA, EJSCREEN Report (Version 2.1): San Patricio County, Texas, available at <https://ejscreen.epa.gov/mapper/> (last accessed Nov. 30, 2022) (attached).

²⁵ ACS Summary Report: San Patricio County, Texas.

²⁶ EJSCREEN Report: San Patricio County, Texas.

public meeting before initiating the scoping period. Instead, FERC atomized public participation by shuttling individual members of the public into separate rooms to share their concerns. FERC held only one public meeting at one location and at one time, ensuring those with different work schedules or familial obligations could not attend. Further, FERC failed to provide a formal informational presentation on the Project before soliciting comments at that meeting. Through this lack of an informational public forum, FERC deprived the public of a necessary, clear overview of the Project. Taken together with FERC's decision to initiate the scoping comments before CCL submitted an application, FERC's actions have left local environmental justice communities in the dark about the Project and its potential impacts. Finally, the publicly available documents are not in a format that is helpful to the public understanding of the project. The only way to access substantive information about the project is to read the resource reports provided by CCL, which consist of over 300 pages of highly technical information. Moreover, FERC has not provided Spanish translation of any of the Project proceedings or documents, despite the fact that the large portions of the surrounding communities that will be affected by the Project speak Spanish.²⁷

Thus far, FERC has imposed substantial barriers to public participation that are inconsistent with the environmental justice and participatory justice aims of the NEPA process. Going forward, it must mitigate these barriers and make information about the Project readily accessible to the public.

C. FERC Must Utilize the EIS Process for Stage IV

NEPA requires agencies to prepare an environmental impact statement ("EIS") for any project that "[i]s likely to have significant effects."²⁸ In determining whether an action is "significant," agencies must "analyze the potentially affected environment and degree of the effects of the action." As discussed in detail below, the Project will have significant impacts, particularly on environmental justice, climate, air quality, water quality, and wildlife. Therefore, FERC must prepare an EIS for this Project.

²⁷ 54 percent of residents in Gregory, Texas are non-English speakers at home. EJSCREEN Report: Gregory, Texas.

²⁸ 40 C.F.R. § 1501.3.

D. FERC Must Determine Whether the Project is Within the Public Interest by Analyzing Factors Outside of Potential Demand for the Project in the International Market

CCL's stated purpose for the Project is "to expand CCL Terminal production capabilities to meet immediate and future global demand for LNG, which requires the liquefaction and export of abundant U.S. natural gas supplies to overseas markets via ocean-going vessels."²⁹ Strict adherence to this purpose during the environmental review process would render FERC's analysis of the Project too narrow and inconsistent with NEPA.

CCL's stated project purpose that would render only one alternative acceptable—the Project. Thus, the purpose CCL put forward is to construct the Project itself, rather than a goal that the Project, along with other possible alternatives, could accomplish. If CCL's purpose is uncritically adopted, no alternative would be acceptable other than the applicants' preferred project and the NEPA process would be a foregone conclusion. Such a process would violate NEPA because "consideration of environmental matters must be more than a pro forma ritual."³⁰

FERC must determine an overall project purpose that ensures due consideration of an appropriate range of alternatives. This must be expanded to something significantly broader than construction of the Project. For FERC to satisfy NEPA, it must seriously consider other potentially viable alternatives. It must also give proper weight to the environmental and social costs of the Project, rather than just focusing on purported international demand for the Project.³¹ It is especially important that FERC consider all aspects of the Project, because, as

²⁹ RR 10-2.

³⁰ *Calvert Cliffs' Coordinating Committee, Inc. v. U.S. Atomic Energy Commission*, 449 F.2d 1109, 1128 (D.C. Cir. 1971).

³¹ There is no basis for CCL's claim that "increased demand around the world for more natural gas." RR 10-2. As the effects of climate change intensify, many countries are seeking efficiency measures and renewable energy solutions that provide a safer, more resilient, and more climate-friendly alternative to further fossil fuel use. The European Union, for its part, is making significant investments into a green transition. European Commission, *Towards a green, digital and resilient economy: our European Growth Model*, (March 2, 2022), https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1467 (attached). Nor is there evidence that additional export capacity is needed or beneficial for supplying gas to Asia or other non-European destinations.

discussed below, the Project poses severe risks to the climate, local environment, and nearby environmental justice communities.

III. FERC Must Analyze the Project's Adverse Impacts to Environmental Justice Communities.

NEPA requires consideration of environmental justice impacts, including the human health, economic and social effects of the proposed action on minority and low-income communities. On February 11, 1994, President Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations." The Executive Order makes it the responsibility of each Federal agency to "make achieving environmental justice part of its mission in identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."³² Accompanying this order was a Presidential Memorandum stating that "each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act. . . ." ³³

The CEQ has issued guidance on incorporating environmental justice considerations in the NEPA process.³⁴ The guidance states in part:

In preparing an EIS or an EA, agencies must consider both impacts on the natural or physical environment and related social, cultural, and economic impacts. Environmental justice concerns may arise from impacts on the natural and physical environment, such as human health or ecological impacts on minority populations, low-income populations, and Indian tribes, or from related social or economic impacts.³⁵

Pursuant to Executive Order 12898, agencies must identify environmental justice populations when a project will have impacts on: a) a minority population

³² Exec. Order 12898, 59 Fed. Reg. 7629 § 1-101 (Feb. 16, 1994) (attached).

³³ Memorandum on Environmental Justice, President Clinton (Feb. 11, 1994), <https://www.govinfo.gov/content/pkg/WCPD-1994-02-14/pdf/WCPD-1994-02-14-Pg279.pdf> (attached).

³⁴ CEQ 1997 Guidance.

³⁵ *Id.* at 8.

that comprises more than 50 percent of the block group's total population; b) a minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis; or c) low-income communities.³⁶

Agencies must consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by the proposed action, and if so whether there may be disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, or Indian tribes.³⁷

It is clear that the Project will have adverse impacts on the surrounding communities, regions supplying the gas to be exported, and the climate as a whole. FERC must consider the disproportionate adverse impacts on environmental justice communities through direct, indirect, and cumulative impacts stemming from the potential expansion.

A. FERC Must Identify the Environmental Justice Communities Impacted by the Project in its Environmental Analysis

The Project will be located approximately one mile southeast of the city of Gregory, in the county of San Patricio, Texas. Both Gregory and San Patricio County are predominantly minority and low-income. Specifically, the population of Gregory is 89% Hispanic/Latino and 91% people of color.³⁸ FERC must analyze the disproportionate impacts felt by the nearby environmental justice communities, especially those closest to the project.

B. FERC Must Consider Disparate Health Impacts on the Nearby Environmental Justice Communities

In addition to identifying nearby environmental justice communities, FERC must properly consider the disproportionate health impacts of the Project on nearby communities. As discussed above, the communities near the Project site are majority Hispanic/Latino. There is a higher incidence of negative health outcomes

³⁶ Exec. Order 12898.

³⁷ CEQ 1997 Guidance at 9.

³⁸ EJScreen Report, Gregory, Texas.

in Hispanic compared to non-Hispanic whites in South Texas, and in general, South Texas communities have less access to healthcare.³⁹

The Project would lead to increased air and water pollution in the Project area (see Sections IV and V below), which would have detrimental impacts on the neighboring environmental justice communities, given their susceptibility to health impacts and lack of healthcare access. Thus, FERC must properly analyze the health impacts of the Project and the potential for disproportionate harm to the nearby environmental justice communities.

C. FERC Must Consider that the Communities Around the Project Site are Overburdened with Pre-Existing Impacts

FERC must also consider that the communities that would be impacted by the expansion are already overburdened with infrastructure and polluting facilities. Toxic pollution from industrial facilities disproportionately impacts low-income neighborhoods and communities of color located near these facilities along the Texas Gulf Coast.

In particular, San Patricio County already has 8 industrial facilities monitored by the Toxics Release Inventory (TRI) as of 2021, which, combined, release over 436 thousand pounds of land, air, and water pollution annually.⁴⁰ Over 367 thousand pounds of that annual pollution comes from just 3 facilities in Gregory, TX, a small city of fewer than 2,050 people⁴¹ located approximately 1 mile from the project site.⁴² Nueces County, adjacent to San Patricio County, with a county seat less than 15 miles from the Project site, has 26 industrial facilities monitored by the TRI, which release over 9.6 million pounds of pollution annually.⁴³

³⁹ A. Ramirez, et al., A Health Disparities Roadmap, The South Texas Health Status Review (2013), available at <https://ihpr.uthscsa.edu/research-publications/other-reports/south-texas-health-status-review/> (attached).

⁴⁰ US EPA, 2021 TRI Factsheet: County – San Patricio County, TX, available at https://enviro.epa.gov/triexplorer/tri_factsheet.factsheet?pzip=&pstate=TX&pcity=&pcounty=San%20Patricio&pyear=2021&pParent=TRI&pDataSet=TRIQ1 (last accessed Dec. 1, 2022) (attached).

⁴¹ ACS Survey, Gregory, Texas.

⁴² US EPA, 2021 TRI Factsheet: City – Gregory, TX, available at https://enviro.epa.gov/triexplorer/tri_factsheet.factsheet?pzip=&pstate=TX&pcity=GREGORY&pcounty=&pyear=2021&pParent=TRI&pDataSet=TRIQ1 (last accessed Dec. 1, 2022) (attached).

⁴³ US EPA, 2021 TRI Factsheet: County – Nueces County, TX, available at: https://enviro.epa.gov/triexplorer/tri_factsheet.factsheet?pzip=&pstate=TX&pcity=&

FERC must consider the cumulative impact that this Project and its associated pollution will have on these communities, in light of the sizable existing pollution burdens.

D. FERC Must Consider that the Project's Nuisance Impacts Will Disproportionately Impact Nearby Environmental Justice Communities

In preparing an EIS or an EA, agencies must consider both impacts on the natural or physical environment—including traffic, noise, and lighting- and related social, cultural, and economic impacts.⁴⁴ Traffic, noise, and lighting impacts from this Project would have a disproportionate impact on the closest communities in Gregory, where the majority of people living near the Project are Hispanic/Latino.⁴⁵ Construction and operation of the Project would cause significant nuisance impacts to the surrounding environmental justice community. For example, construction activities at the Project site would generate increases in sound levels over an approximate seven-year period.⁴⁶ Construction and operation of the Project will also increase traffic, as it will double the authorized LNG ship loading rate and thus result in many more LNG ships calling on the Project each year.⁴⁷ This increase in traffic would have air quality impacts that would be felt outside of the project boundaries. FERC must also assess whether the lighting from the Project construction and operation will have impacts to the nearby environmental justice communities.

E. FERC Must Evaluate Impacts on Environmental Justice Communities From Climate Change, Including Sea Level Rise and Increased Storms

FERC must analyze the climate impacts from this project, as discussed in more detail in Section VII. The Gulf coast is especially vulnerable to sea-level rise

pcounty=Nueces&pyear=2021&pParent=TRI&pDataSet=TRIQ1 (last accessed Dec. 1, 2022) (attached).

⁴⁴ 40 C.F.R. § 1508.1(4).

⁴⁵ EJSCREEN ACS Report: Gregory, Texas.

⁴⁶ RR 1-15.

⁴⁷ Request for Scoping Comments at 4; CC Stage IV Request to initiate Pre-Filing Review Process.

because of its fragile, low-lying shorelines and adjacent coastal environments. Sea level is rising more rapidly along the Gulf Coast because coastal lands are sinking.⁴⁸

This is impacting many Texas residents who live in highly vulnerable low-lying coastal counties. The southern Texas coast houses a majority of the most socially vulnerable populations in the Gulf.⁴⁹ Areas of higher social vulnerability, like environmental justice communities, are more likely to be abandoned than protected in response to sea level rise.⁵⁰

Moreover, severe storms are disproportionately impacting environmental justice communities and forcing the displacement of coastal residents. Damage from land-falling hurricanes along the coast of the Gulf of Mexico is expected to increase as very strong hurricanes become more frequent and intense due to climate change.⁵¹ Coastal areas in Texas are eroding at a rate of over four feet annually, and as a result the area is losing important buffers to the impacts of hurricanes.⁵² Therefore, storm and hurricane related impacts will only intensify for frontline communities in the future. Notably, sea level rise has already cost Texas homeowners over \$76 million in potential property value.⁵³ Because coastal areas in Texas are disproportionately home to environmental justice populations, the serious impacts from climate change will fall disproportionately on these communities.

The Project would exacerbate all of these climate impacts. In addition to analyzing the Project's climate impacts, FERC must also analyze how these impacts would disproportionately fall on environmental justice communities.

⁴⁸ Harte Res. Inst. for Gulf of Mex. Stud., *Living with Sea Level Rise in Texas*, available at <https://www.hartheresearchinstitute.org/collaboration/living-sea-level-rise-texas> (last accessed Dec. 2, 2022) (attached).

⁴⁹ J. Martinich et al., *Risks of Sea Level Rise to Disadvantaged Communities in the United States*, 18 *Mitigation & Adaptation Strategies for Global Change* 169 (2013) (attached).

⁵⁰ *Id.*

⁵¹ U.N. IPCC, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, available at <https://www.ipcc.ch/report/ar6/wg2/> (last accessed Dec. 3, 2022) (attached) [hereinafter "IPCC 2022 Report"].

⁵² The Texas General Land Office, *Coastal Erosion*, available at <https://www.glo.texas.gov/coast/coastal-management/coastal-erosion/index.html> (last accessed Dec. 3, 2022) (attached).

⁵³ P. Trevino, *Study: Sea Level Rise Causes Texas Coastal Homeowners to Lose Millions In Potential Property Value*, *The Houston Chronicle* (Apr. 23, 2019), available at <https://www.houstonchronicle.com/news/houston-texas/texas/article/Study-Sea-level-rise-causes-Texas-coastal-13786803.php> (last accessed Dec. 3, 2022) (attached).

IV. FERC Must Consider Impacts to Air Quality

FERC must consider the air quality impacts from the Project. CCL's resource reports do not contain sufficient information about the projected air emissions of the Project for commenters to provide particularized comments about potential air impacts. The resource reports do not identify any specific type or quantity of air emissions from the project. However, FERC must analyze a variety of toxic pollutants emitted by LNG operations, including carbon monoxide (CO), methane (CH₄), volatile organic compounds (VOCs), nitrogen oxides (NO_x), sulfur dioxide (SO₂), hydrogen sulfide (H₂S), and particulate matter (PM₁₀ and PM_{2.5}). Oil and natural gas operations also emit listed hazardous air pollutants (HAPs) in significant quantities, and so contribute to cancer risks and other acute public health problems.

CCL's resource reports acknowledge that Project construction and operation will have air quality impacts, but do not provide adequate detail concerning the extent of those impacts. Regarding construction impacts, CCL states that "[a]lthough the Project will result in short-term construction air emissions, it will not significantly affect long-term air quality in the region."⁵⁴ As to operational air quality impacts, CCL asserts that, because the Project operation will be subject to the National Ambient Air Quality Standards ("NAAQS") and will need to secure air emissions permits from the Texas Commission on Environmental Quality (TCEQ), "the cumulative impact of emissions on air quality in the area during Project operation is expected to be environmentally acceptable."⁵⁵

However, this has already proven to be untrue for CCL's existing facility at the Project site. CCL's Corpus Christi facility "has exceeded its permitted limits for emissions of pollutants such as soot, carbon monoxide and volatile organic compounds (VOCs) hundreds of times since it started up in 2018."⁵⁶ People living near the facility report that there are frequent, large flares from the facility and that local air quality has deteriorated since the facility's start-up.⁵⁷ In its annual enforcement report for fiscal year 2019, TCEQ linked an 83% increase in emissions

⁵⁴ RR 1-36.

⁵⁵ RR 1-36.

⁵⁶ N. Groom and V. Volcovici, Texas repeatedly raises pollution limits for Cheniere LNG plant (June 24, 2022), available at <https://www.reuters.com/business/environment/texas-repeatedly-raises-pollution-limits-cheniere-lng-plant-2022-06-24/> (last accessed Dec. 5, 2022) (attached).

⁵⁷ *Id.*

in the Corpus Christi region in part to the start-up of the CCL facility.⁵⁸ Moreover, even compliance with permits cannot show a lack of significant air quality impacts—the TCEQ has consistently granted CCL substantial increases in the pollution limits for the facility in response to permit violations, in some cases doubling acceptable emissions levels from the initial permits.⁵⁹

As FERC analyzes the air impacts of the project, it is important to note that when determining whether the Project will cause or contribute to an exceedance of the NAAQS, FERC cannot use significant impact levels (“SIL”) to determine that the Project will not so cause or contribute. The Clean Air Act unambiguously prohibits using SILs to demonstrate that a project would not cause or contribute to NAAQS exceedance.⁶⁰ FERC must analyze the Project’s contribution to declining air quality in the region, regardless of whether the CCL claims the Project will not exceed a SIL.⁶¹ That is the only way for FERC to fulfil its duties under NEPA to disclose the full impacts of the Project to the public and to determine whether the Project is in the public interest as required by the Natural Gas Act.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *See, e.g., Alabama Power Co. v. Costle*, 636 F.2d 323, 362 (D.C. Cir. 1979) (Congress specifically used the term “cause” and “contribute” together to ensure that the Prevention of Significant Deterioration program would prevent increments and the NAAQS from being exceeded by considering all possible violations or contributions to violation); *Bluewater Network v. EPA*, 370 F.3d 1, 13 (D.C. Cir. 2004) (interpreting nearly identical language in the Clean Air Act to mean that the term “contribute” “has no inherent connotation as to magnitude or importance of the relevant ‘share’ in the effect; certainly it does not incorporate any ‘significance’ requirement.”); *Sierra Club v. EPA*, 705 F.3d 458, 465-66 (D.C. Cir. 2013) (vacating EPA’s PM 2.5 SILs regulation because EPA lacks “authority to exempt sources from the requirements of the” Clean Air Act and the regulation “simply states that the demonstration required under [section] 165(a)(3) is deemed to have been made if a proposed source or modification’s air quality impact is below the SIL.”). *See also Sierra Club v. EPA*, 955 F.3d 56, 63-64 (D.C. Cir. 2020) (Affirming that the Court lacks jurisdiction to vacate a non-binding policy document as part of a facial challenge but explaining that “[t]he SILs Guidance is not sufficient to support a permitting decision—simply quoting the SILs Guidance is not enough to justify a permitting decision without more evidence in the record, including technical and legal documents.”).

⁶¹ This is especially important here modeling for CCL’s Stage 3 project showed that the Stage 3 project nearly lead to exceedances of the NAAQS for two criteria pollutants. *See* FERC, Environmental Assessment *in* Docket Nos. CP18-512-000, CP18-513-000 at 130, Accession No. 20190329-3010 (attached).

Thus, FERC must conduct a thorough, independent analysis of the air quality impacts of the Project, including the cumulative impacts that this Project will have in conjunction with other projects in the area.⁶²

V. FERC Must Consider Water Usage, Wetland, and Water Quality Impacts

FERC must consider the ways in which the Project will directly and indirectly harm local water quality, wetlands, and water supply. First, construction and operation of the Project will likely burden local water supply. CCL asserts that all water demands from the Project “will be intermittent or periodic in nature” and estimates that the operational usage for “demineralized, potable, and utility water are 1.1 gpm, 0 gpm, and 0 gpm, respectively.”⁶³ However, CCL does not provide sufficient data in the resource reports to support its claims that the Project’s water usage will be limited, and FERC must engage in a comprehensive analysis of the potential water usage impacts. CCL further states that water for the Project will come from the San Patricio Municipal Water District. FERC should assess the effect of withdrawing water from the local water district, particularly in light of the drought conditions in the Project area.⁶⁴

Additionally, the Project may have a negative impact on water bodies and wetlands as a result of dredging, pipeline stream crossings, increased stormwater pollution, increased ballast water discharge, and increased shipping traffic. FERC must not take CCL’s bare assertion that “[n]o impacts to wetlands are anticipated to occur from construction or operation of the Project,”⁶⁵ rather, it must also conduct a rigorous analysis of potential wetland impacts. Aquatic habitat may be directly disturbed by any necessary dredging, pier construction, or pipeline water crossings. Similarly, construction may occur directly in waterways in order to build the Project. Excavation and construction related to potential crossings risks disruption of aquatic habitat, and the potential for blow-out or failure of these crossings may present further risks that FERC must analyze.

Finally, the Project will also impact water quality. Stormwater runoff from the project may spread contaminants and impair local water quality. As the

⁶² 40 C.F.R. § 1508.1(g); see RR 1-26–1-27.

⁶³ RR 2-6.

⁶⁴ SPMWD, Stage 1 Conservation Measures Remain in Effect (November 2022), available at <http://www.sanpatwater.com/Stage%201%20July%202022.php> (last accessed Dec. 5, 2022) (attached).

⁶⁵ RR 2-7.

National Marine Fisheries Service has asserted in connection with another LNG terminal application, stormwater runoff associated with an LNG terminal can contain “heavy metals, petroleum products and brake chemicals and compounds that are deleterious to fish and fish habitat.”⁶⁶ Moreover, the ship traffic inherent in LNG export will also impair water quality in the bay. The Project would result in an increase in ship departures from 400 LNG carriers per year to 480 LNG carriers per year.⁶⁷ As FERC has explained in a prior EIS, LNG tanker traffic causes “resuspension of bottom sediments and resulting increases in turbidity.”⁶⁸ Although resuspension of sediment caused by any individual ship passage may be only temporary, adding 80 additional ship departures per year will make this turbidity a far more frequent and continuous occurrence. Ships may also further harm the aquatic environment by discharging ballast water at the terminal, potentially introducing exotic or nuisance organisms. Separate from effects on water quality, the frequent passage of LNG tankers through the bay, coupled with the large exclusion zones that are maintained around these ships for safety, will significantly disrupt other human users of the bay, including fishermen and recreational boaters. FERC must closely analyze these potential impacts, rather than accepting CCL’s unsupported claims that they are unlikely.⁶⁹

VI. FERC Must Consider Noise and Light Impacts

Construction and operation of the proposed project will cause significant increases in local noise and light pollution, which will adversely impact nearby residents and wildlife. The resource reports acknowledge that lighting will be needed.⁷⁰ They also note that construction and operational noise will be generated from the Project.⁷¹ NEPA requires that FERC consider these impacts during the environmental review process.

⁶⁶ Comment of National Marine Fisheries Service on Final Environmental Impact Statement for the Jordan Cove Energy Liquefied Natural Gas Terminal and Pacific Connector Gas Pipeline Project, FERC Docket CP07-441, at 2 (June 5, 2009)

⁶⁷ *Id.*

⁶⁸ Jordan Cove CP07-441 EIS § 4.3.2.3.

⁶⁹ *See* RR 2-12.

⁷⁰ RR 8-6.

⁷¹ RR 1-37.

VII. Under NEPA, FERC Must Consider Climate Change as Part of its Environmental Analysis

FERC must also consider the environmental impacts of climate change to and from this project. This analysis must be rigorous, far-reaching, and multi-faceted. Among other considerations, FERC must analyze how climate change will impact the proposed Project and the environmental and other resources in the Project area—*e.g.* endangered and threatened species, water resources, wetlands, fisheries, cultural resources, vegetation, wildlife, cumulative impacts, and public safety. Additionally, FERC must properly identify the full extent of greenhouse gas emissions associated with this project. This includes upstream, downstream, and direct (*e.g.* operational and construction) emissions. FERC must analyze these emissions' contribution to climate change and its impacts.

A. *As an initial matter, FERC must analyze Project impacts with and without CCS*

CCL has indicated it is looking to add carbon capture and storage to its Corpus Christi LNG facility.⁷² However, to date, CCL has made no commitment to install or ultimately operate CCS equipment in this Project or others. Thus, without clearer information from CCL, FERC must analyze the project's greenhouse gas emissions and their impacts based on multiple scenarios. FERC must analyze the facility's greenhouse gas emissions and the severity of their impact under scenarios where various CCS systems are operational and another where no CCS system is operational. CCS scenarios must take into account fugitive emissions from the pipeline and storage site.

In analyzing CCS scenarios, FERC must consider an array of impacts from CCS, including issues related to energy usage, water usage, and storage. CCS systems are energy- and water-intensive technologies.⁷³ It is estimated that if CCS were used “to meet the 1.5 °C climate target, CCS would almost double the water

⁷² Fugitive Emissions Journal Publisher, Cheniere Energy & Sempra to add CCS to LNG (May 10, 2021), available at <https://fugitive-emissions-journal.com/cheniere-energy-sempra-to-add-ccs-to-lng/> (last accessed Dec. 6, 2022) (attached).

⁷³ L. Rosa et al., The water footprint of carbon capture and storage technologies (October 2020), available at https://www.researchgate.net/publication/346480783_The_water_footprint_of_carbon_capture_and_storage_technologies (last accessed Dec. 5, 2022) (attached).

footprint of humanity.”⁷⁴ Thus, deploying CCS systems in water-scarce areas places increased pressure on local water resources.⁷⁵ San Patricio County is a drought-prone region: it was in severe to extreme drought conditions at the end of June, and the San Patricio County Municipal Water District announced in November that Stage 1 conservation measures remain in effect.⁷⁶ FERC must take into account the burden that CCS would add to the already stressed water sources that the Project would rely on.

As CCL has not committed to CCS, FERC must also analyze the Project’s impacts without CCS. FERC may not weigh any benefits that would potentially be provided by an operational CCS system when determining whether the project is in the public interest because there is no legally enforceable CCS plan.

B. In its analysis, FERC must use the social cost of carbon or a similar metric to determine significance of GHG emissions

The social cost of carbon is an appropriate and effective methodology for addressing the impact of greenhouse gas emissions. It provides a monetary estimate of the cost to society of each additional ton of CO₂ emitted. Because the climate related impacts of project-specific emissions can be somewhat difficult to evaluate, the social cost of carbon helps by monetizing impacts. Thus, in this way, the social cost of carbon provides a dollar value illustrating the climate related consequences of discrete projects.⁷⁷

⁷⁴ *Id.*

⁷⁵ L. Rosa et al., Hydrological limits to carbon capture and storage (May 2020), available at <https://nature.berkeley.edu/matteolab/wp-content/uploads/2020/05/CCS-water-Nature-Sustainability-2020.pdf> (last accessed Dec. 5, 2022) (attached).

⁷⁶ SPMWD, Stage 1 Conservation Measures Remain in Effect (November 2022) (attached).

⁷⁷ For example, the National Highway Transportation Administration determined that stricter vehicle fuel economy standards adopted in 2012 would avoid only 0.0074 to 0.0176 °C in global temperature increases, relative to no-action, but that this seemingly small change would produce \$170 billion in benefits, when calculated with a 3% discount rate. 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62,624, 62,897, 62,929 (Oct. 15, 2012).

On January 20, 2021, the Biden Administration reversed a previous Executive Order withdrawing the use of the social cost of carbon tool.⁷⁸ In reinstating the Social Cost of Carbon tool, President Biden stated:

It is essential that agencies capture the full costs of greenhouse gas emissions as accurately as possible, including by taking global damages into account. Doing so facilitates sound decision-making, recognizes the breadth of climate impacts, and supports the international leadership of the United States on climate issues. ... An accurate social cost is essential for agencies to accurately determine the social benefits of reducing greenhouse gas emissions when conducting cost-benefit analyses of regulatory and other actions.⁷⁹

The Executive Order also called for an update to the social cost of carbon tool.⁸⁰ In September 2022, the EPA proposed a new estimate for the social cost of carbon emissions, \$190 per ton, which incorporates recent scientific advances.⁸¹ The EPA calculated the new metric based on four components of the SC-GHG estimation process – socioeconomics and emissions, climate, damages, and discounting – and drew on the latest research and expertise from scientific disciplines relevant to each component.⁸² Because there is a range of available social cost of carbon values, FERC should apply several values here to assess the climate related impacts of the Project. FERC should include EPA’s recently released figure in that analysis.

Moreover, the social cost of carbon contextualizes the magnitude of greenhouse gas impacts in a manner easily understood by the public that might otherwise be obscured. This fulfills FERC’s obligations under NEPA to provide sufficient information for members of the public to “evaluate and balance the (environmental) factors [of the project] on their own.”⁸³

⁷⁸ Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 86 FR 7037 (attached).

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ U.S. EPA, Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances (September 2022), available at https://www.epa.gov/system/files/documents/2022-11/epa_scghg_report_draft_0.pdf (attached).

⁸² *Id.*

⁸³ *Calvert Cliffs’ Coordinating Committee, Inc. v. U.S. Atomic Energy Commission*, 449 F.2d 1109, 1114 (D.C. Cir. 1971).

In the past, FERC refused to utilize the social cost of carbon tool for a myriad of reasons.⁸⁴ These justifications are without merit. If FERC maintains, as it has historically, that it cannot determine the project's incremental impacts from greenhouse gas emissions and cannot assess the significance of the project's contribution to climate change,⁸⁵ NEPA mandates that FERC utilize a theoretical approach or research method generally accepted in the scientific community to evaluate the reasonably foreseeable impacts.⁸⁶ The social cost of carbon protocol is used by other federal agencies, and is recognized by the scientific community as an acceptable method to evaluate the severity of greenhouse gas emissions on climate change. FERC has implicitly recognized the general acceptance of the social cost of carbon tool.⁸⁷ As such, FERC must utilize the social cost of carbon to meet this mandate if it has no other means for assessing the impacts of greenhouse gas emissions.⁸⁸

C. FERC Must Analyze Climate Impacts in the Context of Greenhouse Gas Reduction Targets

The United States has adopted nationwide greenhouse gas reduction targets in line with the Paris Climate Accord's goal to limit global warming to 1.5°C. President Biden recently announced a new target for the United States to achieve a 50-52 percent reduction from 2005 levels in economy-wide net greenhouse gas

⁸⁴ See, e.g., Br. of Respondent, *Vecinos v. FERC*, Cause No. 20-1045, 60-69 (D.C.C. Sept. 23, 2020).

⁸⁵ 169 FERC ¶ 61,131, Order Granting Authorizations Under Sections 3 and 7 of the Natural Gas Act, ¶ 109 (Nov. 22, 2019).

⁸⁶ 40 CFR § 1502.21.

⁸⁷ See Amicus Br. of the Institute For Policy Integrity at New York University School of Law, *Vecinos v. FERC*, Cause No. 20-1045, 8-10 (D.C.C. June 17, 2020). FERC has previously not disputed that the social cost of carbon is an accepted method for evaluating the impacts of greenhouse gas emissions. *Vecinos para el Bienestar de la Comunidad Costera v. FERC*, 6 F.4th 1321, 1329 (D.C.C. 2021) (citing Order Denying Rehearing, 164 FERC ¶ 61,099, at *10 (Aug. 10, 2018)).

⁸⁸ See *Vecinos*, 6 F.4th at 1329 (finding “the Commission may have been obligated to use the social cost of carbon protocol in its EIS, notwithstanding its concerns that no consensus exists as to an appropriate discount rate, that the tool provides a dollar estimate but does not measure the actual incremental impacts of a project on the environment, and that there are no established criteria for evaluating whether a given monetary cost is ‘significant.’”).

pollution in 2030.⁸⁹ FERC must analyze how this Project—individually, and cumulatively with other FERC-approved projects—will impact federal greenhouse gas reduction goals and the U.S.’s international treaty commitments.

In pathways consistent with a 1.5°C temperature increase, global net anthropogenic CO₂ emissions must reach net zero by around 2050.⁹⁰ Critically, in the Fourth National Climate Assessment (NCA), the U.S. government decisively recognized the dominant role of fossil fuels in driving climate change.⁹¹ In particular, the NCA found that “fossil fuel combustion accounts for approximately 85% of total U.S. greenhouse gas emissions,”⁹² which is “driving an increase in global surface temperatures and other widespread changes in Earth’s climate that are unprecedented in the history of modern civilization.”⁹³

It is clear that, to limit the worst damages of climate change and meet its emissions reductions targets, the United States must immediately and rapidly phase out its fossil fuel production. Yet this Project would do just the opposite, by increasing the U.S.’s capacity to liquefy and export gas by more than 3 million tons per year.⁹⁴ Thus, approval of the Project would be directly at odds with U.S. climate goals and international treaty obligations.⁹⁵

⁸⁹ FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies (Apr. 22, 2021), available at <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/> (attached).

⁹⁰ U.N. IPCC, Global Warming Of 1.5°C, An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty 2-28 (2018), available at <http://www.ipcc.ch/report/sr15/> (attached).

⁹¹ U.S. Glob. Change Research Program, Climate Science Special Report: Fourth National Climate Assessment, Volume I 10 (D.J. Wuebbles et al. eds., 2017), available at <https://science2017.globalchange.gov/> (attached).

⁹² *Id.* at 60.

⁹³ *Id.* at 39.

⁹⁴ FERC, Approval of Pre-Filing Request (Sept. 9, 2022).

⁹⁵ M. Copley, The U.S. wants to slash carbon emissions from power plants. Natural gas is in the way, NPR (Dec. 5, 2022) available at <https://www.npr.org/2022/12/05/1139401121/the-u-s-wants-to-slash-carbon-emissions-from-power-plants-natural-gas-is-in-the-> (last accessed Dec. 5, 2022) (attached).

D. Texas is Uniquely Susceptible to Harsh Impacts From Climate Change

FERC must consider both the effects of the project on climate change, as well as the effects of climate change on the project. With regard to the latter, FERC's analysis must be site specific, recognizing not only the unique susceptibility of the Texas coast, but considering the particular region surrounding the proposed projects.

As FERC and the United States government are aware, climate change is already having devastating impacts on the United States and around the world and the impacts will get worse over time. Climate change and its consequences have been widely studied by the United States and the international community.⁹⁶ There is consensus that climate change must be addressed. This consensus includes the White House,⁹⁷ the federal courts,⁹⁸ federal agencies,⁹⁹ and, specifically, FERC.¹⁰⁰ But while climate change will impact all people and all areas of the world, coastal Texas is among the geographic regions that are particularly susceptible to climate change impacts. Texas is already experiencing extreme coastal erosion—“[s]ixty-four percent of the Texas coast is eroding at an average rate of about 6 feet per year, with some locations losing more than 30 feet per year.”¹⁰¹ Besides the obvious issues presented by the rapid losses of coastal land—displacement of the people who live there, *etc.*—it renders the impacts of climate change even more catastrophic.

⁹⁶ See, e.g., U.S. Global Change Research Program, Fourth National Climate Assessment, Vol. II:

Impacts, Risks, and Adaptation in the United States (2018), available at <https://nca2018.globalchange.gov/> (attached); IPCC 2022 Report.

⁹⁷ Exec. Order No. 14,008, 86 Fed. Reg. 7619 (Feb. 1, 2021) (Executive Order on Tackling the Climate Crisis at Home and Abroad) (attached).

⁹⁸ *Vecinos para el Bienestar de la Comunidad Costera v. FERC*, 6 F.4th 1321 (D.C. Cir. 2021).

⁹⁹ National Oceanic and Atmospheric Administration, Global and Regional Sea Level Rise Scenarios for the United States (2022), available at <https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-report-sections.html> (last accessed Dec. 3, 2022) (attached).

¹⁰⁰ FERC, Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews (2022).

¹⁰¹ The Texas General Land Office, Coastal Erosion.

Land loss risks are variable across the Texas coast,¹⁰² therefore, FERC's analysis of climate change impacts on the Project and surrounding area must be site specific rather than a general discussion of climate change impacts on the Texas coast. FERC must consider these risks in addressing the impact of climate change on the projects, and the cumulative impact of the projects and climate change on surrounding communities.

E. FERC Must Consider the Impacts of Sea Level Rise and Subsidence on the Project.

Consideration of how subsidence and sea level rise will impact the Project and potential alternatives is well within the scope of FERC's NEPA analysis. As explained above, the Texas coast is uniquely vulnerable to sea level rise. Along the Texas coast, relative sea level rise is higher than in other areas because coastal land is sinking, compounding the impacts of sea level rise.¹⁰³

As FERC performs its environmental review, it must include the project area's sensitivity to storm surge, climate change, subsidence, and the worsening synergistic impacts of these forces in the environmental baseline. Additionally, sea level rise and subsidence should be considered together, as they may combine to cause severe impacts to the Project.

F. FERC Must Consider the Impacts of Hurricanes on the Project.

Additionally, the Project's location renders it susceptible to hurricanes—including the increased frequency and severity of hurricanes associated with climate change. This, combined with the other impacts from climate change—e.g. sea level rise and associated storm surge, flooding, and erosion risks—raise questions about the safety and prudence of constructing and operating the Project in this region.

Climate change has seemingly already begun to impact the frequency and severity of hurricanes in Texas and these impacts are expected to continue. Hurricanes in the Gulf of Mexico are expected to increase in severity, with an increase in the proportion of category 3, 4, and 5 storms, a ten percent increase in

¹⁰² Surging Seas Risk Finder, Texas, USA, available at https://riskfinder.climatecentral.org/state/texas.us?comparisonType=county&forecastType=NOAA2017_int_p50&level=4&unit=ft (last accessed Dec. 3, 2022) (attached).

¹⁰³ SeaLevelRise.org, Texas' Sea Level Is Rising, available at <https://sealevelrise.org/states/texas/> (last accessed Dec. 3, 2022) (attached).

cyclone damage for the most intense hurricanes, and a 30-40 percent increase in precipitation, which would exacerbate flooding in these low-lying regions.¹⁰⁴

FERC should assess projected changes to the frequency and severity of hurricanes in the vicinity of the Project and identify engineering solutions capable of managing the host of risks that extreme weather poses to sensitive infrastructure and coastal habitat. FERC should also consider whether the risks posed by hurricanes and the consequences of those risks to the Project render the Project not in the public interest. Finally, it should include the increased severity and frequency of hurricanes hitting this region as part of the current environmental baseline of the project area.

G. When Performing this Environmental Review, FERC Should Identify and Quantify Direct, Upstream, and Downstream Greenhouse Gas Emissions Associated with the Project.

Under NEPA, FERC must consider reasonably foreseeable indirect impacts of the Project.¹⁰⁵ And, as explained above, FERC is responsible for ensuring an unsegmented, thorough environmental review of the Project. This requires FERC to analyze the foreseeable emissions from the entire lifecycle of exported gas,¹⁰⁶ alongside the direct greenhouse gas emissions. Induced gas production, including the added risks of hydraulic fracturing, or fracking, is indeed a foreseeable consequence of this Project. Future emissions associated with the use of the gas after it is exported are also foreseeable. These impacts are precisely the type of

¹⁰⁴ C. Bruyère et al., Impact of Climate Change on Gulf of Mexico Hurricanes, NCAR Technical Note NCAR/TN-535+STR, 165, available at <http://dx.doi.org/10.5065/D6RN36J3> (attached); S. Dance and K. Patel, How climate change is rapidly fueling super hurricanes, Washington Post (Sept. 29, 2022), available at <https://www.washingtonpost.com/climate-environment/2022/09/29/ian-hurricane-rapid-intensification-climate/> (last accessed Dec. 3, 2022) (attached).

¹⁰⁵ 40 C.F.R. § 1508.1.

¹⁰⁶ Not only does FERC have to analyze the upstream and downstream emissions of the Project, it has to analyze all upstream and downstream impacts of the Project. Here, that means, *inter alia*, determining the sources of feedgas for the Project and analyzing impacts to communities at the various well sites. For example, if the Project will receive gas from the Barnett Shale, close to 1,000,000 out of 2,100,000 residents in Tarrant County Texas live less than a half mile from fracking sites. FERC must determined the impacts of those, and other persons, upstream of the Project that will be impacted.

indirect effects NEPA requires FERC to consider, and it must conduct a thorough analysis here.¹⁰⁷

VIII. FERC Must Analyze the Impact of Additional Exports on Domestic Natural Gas Prices

The Project will export 3.28 million tons of LNG per year.¹⁰⁸ These exports will increase domestic natural gas prices, leading to causally independent environmental harm as these increased prices drive domestic electricity generators to shift some demand from natural gas to coal. Increased natural gas prices are also likely to harm the domestic economy. LNG exports lead to increased domestic prices for natural gas.¹⁰⁹ This winter, natural gas prices for U.S. households are forecasted to increase significantly due in part to growing LNG exports.¹¹⁰ FERC must consider these impacts in its environmental analysis.

IX. FERC Must Consider Impacts of the Project on Wildlife, Particularly on the Vulnerable Species of the Region

The Project is likely to have significant impacts on vulnerable species.¹¹¹ FERC should analyze the impacts to the species in the region, paying particularly close attention to the threatened and endangered species potentially occurring in the project area, listed in RR3.¹¹²

¹⁰⁷ See, e.g., *Friends of the Earth v. Haaland*, 583 F. Supp. 3d 113 (D.D.C. 2022) (finding that BOEM's failure to consider foreign consumption in greenhouse gas emissions calculations in its environmental review document of a lease sale was arbitrary and capricious).

¹⁰⁸ FERC Approval of Pre-Filing Request.

¹⁰⁹ U.S. Energy Information Administration, Winter Fuels Outlook, October 2022, available at

<https://www.eia.gov/outlooks/steo/report/winterfuels.php#:~:text=For%20winter%202022%E2%80%9320we,the%20previous%20five%20winter%20average> (last accessed Dec. 5, 2022) (attached).

¹¹⁰ *Id.* at 1.

¹¹¹ RR 3-12–3-14.

¹¹² *Id.*

A. *In Particular, FERC Must Analyze the Impacts to the Critically Endangered Rice's Whale*

In 2021, scientists determined that the Gulf of Mexico Bryde's whale ("Rice's whale, [*Balaenoptera ricei*]"¹¹³), previously considered one of two subspecies of the Bryde's whale, is, in fact, a genetically distinct species of whale.¹¹⁴ The newly discovered species is the only large whale species to fully reside in United States waters, and is exclusively found in the northern Gulf of Mexico.¹¹⁵ The best abundance estimate available for this species of whale is 51 individuals (coefficient of variation (CV)=.5),¹¹⁶ making it one of the most endangered whales on Earth.¹¹⁷ For the species to recover, it can only afford to lose one whale about every fifteen years as a result of human impacts.¹¹⁸

¹¹³ Once thought to be a subspecies of Bryde's whales located solely within the Gulf of Mexico known as the Gulf of Mexico Bryde's whale, new genetic evidence has determined that this whale population is actually an entirely separate baleen whale species. The species is known to solely live within the northern Gulf of Mexico. New Species of Baleen Whale in the Gulf of Mexico, NOAA Fisheries (Jan. 22, 2021), available at <https://www.fisheries.noaa.gov/feature-story/new-species-baleen-whale-gulf-mexico> (attached).

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ U.S. Atlantic and Gulf of Mexico Draft Marine Mammal Stock Assessment, NOAA Fisheries 287 (2021), available at <https://repository.library.noaa.gov/view/noaa/45014> (last accessed Dec. 5, 2022) (attached).

¹¹⁷ Rice's Whale, Species Directory, NOAA Fisheries, <https://www.fisheries.noaa.gov/species/rices-whale> (last accessed Dec. 5, 2022) (attached).

¹¹⁸ U.S. Atlantic and Gulf of Mexico Draft Marine Mammal Stock Assessment at 286-295. Potential Biological Removal (PBR) is the product of minimum population size, one-half the maximum net productivity rate, and a recovery factor (MMPA Sec. 3.16 U.S.C. 1362; Wade and Angliss 1997; Wade 1998). According to the Draft Stock Assessment Report, the minimum population size is 34, the maximum productivity rate is .04, the default value for cetaceans, and the recovery factor is .1 because the stock is listed as endangered. We therefore calculate PBR for the Gulf of Mexico Bryde's Whale as .068 (in our view, PBR should not be rounded up to .1, as done in the Draft Stock Assessment Report; p. 289, Table 2).

The Gulf of Mexico Bryde's whale was listed as "endangered" under the ESA on April 15, 2019,¹¹⁹ and is presently listed as a "Critically Endangered" subpopulation on the IUCN Red List.¹²⁰ The endangered listing occurred after a determination that it was a subspecies of the Bryde's whale (meeting the ESA's species definition), but prior to the taxonomic discovery further delineating the whale as a distinct species. Therefore, the species' April 2019 listing was based on the subspecies distinction, along with evidence of its extremely small population, life history characteristics, and extremely limited distribution and vulnerability to existing threats.¹²¹

Careful examination of the Project's impacts on the animal is especially important given the whale's highly imperiled status. One recent study, for example, concluded that given the highly industrialized nature of Gulf waters and the already restricted habitat for Rice's whales, it is essential to accurately identify and remove anthropogenic threats through protective measures (e.g. marine protected area establishment); and that to effect recovery, such protections must extend beyond currently occupied, remnant habitat.¹²² The study also found that the whale's behavior—including its dive behaviors and tendency to spend a considerable amount of time at night within the upper 15 meters of the water column, which is within the draft depths of most commercial vessels—significantly raises the risk of vessel strikes.¹²³

The National Marine Fisheries Service (NMFS) recently found that the species is threatened by oil spills, noise pollution, and vessel strikes (among other stressors) which can cause mortality, chronic stress, behavioral disruption, significant masking, and hearing loss, "all of which are expected to reduce the fitness of individuals."¹²⁴ NMFS concluded that given the "precarious status [of the

¹¹⁹ Endangered and Threatened Wildlife and Plants; Endangered Status of the Gulf of Mexico Bryde's Whale, 84 Fed. Reg. 15,446 (Apr. 15, 2019) (attached).

¹²⁰ P. Corkeron et al., *Balaenoptera edeni* (Gulf of Mexico subpopulation), Gulf of Mexico Whale, IUCN Red List (2022), available at <https://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T117636167A117636174.en> (attached).

¹²¹ Rice's whale, Marine Mammal Commission, available at <https://www.mmc.gov/priority-topics/species-of-concern/rices-whale/> (attached).

¹²² M. Soldevilla et al., Spatial distribution and dive behavior of Gulf of Mexico Bryde's whales: potential risk of vessel strikes and fisheries interactions, 32 *Endangered Species Research* 533 (2017), available at <https://repository.library.noaa.gov/view/noaa/16050> (attached).

¹²³ *Id.*

¹²⁴ Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of

species], any effects that are expected to reduce the fitness of individuals or result in mortality are of great concern.”¹²⁵ Vessel strikes and noise, offshore infrastructure, and marine debris were all determined by NMFS as actions that would “likely adversely affect” the Gulf of Mexico Bryde’s whale.¹²⁶ The Project will increase the prevalence of many of these stressors, such as increasing vessel traffic, that NMFS recently concluded would jeopardize the continued existence of this beleaguered species.

Given the increased large vessel traffic that will be required by the Project, the EIS must evaluate the impacts from ship noise, vessel strikes, marine debris, and any other potential impact the Project may visit on the Gulf of Mexico Bryde’s whale.

X. Conclusion

Commenters appreciate the opportunity to submit these comments and to take part in FERC’s process as it considers this application. NEPA requires FERC to undertake a rigorous and far-reaching environmental review of the Project. Commenters look forward to the results of this review.

Respectfully Submitted,

/s/ Thomas Gosselin

Thomas Gosselin
Sierra Club
P.O. Box 4998
Austin, TX 78765
(424) 346-3276
tom.gosselin@sierraclub.org
Attorney for Sierra Club

/s/ Rebekah Sale

Rebekah Sale
rebekahsale@pipelinecenter.org
On behalf of Property Rights and Pipeline Center

/s/ Adam Carrington

Pastor Adam T. Carrington
brooksamec@hotmail.com
On behalf of Citizens Alliance for Fairness and Progress

/s/ Luke Metzger

Luke Metzger
luke@environmenttexas.org
On behalf of Environment Texas

Mexico, NMFS, FPR-2017-9234, 553 (Mar. 13, 2020), available at <https://repository.library.noaa.gov/view/noaa/23738> (attached).

¹²⁵ *Id.*

¹²⁶ *Id.* at 301.

/s/ Maayan Cohen

Maayan Cohen

maayan@acespace.org

*On behalf of Action for Climate
Emergency (ACE)*

/s/ Mary Gutierrez

Mary Gutierrez

earthethicsaction@gmail.com

On behalf of Earth Ethics, Inc.

/s/ Errol A. Summerlin

Errol A. Summerlin

summerline@verizon.net

*On behalf of Coastal Alliance to Protect
our Environment and Portland
Citizens United*

/s/ Joanie Steinhaus

Joanie Steinhaus

joanie@tirn.net

*On behalf of Turtle Island Restoration
Network*

/s/ James Klein

James Klein

*On behalf of Coastal Bend Sierra Club
Group*

/s/ Chloe Torres

Chloe Torres

chloe@texasenvironment.org

*On behalf of Texas Campaign for the
Environment*

/s/ James L. Caldwell

Reverend James L. Caldwell, COCO

cocohoustonnow@gmail.com

*On behalf of Coalition of Community
Organizations*

/s/ Ceceilia Fontenot

Ceceilia Fontenot

*On behalf of Fair Housing &
Neighborhood Rights*

/s/ Matt Leonard

Matt Leonard

matt@oilgasaction.org

*On behalf of Oil and Gas Action
Network*

/s/ Drew Hudson

Drew Hudson

drew@198methods.org

On behalf of 198 Methods

/s/ Bill Berg

Bill Berg

billberg42@gmail.com

On behalf of Save RGV

/s/ Love Sanchez

Love Sanchez

indigenouspeoplecoastalbend@gmail.com

*On behalf of Indigenous Peoples of the
Coastal Bend*

/s/ Dorothy Peña

Dorothy Peña

ftggcoastalbend@gmail.com

On behalf of For the Greater Good

/s/ James Hiatt

James Hiatt

james@labucketbrigade.org

On behalf of Louisiana Bucket Brigade

/s/ Sheila Serna

Sheila Serna

sheila@rgisc.org

*On behalf of Rio Grande International
Study Center*

/s/ Eduardo Canales

Eduardo Canales

*On behalf of South Texas Human
Rights Center*

/s/ Virginia Palacios

Virginia Palacios

vpalacios@commissionshift.org

On behalf of Commission Shift

/s/ Cathy Fulton

Cathy Fulton

mcf4040@hotmail.com

On behalf of Cathy Fulton

/s/ Sally Clark Farris

Sally Clark Farris

s.farris@att.net

*On behalf of League of Women Voters-
Corpus Christi Area*

/s/ Ranjana Bhandari

Ranjana Bhandari

liveablearlington@gmail.com

On behalf of Liveable Arlington

/s/ Jennifer Krill

Jennifer Krill

jkrill@earthworksaction.org

On behalf of Earthworks

/s/ Tom Owens

Tom Owens

owensthom@gmail.com

*On behalf of Center for Oil and Gas
Organizing*

/s/ Fletcher Harper

Reverend Fletcher Harper

fletcher@greenfaith.org

On behalf of GreenFaith

/s/ Juan Parras

Juan Parras

parras.juan@gmail.com

/s/ Ana M. Parras

Ana M. Parras

ana.parras@gmail.com

*On behalf of Texas Environmental
Justice Advocacy Services*

/s/ Ted Glick

Ted Glick

indpol@igc.org

On behalf of Beyond Extreme Energy

/s/ Marilyn Elie

Marilyn Elie

eliewestcan@gmail.com

*On behalf of Indian Point Safe Energy
Coalition*

/s/ Roishetta Ozane

Roishetta Ozane

roishetta@gmail.com

*On behalf of The Vessel Project of
Louisiana*

/s/ Kristen Schlemmer

Kristen Schlemmer

kristen@bayoucitywaterkeeper.org

On behalf of Bayou City Water Keeper

/s/ Naomi Yoder

Naomi Yoder

naomi@healthygulf.org

On behalf of Healthy Gulf

/s/ Neil McQueen

Neil McQueen

co-chair@coastalbend.surfrider.org

*On behalf of Surfrider Foundation –
Texas Coastal Bend Chapter*

/s/ Ruth Breech

Ruth Breech

ruth@ran.org

On behalf of Rainforest Action Network

/s/ Collin Rees

Collin Rees

collin@priceofoil.org

On behalf of Oil Change International

/s/ Elida Castillo

Elida Castillo

ecastillo@lcv.org

On behalf of Chispa Texas

/s/ Marcie Keever

Marcie Keever

mkeever@foe.org

On behalf of Friends of the Earth U.S.

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused the foregoing document to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Bexar County, Texas this 12th Day of December, 2022.

/s/ Thomas Gosselin

Thomas Gosselin

Sierra Club

P.O. Box 4998

Austin, TX 78765

(424) 346-3276

tom.gosselin@sierraclub.org

Attorney for Sierra Club