

149 FERC ¶ 61,119
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Chairman;
Philip D. Moeller, Tony Clark,
and Norman C. Bay.

Freeport LNG Development, L.P.

Docket No. CP12-29-001

Freeport LNG Development, L.P.
FLNG Liquefaction, LLC
FLNG Liquefaction 2, LLC
FLNG Liquefaction 3, LLC

Docket No. CP12-509-001

ORDER DENYING REHEARING AND CLARIFICATION

(Issued November 13, 2014)

1. On August 29, 2014, Sierra Club and Galveston Baykeeper (collectively, Sierra Club) jointly filed a timely request for rehearing of the Commission's July 30, 2014 Order authorizing Freeport LNG Development, L.P.'s request to modify the previously authorized liquefied natural gas (LNG) facilities at its existing Quintana Island terminal located near the City of Freeport, in Brazoria County, Texas, to facilitate the export of LNG (Phase II Modification Project).¹ The July 30 Order also authorized FLNG Liquefaction, LLC, FLNG Liquefaction 2, LLC, and FLNG Liquefaction 3, LLC, to site, construct, and operate natural gas liquefaction facilities, pretreatment plant facilities, and several interconnecting pipelines and utility lines to support export operations at the Quintana Island terminal (Liquefaction Project).² As discussed below, we will deny rehearing.

¹ *Freeport LNG Development, L.P.*, 148 FERC ¶ 61,076 (2014) (July 30 Order).

² FLNG Liquefaction, LLC, FLNG Liquefaction 2, LLC, and FLNG Liquefaction 3, LLC, are Delaware limited liability companies that are wholly-owned subsidiaries of Freeport Expansion, L.P., a Delaware limited partnership which in turn is owned by Freeport LNG Development. We use the name "Freeport LNG" herein to refer to all the entities collectively.

I. Background

2. In 2004, the Commission authorized Freeport LNG to site, construct and operate an LNG terminal with a vaporization capacity of 1.5 billion cubic feet (Bcf/d), located on Quintana Island (Phase I Project), for the purpose of importing LNG.³ As relevant here, the Phase I Project is comprised of one marine berthing dock with the capability of unloading up to 200 LNG vessels per year; two 160,000 cubic meter full containment LNG storage tanks; LNG vaporization systems; and associated facilities. On June 10, 2004, staff issued a General Conformity Determination to ensure that the Phase I facilities did not violate the Texas State Implementation Plan that included the emissions from the estimated 200 LNG vessels per year.⁴

3. In 2006, the Commission authorized an expansion of the terminal's send-out capacity from 1.5 Bcf/d to 4.0 Bcf/d⁵ (Phase II Project). The 2006 Order also authorized an additional marine berthing dock and associated transfer facilities for LNG vessels; new and expanded vaporization systems to increase the vaporization capacity; and an additional LNG storage tank. Freeport LNG projected an additional 200 LNG vessels beyond those projected for the Phase I Project. Accordingly, the environmental assessment (EA) prepared for the Phase II Project analyzed the incremental impacts of the additional 200 LNG vessels, for a total of 400 LNG vessels per year.⁶ The Phase II facilities have not yet been constructed.

³ *Freeport LNG Development, L.P.*, 107 FERC ¶ 61,278 (2004), *order granting reh'g and clarification*, 108 FERC ¶ 61,253 (2004).

⁴ Section 176(c) of the Clean Air Act requires a federal agency to demonstrate that a proposed action conforms to the applicable State Implementation Plan, which is the state's plan to attain the National Ambient Air Quality Standards for nonattainment pollutants. *See* 42 U.S.C. § 7506(c). A General Conformity Determination is required when the federal agency determines that an action would generate emissions exceeding conformity threshold levels of pollutants in the nonattainment area, and assesses whether the federal action will conform with the State Implementation Plan. A federal agency cannot approve or support activity that does not conform to an approved State Implementation Plan. *See* 40 C.F.R. § 93.157(a) (2014).

⁵ *Freeport LNG Development, L.P.*, 116 FERC ¶ 61,290 (2006) (2006 Order).

⁶ We note that the Commission issued a General Conformity Determination for the Phase II Project. However, pursuant to EPA's General Conformity regulations, because the project was not constructed within five years, the General Conformity Determination expired. *See* 40 C.F.R. § 93.157(b).

4. On May 6, 2009, the Commission authorized Freeport LNG's request to operate the existing LNG terminal facility for the additional purpose of exporting foreign-source LNG on a short-term basis, and to construct and operate a boil-off gas (BOG) liquefaction system and an LNG truck delivery system to provide alternative sources of LNG⁷ (Freeport LNG Export Project and BOG/Truck Project).

5. On December 9, 2011, and August 31, 2012, Freeport LNG filed applications under the Natural Gas Act (NGA) section 3 requesting authorizations, respectively, to modify the Phase II facilities, and to site, construct, and operate natural gas liquefaction facilities, pretreatment plant facilities, and several interconnecting pipelines and utility lines to support export operations at the Quintana Island terminal (collectively, Freeport LNG Projects).

6. On June 16, 2014, staff issued an environmental impact statement (EIS) to assist the Commission in its decision making with respect to the Freeport LNG Projects. The EIS addressed comments received on the March 14, 2014 draft EIS. The EIS concluded that the impacts from the construction and operation of the Freeport LNG Projects, while resulting in some significant and unavoidable impacts to residents of the Town of Quintana, will be temporary and could be minimized by the recommended conditions.

7. The July 30 Order authorizing the Freeport LNG Projects concurred with the EIS's findings, and rejected Sierra Club's comments that the EIS should have considered the indirect and cumulative effects of additional natural gas production which would allegedly be induced by the Freeport LNG Projects. We explained that such production was neither caused by the Freeport LNG Projects, nor were the impacts from such production "reasonably foreseeable," as it is speculative not only as to where the gas processed by the Freeport LNG Projects will originate, but where the wells, gathering lines, and other infrastructure associated with such development may occur.⁸

8. The July 30 Order also declined to address Freeport LNG's and Sierra Club's competing claims with respect to the purported beneficial and adverse impacts of natural gas exports (including environmental impacts), noting that impacts associated with the export of the commodity natural gas fall under the Department of Energy's (DOE) purview, while the Commission's NGA section 3 review is limited to consideration of the impacts of the siting, construction, and operation of the Freeport LNG Projects facilities.⁹

⁷ *Freeport LNG Development, L.P.*, 127 FERC ¶ 61,105 (2009).

⁸ July 30 Order, 148 FERC ¶ 61,076 at PP 77-78.

⁹ *Id.* at P 32.

9. The July 30 Order explained that the 1977 Department of Energy Organization Act¹⁰ transferred the regulatory functions of NGA section 3 to the Secretary of Energy and that, subsequently, with respect to the import or export of natural gas, the Secretary delegated to the Commission the authority to approve or disapprove the construction and operation of facilities, the site at which the facilities would be located, and the place of entry for imports or exit for exports.¹¹ DOE retains a separate obligation under NGA section 3 to authorize the import or export of the commodity natural gas, including LNG, unless it finds that the import or export will not be consistent with the public interest. Pursuant to this authority, in orders issued May 17, 2013, and November 15, 2013, the Department of Energy's Office of Fossil Energy (DOE/FE) authorized Freeport LNG to export a total of 1.8 Bcf/d of LNG.¹² The November 15 Order found that "on balance," the potential negative impacts of Freeport LNG's proposed exports "are outweighed by the likely economic benefits and by other non-economic or indirect benefits...."¹³

10. DOE's November 15 Order explained that this was a preliminary finding on all issues except environmental issues, and was therefore conditioned on DOE's "satisfactory completion of the environmental review process."¹⁴ Noting that it was participating in the Commission's National Environmental Policy Act (NEPA) review as a cooperating agency,¹⁵ the November 15 Order stated that, "when the environmental review is complete, DOE will reconsider this conditional Order in light of the information gathered as part of that review."¹⁶

11. The Commission's July 30 Order concurred with the EIS's findings that impacts from the construction and operation of the Freeport LNG Projects, while resulting in some significant and unavoidable impacts to residents of the Town of Quintana, will be

¹⁰ 42 U.S.C. § 7151(b) (2006).

¹¹ July 30 Order, 148 FERC ¶ 61,076 at P 27, n.11.

¹² See July 30 Order, 148 FERC 61,076 at P 17, n.6.

¹³ DOE/FE Order No. 3357 at 148-157.

¹⁴ DOE/FE Order No. 3357 at 19.

¹⁵ The Council on Environmental Quality regulations implementing NEPA define "cooperating agency" as "any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect" to proposed actions for which a NEPA analysis is prepared. See 40 C.F.R. § 1508.5 (2014).

¹⁶ DOE/FE Order No. 3357 at 19.

temporary and minimized with a number of conditions recommended in the EIS. The July 30 Order concluded that, with the adoption of the environmental conditions, the Freeport LNG Projects are not inconsistent with the public interest.¹⁷

II. Rehearing Request

12. In its rehearing request of the July 30 Order, Sierra Club contends that: (1) the Commission should have considered “induced natural gas production” as an indirect effect of the Freeport LNG Projects; (2) the Commission should have considered the cumulative impacts of existing and proposed LNG export projects; (3) the Commission failed to analyze impacts from changes in electricity generation, including increases in greenhouse gas emissions (GHG) caused by domestic gas price increases; (4) the Commission violated NEPA by making erroneous assumptions about the “no action alternative”; (5) the Commission failed to take a hard look at the projects’ air pollution impacts; (6) the EIS relied on an improper environmental baseline for LNG vessel traffic; (7) the Commission’s General Conformity Determination violates NEPA and the Clean Air Act; (8) the Commission should have considered the risk of a vessel fire affecting nearby industrial facilities; and (9) the Commission erroneously relied on DOE’s NGA section 3 public interest determination.

III. Discussion

1. Indirect Effects

13. Sierra Club argues that “induced natural gas production” is “plainly an indirect effect of the construction and operation” of the Freeport LNG Projects.¹⁸ It argues that the projects will increase natural gas production, and cites as support to various reports, including NERA Economic Consulting’s 2012 “Macroeconomic Impacts of LNG Exports from the United States,” Deloitte MarketPoint’s “Analysis of Economic Impact of LNG Exports from the United States,” and the Energy Information Administration’s (EIA) 2012 “Effect of Increased Natural Gas Exports on Domestic Energy Markets” (EIA LNG Export Study).¹⁹

14. Specifically, Sierra notes that the EIA LNG Export Study predicts that 63 percent of the demand created by U.S. LNG export projects will come from increased natural gas

¹⁷ July 30 Order at P 35.

¹⁸ Sierra Club Rehearing Request at 4-5.

¹⁹ *Id.* at 6.

production, with 72 percent of this increase coming from shale gas.²⁰ Sierra Club extrapolates that the Freeport LNG Projects' export of 1.8 Bcf/d of natural gas will create at least 1.8 Bcf/d of additional gas demand; that roughly 63 percent of this demand, or 1.13Bcf/d, would be satisfied by new production, and that of this new production, roughly 72 percent would come from shale gas, and 28 percent from other sources. Sierra Club adds that the Commission has not "identified or offered any explanation as to how exports could occur without causing an increase in production."²¹

15. Contrary to Sierra Club's suggestion, the Commission has never affirmatively asserted that LNG exports will not induce natural gas production in the United States. However, even if the Commission could reasonably determine how much, if any, of the export volumes associated with the Freeport LNG Projects will derive from increased gas production, we have consistently found under the circumstances presented to date that the impacts from additional production are not reasonably foreseeable, as it is unknown where, or when, such production would occur.²²

16. The Council on Environmental Quality (CEQ) regulations require agencies to consider the indirect impacts of proposed actions. Indirect impacts are "caused by the proposed action" and occur later in time or farther removed in distance than direct impacts, but are still "reasonably foreseeable."²³ Indirect impacts may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water.²⁴ For an agency to include consideration of an impact in its NEPA analysis as an indirect effect, approval of the proposed project and the related secondary effect must be causally related, i.e., the agency action and the effect must be "two links of a single chain."²⁵

²⁰ *Id.* at 7.

²¹ *Id.* at 5.

²² See, e.g., *Dominion Cove Point LNG, LP*, 148 FERC ¶ 61,244, at P 231 (2014); *Sabine Pass Liquefaction, LLC*, 139 FERC ¶ 61,039, at PP 94-99, *reh'g denied*, 140 FERC ¶ 61,076, at PP 8-22 (2012); *Cheniere Creole Trail Pipeline, L.P.*, 142 FERC ¶ 61,137 at PP 51-60, *order on reh'g*, 145 FERC ¶ 61,074 at PP 8-19 (2013).

²³ 40 C.F.R. § 1508.8(b) (2014).

²⁴ *Id.*

²⁵ *Sylvester v. U.S. Army Corps of Engineers*, 884 F.2d 394 (9th Cir. 1980).

17. The potential environmental effects associated with additional natural gas production are neither sufficiently causally related to the Freeport LNG Projects to warrant a detailed analysis, nor are the potential environmental impacts reasonably foreseeable, as contemplated by the CEQ regulations.

18. With respect to causation, as noted in the July 30 Order, Sierra Club fails to identify any induced natural gas production directly associated with the Freeport LNG Projects, other than to note Freeport LNG's application, in which it predicts that "the natural gas supply underlying the proposed exports will come primarily from the highly liquid Texas market" and that the project "will benefit from expanded gas production capacity in the Eagle Ford, Barnett, and Haynesville Shales."²⁶

19. Moreover, Sierra Club fails to explain how identifying possible locations from which the gas processed by the Freeport LNG Projects may originate means that the gas will come from future, *induced* natural gas production, as opposed to from existing production, particularly in light of the longtime, extensive natural gas development that has already occurred in Texas, including in its shale areas.

20. Sierra Club's reliance on the NERA, Deloitte, and EIA studies is misplaced. These studies provide general economic analyses concluding that increased LNG exports may increase domestic natural gas production, but they do not provide specificity that would assist in informing the Commission's decision here. For example, EIA's projections that increased exports will lead to increased domestic production, and that 72 percent of the increase will come from shale, do not project that gas processed by any particular export facility will mirror the estimated percentages. Moreover, we note that the EIA report includes the caveat that projections involving energy markets are "highly uncertain and subject to many events that cannot be foreseen, such as supply disruptions, policy changes, and technological breakthroughs."²⁷

21. Accordingly, such information does not meaningfully inform the Commission on whether the Freeport LNG Projects will use natural gas derived from new production or existing production. Moreover, as noted above, even if the Commission could reasonably conclude that the Freeport LNG Projects will cause additional natural gas production, the potential impact from such production, if any, is not reasonably foreseeable, given that the amount, timing, and location of development activity is simply unknowable at this time.

²⁶ Sierra Club Rehearing Request at 11.

²⁷ See EIA Export Study at 3. See also *Dominion Cove Point LNG, LP*, 148 FERC ¶ 61,244 at P 235.

22. An impact is reasonably foreseeable if it is “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.”²⁸ Courts have noted that the starting point of any NEPA analysis is a “rule of reason,” under which NEPA documents “need not address remote and highly speculative consequences.”²⁹ Courts are clear that an agency is not required “to engage in speculative analysis” or “to do the impractical, if not enough information is available to permit meaningful consideration.”³⁰

23. Sierra Club claims that “additional tools such as EIA’s” study “are capable of providing more robust and precise predictions of where induced production will occur.”³¹ It asserts that, consistent with the D.C. Circuit’s opinion in *Scientists’ Institute for Public Information, Inc. v. Atomic Energy (Scientists’ Institute for Public Information)*,³² since DOE determined such studies to be sufficient to support an analysis of price impacts, “they are also sufficient to support an analysis of environmental impacts.”³³

24. However, we find the studies that Sierra Club cites are unavailing. They set forth general economic projections with respect to LNG exports in the United States, and do not assist the Commission in reasonably estimating how much of Freeport LNG’s export volumes will come from current versus future natural gas production, or where and when that future production may be located, much less any associated environmental impacts of such production.

25. Sierra Club’s reliance on *Scientists’ Institute For Public Information, Inc.*, is equally misplaced. There, the D.C. Circuit faulted the Atomic Energy Commission (AEC) for failing to prepare *any* NEPA analysis for its proposed liquid metal fast breeder reactor program. The D.C. Circuit noted that, while the AEC had prepared a complex

²⁸ *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992).

²⁹ *Hammond v. Norton*, 370 F.Supp. 2d 226, 245-46 (D.D.C. 2005).

³⁰ *N. Plains Res. Council v. Surface Transp. Bd.*, 668 F.3d 1067, 1078 (9th Cir. 2011). *See also Habitat Educ. Ctr v. U.S. Forest Serv.*, 609 F.3d 897 (7th Cir. 2010) (an environmental impact would be considered too speculative to include in the NEPA document if, at the time the document is drafted, the impact cannot be described with sufficient specificity to make its consideration useful to a reasoned decision maker).

³¹ Sierra Club Rehearing Request at 11.

³² 481 F.2d 1079, 1097 (D.C. Cir. 1973).

³³ Sierra Club Rehearing Request at 11.

cost/benefit analysis in attempting to justify the proposed program, it failed to attempt to include a consideration of the environmental costs and benefits associated with the proposed program.

26. Unlike the AEC, Commission staff prepared an EIS that thoroughly considered the potential impacts of the Freeport LNG Projects, which informed the Commission's decision. Moreover, the D.C. Circuit was persuaded that a NEPA analysis should have been prepared because the AEC had existing detailed estimates on the amount of waste and the amount of land area necessary for storage of the waste, as well as "much information on alternatives to the program and their environmental effects."³⁴ For the reasons discussed above, the Commission has no existing detailed or quantifiable information with respect to additional production that might be induced by the Freeport LNG Projects that would assist us in a meaningful analysis.

27. Sierra Club also challenges the July 30 Order's explanation that, in part, the indirect effects of induced gas production need not be considered because "the purpose of the Projects is not to facilitate additional shale production...over which the Commission has no jurisdiction."³⁵ In its rehearing request, Sierra Club states that lack of jurisdiction "does not mean that FERC does not have to consider the environmental effects of this development under NEPA."³⁶

28. We agree that lack of jurisdiction over an action does not necessarily preclude an agency from considering the potential impacts. However, Sierra Club misunderstands the intent of our statement, which was to reinforce our finding that, because states, and not the Commission, have jurisdiction over natural gas production and associated development (including siting and permitting), the location, timing, and potential impacts from such development are even more speculative.

29. Sierra Club also argues that in the July 30 Order, the Commission "indicates that induced production need not be considered because DOE has specifically reserved authority over the actual export of natural gas."³⁷ Sierra Club cites to the order's discussion of the division of NGA section 3 authority, in which the Commission declined to address impacts associated with the export of natural gas, because such a review falls under DOE's NGA section 3 authority.

³⁴ *Scientists Institute for Public Information, Inc.*, 481 F.2d 1079.

³⁵ July 30 Order, 148 FERC ¶ 61,076 at P 77.

³⁶ Sierra Club Rehearing Request at 9.

³⁷ Sierra Club Rehearing Request at 8.

30. The Commission did not decline to consider induced natural production in its NEPA analysis because the matter falls under DOE's NGA section 3 authority. Rather, for all of the reasons discussed above, i.e., because the potential environmental effects associated with additional natural gas production are neither sufficiently causally related to the Freeport LNG Projects to warrant a detailed analysis, nor are the potential environmental impacts reasonably foreseeable, as contemplated by the CEQ regulations, we found that NEPA does not require the Commission, nor is it reasonable for us, to consider induced natural gas production as a factor in our determination.

31. We affirm our finding that the impact from induced natural gas production is not an indirect effect of the Freeport LNG Projects.³⁸

2. Cumulative Impacts

32. Sierra Club states that the Commission should have analyzed the cumulative impacts of "the many proposed export projects," including, "at a minimum," those already authorized, and "all other export projects to have received conditional authorization from DOE."³⁹

33. We disagree. The CEQ regulations define cumulative impacts as "the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."⁴⁰ A cumulative impact analysis may require an analysis of actions unrelated to the proposed project if they occur *in the project area being analyzed*.⁴¹ CEQ states that "it is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful."⁴² An agency is only required to include "such

³⁸ We note that the Commission has been upheld in finding that it need not consider the environmental impacts of increased natural gas production, in this case in the Marcellus shale, when authorizing projects that may or may not make use of such supplies. *Cent. N.Y. Oil and Gas Co., LLC*, 137 FERC ¶ 61,121, at PP 81-101 (2011), *order on reh'g*, 138 FERC ¶ 61,104, at PP 33-49 (2012), *petition for review dismissed, sub nom. Coalition for Responsible Growth, et al. v. FERC*, 485 Fed. Appx. 472, 2012 WL 1596341 (2nd Cir., Apr. 17, 2012) (unpublished opinion).

³⁹ Sierra Club Rehearing Request at 12.

⁴⁰ 40 C.F.R. § 1508.7 (2014).

⁴¹ CEQ Guidance, *Considering Cumulative Effects Under the National Environmental Policy Act* (January 1997).

⁴² *Id.* at 8.

information as appears to be reasonably necessary under the circumstances for evaluation of the project rather than to be so all-encompassing in scope that the task of preparing it would become either fruitless or well nigh impossible.”⁴³

34. The EIS considered Brazoria County as the projects’ geographic study area, and in the cumulative impact analysis considered a number of industrial developments, pipeline developments, oil and gas field developments (including proposed drilling activity in several existing production areas, applications for wells, and drilling activity as far as 22 miles from the Quintana Island terminal), land and air transportation developments, commercial developments, and port and harbor channel developments.⁴⁴ The existing and pending LNG export projects that Sierra Club insists must be considered in the cumulative impact analysis cover a vast geographic scope consisting of tens of thousands of square miles, and neither the CEQ guidance nor case law requires such an analysis.

35. As discussed in the July 30 Order, we find that Sierra Club seeks a programmatic EIS for a program that is not before the Commission. The CEQ regulations state that major federal actions for which an EIS may be required include “...programs, such as a group of concerted actions to implement a specific policy or plan; and systematic and connected agency decisions allocating agency resources to implement a specific statutory program....”⁴⁵

36. The July 30 Order explains that the Freeport LNG Projects do not meet this definition for broad proposals, nor does Sierra Club rebut this finding in its request for rehearing. The projects concern modifications to previously authorized facilities and development of new liquefaction facilities and LNG export capacity. Further, as noted in the July 30 Order, the Commission considers proposed projects on their own merits, based on the facts and circumstances specific to each proposal.⁴⁶

3. General Conformity Determination

37. On July 30, 2014, staff issued for comment a draft General Conformity Determination, which considered whether the construction and operation of Freeport

⁴³ *New York Natural Res. Def. Council, Inc. v. Kleppe*, 429 U.S. 1307, 1311 (1976) (citing *Natural Res. Def. Council v. Calloway*, 524 F.2d 79, 88 (2d. Cir. 1975)).

⁴⁴ June 2014 EIS Volume I at 4-240 through 4-266.

⁴⁵ July 30 Order, 148 FERC ¶ 61,076 at PP 75-76 (citing 40 C.F.R. § 1508.18(b)(3) (2014)).

⁴⁶ July 30 Order, 148 FERC ¶ 61,076 at P 76.

LNG's proposed facilities, including operational emissions of the LNG vessels, could go forward without violating the Texas State Implementation Plan. On July 11, 2014, Freeport LNG had informed staff that it had revised its projection of LNG ship calls to its facilities from 400 per year to 250 per year. Accordingly, the draft General Conformity Determination analyzed the additional 50 ship calls beyond the 200 previously analyzed in the Phase I Project proceeding. On September 15, 2014, staff issued the final Conformity Determination, which addressed comments filed by Sierra Club on the draft General Determination.

38. On rehearing, Sierra Club argues that the July 30 Order violates the General Conformity Determination regulations because it "authorizes activities despite the fact that no final conformity determination" had been made.⁴⁷

39. We disagree. The Clean Air Act's conformity provisions provide that no federal agency "shall...approve any activity which does not conform to an applicable implementation plan."⁴⁸ The conformity provisions add that a federal agency must make a determination that a Federal action conforms to the applicable implementation plan "in accordance with the requirements of this subpart *before the action is taken.*"⁴⁹ (Emphasis added).

40. The September 15, 2014 General Conformity Determination found, in response to Sierra Club's identical comment on the draft General Conformity Determination, that the "action" contemplated in the General Conformity regulations is the start of project construction. Freeport LNG received approval to proceed with initial site preparation on October 17, 2014, and will not receive approval to proceed with further project facility construction unless and until all pre-construction conditions are satisfied.⁵⁰

41. Sierra Club also challenges Condition No. 79 of the July 30 Order, which provides that:

Freeport LNG shall notify the Commission within 30 days prior to exceeding 250 LNG ship-calls in a calendar year. This will allow Commission staff to

⁴⁷ Sierra Club Rehearing Request at 18 (citing 40 C.F.R. § 93.150(b)).

⁴⁸ 40 C.F.R. § 93.150(a).

⁴⁹ 40 C.F.R. § 93.150(b).

⁵⁰ We also question how Sierra Club was harmed, given that it provided extensive comments on the draft General Conformity Determination, which were addressed in the September 15, 2014 General Conformity Determination.

ensure that the General Conformity Analysis is revised in accordance with 40 C.F.R. § 93.157(c).

42. Sierra Club suggests that Condition No. 79 allows Freeport LNG to exceed 250 LNG ship calls so long as it notifies the Commission within 30 days prior to doing so, and asks that Condition No. 79 be clarified to state that additional ship calls are prohibited unless and until the Commission actually reaches a revised conformity determination.

43. We will deny clarification. We note that there is nothing in the record to suggest that Freeport LNG is likely to receive more than the 250 ship calls per year analyzed. We further note that Freeport LNG would not be required to seek an amendment to its section 3 authorization in order to exceed that number. In any event, if, and when, Freeport LNG makes a filing pursuant to Condition No. 79, the Commission will determine at that time what, if any, action is required.

44. Sierra Club also asserts that the Commission has changed its estimate of the vessel traffic associated with the Freeport LNG Projects at various stages, with no “adequate factual basis.” We disagree, and find that the September 15, 2014 General Conformity Determination clearly explained the revisions. Specifically, in response to similar comments Sierra Club filed on the draft General Conformity Determination, the September 15, 2014 General Conformity Determination explained that both the original Phase I Project EA and original General Conformity Determination addressed impacts from 200 ship calls per year, and that the June 2006 EA for the Phase II Project addressed impacts from an additional 200 ship calls per year projected by Freeport LNG, for a total of 400 ship calls. Because, after issuance of the EIS for this proceeding, Freeport LNG revised its projection of total ship calls to be associated with the Freeport LNG Projects from 400 ship calls to 250, the September 15, 2014 General Conformity Determination reflected the revised number.⁵¹

45. Sierra Club also argues that the General Conformity Determination improperly assessed only the additional 50 LNG ship calls per year, rather than the full 250 annual ship calls Freeport LNG projected.⁵² We disagree. As discussed in the EIS, the Freeport LNG Projects must conform with the Houston-Galveston-Brazoria County Texas State Implementation Plan, which already accounts for the emissions from the 200 ship calls per year identified in the June 10, 2004 General Conformity Determination for the original Phase I Project. Therefore, only the emissions from the additional 50 ships, as

⁵¹ See September 15, 2014 General Conformity Determination at 2.

⁵² Sierra Club Rehearing Request at 20.

identified by Freeport LNG here, needed to be addressed in the General Conformity Determination for the Freeport LNG Projects.

4. NEPA Baseline

46. As discussed above, since Freeport LNG initially projected that no additional ship traffic beyond that considered in conjunction with the Phase II Project would be associated with the Freeport LNG Projects, the June 2014 EIS analyzed impacts from 400 ship calls per year.⁵³ The EIS also noted that very few vessels have visited the existing Freeport LNG terminal.⁵⁴

47. On rehearing, Sierra Club argues that the EIS should have considered a baseline of the minimal actual vessel traffic, instead of relying on previous NEPA analyses for the Phase II Project. We disagree.

48. The Freeport LNG Projects are a modification of the Phase II Project, and therefore the June 2014 EIS updated the findings from the EA prepared for the Phase II Project. The EIS described the impacts on various resources that would occur due to the modifications proposed here, including vessel impacts, and included additional data on these impacts. For example, the EIS notes that the number of LNG vessel visits contemplated in association with the Freeport LNG Projects is much higher than the number being experienced under current conditions. However, the EIS explains that the scientific analysis set forth in the March 2009 EA prepared for the Freeport LNG Export Project and BOG/Truck Project found that the vessel traffic (400 ship calls per year) associated with that project will not adversely affect aquatic biota, and the rationale underlying this finding is equally valid with respect to the 250 ship calls per year contemplated for the Freeport LNG Projects.⁵⁵ The June 2014 EIS also discusses the numerous laws and regulations with respect to ballast water that would minimize ballast water impacts to a number of resources.⁵⁶ Accordingly, we find that the June 2014 EIS properly considered the impacts of the vessel traffic projected to be associated with the Freeport LNG Projects.

⁵³ See, e.g., June 2014 EIS Volume I at 4-217 and 4-238.

⁵⁴ June 2014 EIS Volume I at 4-131.

⁵⁵ June 2014 EIS Volume 1 at 4-70 (citing Freeport LNG Export Project and BOG/Truck Project Environmental Assessment (Docket Nos. CP03-75-003, CP03-75-004, CP05-361-001, and CP05-361-002), March 13, 2009).

⁵⁶ *Id.* at 4-70 through 4-73.

5. Safety Impacts

49. Sierra Club asserts that the EIS failed to consider the risk of vessel fire on nearby industrial facilities, and that therefore the Commission did not take the required “hard look” at impacts on public safety.⁵⁷ Sierra Club acknowledges that vessel fire risks were considered in prior NEPA analyses for the Phase I Project, and by the U.S. Coast Guard (Coast Guard), but alleges that the risk of fire to nearby chemical plants was not considered. Sierra Club argues that recent DOE studies of the effects of LNG vessel fires suggest that hazard zones from vessel fires can extend to zones encompassing nearby industrial facilities such as the chemical plants, but that the risk of fire to these chemical plants was not considered by the Commission.⁵⁸ As discussed in the EIS, ship transits for the Freeport LNG terminal were considered in the 2004 Phase I Project proceeding using similar hazard zones as those described in the DOE study to which Sierra Club refers.⁵⁹ Moreover, the Coast Guard, which exercises regulatory authority over LNG facilities that affect the safety and security of waterways, the ports within those waterways, and the individual facilities within those ports, reviewed the proposed Freeport LNG Projects and concluded that, since the Freeport LNG Projects would not result in an increase in the size and/or frequency of LNG marine traffic over that previously considered, neither a Letter of Intent nor a revision to the existing Water Suitability Assessment was required.⁶⁰

50. We note that the Coast Guard determines what, if any, vessel traffic and/or facility control measures would be appropriate to adequately address navigational safety and maritime security considerations, and we rely on its expertise. Further, the Coast Guard continually assesses the waterway based on the most current information, and has the authority to prohibit LNG transfer or LNG vessel movements to protect the waterway, port or marine environment pursuant to a number of statutory authorities including the

⁵⁷ Sierra Club Rehearing Request at 21.

⁵⁸ *Id.*

⁵⁹ June 2014 EIS Volume 2 at 188 (citing to May 2012 Report to Congress, “Liquefied Natural Gas Safety Research”).

⁶⁰ June 2014 EIS Volume 1 at 4-203. Pursuant to 33 C.F.R. § 127.007(a), an owner or operator planning new construction to expand or modify marine terminal operations at an existing LNG facility, where such construction, expansion or modification would result in an increase in the size and/or frequency of LNG marine traffic on the associated waterway, must submit to the Coast Guard a Letter of Intent. Under 33 C.F.R. § 127.007(e), the owner or operator must also file or update a Water Suitability Assessment.

Ports and Waterways Safety Act of 1972,⁶¹ the Magnuson Act,⁶² and the Marine Transportation Security Act of 2002.⁶³

51. The EIS comprehensively analyzed safety issues, including potential impacts concerning: hazards associated with substances involved in the liquefaction, storage and vaporization of LNG; cryogenic and flashing liquid releases; flammable vapor dispersion; vapor cloud ignition; overpressures; toxic vapor dispersion; past incidents at LNG plants; and potential hazards associated with operation regarding design and operational measures to control potential accidents.⁶⁴ Accordingly, we are satisfied the EIS took the requisite hard look at public safety.

6. Impacts of Increased Domestic Gas Prices

52. On rehearing, Sierra Club repeats its arguments previously addressed in the EIS that LNG exports will increase gas production, which, it asserts, will increase domestic gas prices, and that therefore the EIS should have considered the indirect and cumulative effects of gas price increases on carbon emissions from domestic electricity production.⁶⁵ The EIS explained that DOE has exclusive jurisdiction over the export of natural gas as a commodity, and therefore consideration of impacts related to the exportation of the commodity was not considered in our review.⁶⁶ The EIS further noted that in any event, studies conducted by NERA Economic Consulting indicate that LNG exports are self-limiting, in that little or no natural gas will be exported if the price of natural gas in the U.S. increases much above current expectations.⁶⁷ On rehearing, Sierra Club asserts that the division of NGA authority between DOE and the Commission does not remove these effects from the scope of the Commission's EIS.

53. For the reasons discussed above, the June 2014 EIS analyzed the impacts from the siting, construction and operation of the Freeport LNG Projects facilities themselves. Changes in natural gas commodity prices are not an impact of the facilities. In any event,

⁶¹ 33 U.S.C. § 1221, *et seq.*

⁶² 50 U.S.C. § 191.

⁶³ 46 U.S.C. § 701.

⁶⁴ *See* June 2014 EIS Volume I at 4-142 through 4-165.

⁶⁵ Sierra Club Rehearing Request at 13.

⁶⁶ June 2014 EIS Volume I at 216.

⁶⁷ *Id.*

we note that any attempt to analyze potential impacts of changes in electricity generation which might result from the construction and operation of the Freeport LNG Projects would require the Commission to consider potential impacts far removed and attenuated from the Freeport LNG Projects.

54. Specifically, Sierra Club would have the Commission consider: 1) the extent, if any, to which LNG exports will increase domestic gas prices; 2) whether gas price increases would “significantly increase” domestic use of coal for electricity generation; 3) whether the decrease, if any, in domestic gas consumption in response to exports and export-driven price increases would primarily occur in the electric sector, with producers replacing some gas fired electric generation with coal; and 4) the extent to which the shift from gas to coal-fired electric generation would increase emissions of both traditional air pollutants and greenhouse gases. These steps would require the Commission to engage in speculation upon speculation, and would entail a level of analysis neither contemplated nor required by courts or the CEQ regulations.⁶⁸

7. No Action Alternative

55. The June 2014 EIS concluded that under the “no action alternative” (i.e., denial of Freeport LNG’s application), the environmental impacts described in the EIS would not occur. The EIS noted that it would be speculative to predict the actions that would be taken by natural gas producers if the Freeport LNG Projects were not built, and any potential associated impacts of those actions. For example, the EIS noted that it is possible that natural gas infrastructure supplying natural gas to the global market area could be developed in other, unforeseen ways, depending on market conditions, or that other LNG export projects could be built, which could have impacts less than, equal to, or greater than those from the Freeport LNG Projects.⁶⁹

56. On rehearing, Sierra Club argues that it is not “speculative” whether other means for U.S. LNG exports will be undertaken if the no action alternative is adopted, because

⁶⁸ See *Sierra Club v. Froehlke*, 486 F.2d 946, 951 (7th Cir. 1973) (quoting *Sierra Club v. Froehlke*, 344 F. Supp. 440, 444 (1972)) (stating that NEPA does not require that every conceivable study be performed and that each problem be documented from every angle to explore its every potential for good or ill. Rather, what is required is that officials and agencies take a ‘hard look’ at environmental consequences); see also CEQ guidance to agencies, which provides that “it is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful.” *Considering Cumulative Effects Under the National Environmental Policy Act* (CEQ 1997 at 8, Table 1-2).

⁶⁹ June 2014 EIS Volume I at 3-1.

the “Commission could prevent the adverse environmental impacts of these projects, and the comparable environmental impacts of any other LNG export project, by selecting the no action alternative in each proceeding.”⁷⁰

57. Sierra Club appears to suggest that the Commission make a determination here that based on the records in pending and future applications for LNG export facilities, all or most of those proposals would be inconsistent with the public interest. We decline to do so. As explained above, NGA section 3 provides that applications under that section *shall* be approved if the proposal “will not be inconsistent with the public interest.” In making our public interest determination, the Commission considers proposed actions on their own merits, based on the facts and circumstances specific to each proposal. Here, the Commission relied on the findings set forth in a comprehensive EIS, concluded that construction and operation of the Freeport LNG Projects, subject to conditions, would have limited significant environmental impacts, and found that authorizing it is not inconsistent with the public interest.⁷¹

8. Air Pollution Impacts

58. The EIS considered the global warming potential (GWP)⁷² of 21 for methane over a 100-year period in its analysis of greenhouse gas emissions associated with the Freeport LNG Projects. On rehearing, Sierra Club argues that the EIS should have adopted U.S. Environmental Protection Agency’s (EPA) updated GWP of 25, which was issued in November 2013, several months before the draft EIS was issued. Sierra Club adds that the updated GWP doesn’t even reflect the current scientific consensus with respect to methane. Sierra Club cites to the Intergovernmental Panel on Climate Change’s (IPCC) Fifth Assessment Report, which estimates the value for methane to be 36 over a 100-year period, and 86 over a 20-year period.⁷³ Sierra Club argues that using science that is

⁷⁰ Sierra Club Rehearing Request at 14.

⁷¹ We also note that the no action alternative discussed in the EIS is consistent with CEQ Guidance. *See Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations*, 46 Fed. Reg. 18,026 (1981) at 3a (noting that the no action alternative means “the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of allowing the proposed activity...”).

⁷² The global warming potential is a ratio relative to carbon dioxide that is based on the properties of greenhouse gases’ ability to absorb solar radiation as well as the residence time within the atmosphere.

⁷³ Sierra Club Rehearing Request at 15.

“outdated” is inconsistent with the CEQ regulation requiring agencies to ensure the “scientific integrity...of the discussions and analyses” in NEPA documents.⁷⁴

59. We find that the EIS appropriately relied on the GWP of 21, because this is the value EPA established for Freeport LNG’s GHG Clean Air Act Prevention of Significant Deterioration permit.⁷⁵ While the Commission acknowledges that the GWP of 21 was slightly outdated, when balanced with the benefit of retaining consistency across federal programs, the potential gain in accuracy does not justify the loss of consistency in reporting; in addition, adoption of a different measure likely would have caused stakeholder confusion among the various GWPs used in different programs. Moreover, we note that the change in GWP from 21 to 25 would have only resulted in a 0.003 percent increase in the emissions of methane from operation of the project, which is well within the margin of error of the emissions calculations.⁷⁶

60. Sierra Club also challenges the EIS’s comparison of the indirect impacts of using electric motors versus on-site gas combustion turbines for generating the electricity consumed by the Freeport LNG Projects. While Sierra Club generally approves of the Commission’s comparison and conclusions, it states that the impacts of the two design alternatives is “incomplete, because NEPA requires a comparison of impacts against the no-action alternative.”⁷⁷ Sierra Club states that “the EIS does not indicate the amount of emissions that would be avoided by the no action alternative.”⁷⁸

⁷⁴ *Id.*

⁷⁵ With respect to Sierra Club’s citation to the IPCC report, we note that EPA’s November 29, 2013 rulemaking supported the adoption of the published IPCC Fourth Assessment Report GWP values over the Fifth Assessment Report values.

⁷⁶ The operational volatile organic compound (VOC) emissions from the Freeport LNG Projects (existing, and proposed stationary and marine emissions) are identified in the June 2014 EIS at tables 4.11.1-5 and 4.11.1-7. VOC is assumed to be methane for purposes of calculating carbon dioxide (CO₂) equivalents (CO₂e). The change from 21 to 25 would increase the greenhouse gas CO₂e emissions by approximately 200 tons of CO₂e. The CO₂e emissions from burning fossil fuels from the projects, also identified in the tables, is more than 1.6 million tons. Accordingly, adopting the slight change in GWP would be less than 1/100 of 1 percent, and therefore would have been negligible.

⁷⁷ Sierra Club Rehearing Request at 16.

⁷⁸ *Id.*

61. We disagree. As discussed above, the EIS clearly states that with the no action alternative, the environmental impacts of the Freeport LNG Projects would not occur. There was no need to repeat this statement when discussing the indirect impacts of generating the electricity consumed by the Freeport LNG Projects. We note that Sierra Club has no issue with the analysis of the alternative designs.

62. We also reject Sierra Club's assertion that the EIS did not take a hard look at the design alternative of carbon capture and sequestration to mitigate emissions of carbon dioxide removed from pipeline gas as part of the pretreatment process.

63. As noted above, EPA issued a draft Prevention of Significant Deterioration permit to Freeport LNG for greenhouse gas emissions, which was included in the EIS.⁷⁹ In addressing measures to reduce greenhouse gas emissions, the Prevention of Significant Deterioration permit considered a number of technologies judged to be technically feasible, including carbon capture and sequestration; efficient turbine design; proper thermal oxidizer design; fuel selection; and good combustion, operating, and maintenance practices. As concluded in the EPA Region 6 Statement of Basis for the draft greenhouse gas permit, carbon capture and sequestration, while technically feasible, would be prohibitively costly. EPA concluded that implementation of carbon capture and sequestration would impose energy penalties and result in unacceptable collateral increases of various emissions. Carbon capture and sequestration was also rejected due to other greenhouse gas limiting technologies and/or operational control that EPA also considered. Accordingly, the carbon capture and sequestration alternative was rejected, and the other technologies were selected as reasonable measures to reduce greenhouse gas emissions.⁸⁰

64. On rehearing, Sierra Club takes issue with EPA's conclusions, stating that EPA did not address the economic feasibility of carbon capture and sequestration more narrowly applied to emissions from the amine units, and that EPA's conclusions regarding energy penalties and collateral increases in other pollutants "apply primarily, if not exclusively, to application of carbon capture and sequestration to combustion emissions."⁸¹

65. We see no need to duplicate EPA's extensive efforts, nor question conclusions based on its expertise in this matter. Moreover, a number of measures were imposed in

⁷⁹ June 2014 EIS Volume I at Appendix B.

⁸⁰ June 2014 EIS Volume I at 4-261.

⁸¹ Sierra Club Rehearing Request at 17.

the July 30 Order to reduce greenhouse gas emissions. We conclude the EIS took the requisite hard look at the carbon capture and sequestration alternative.

9. DOE's Conditional Authorization of Exports

66. Finally, Sierra Club argues that the Commission “mischaracterizes and inappropriately relies” on DOE’s conditional authorization of exports.⁸² Sierra Club notes that the July 30 Order states that DOE has reviewed impacts on balance in making its public interest determination, yet emphasizes that “DOE explicitly has not yet considered environmental impacts.”⁸³ Sierra Club asserts that the Commission “cannot base *its* own assessment of the public interest on the belief that DOE has already determined that the project is consistent with the public interest.”⁸⁴

67. Sierra Club appears to misunderstand the relationship between the Commission’s public interest finding pursuant to NGA section 3 and DOE’s NGA section 3 public interest finding. The Commission made its independent determination with respect to the siting, construction and operation of the LNG facilities which will be used to export the commodity. In making this finding, the Commission concurred with the June 2014 EIS, which concluded that construction and operation of the Freeport LNG Project would have minimal environmental impacts, and that the projects are therefore not inconsistent with the public interest.

68. The Commission did not opine as to the sufficiency of DOE’s public interest determination. While the ultimate viability of proposals to construct and operate LNG import/export facilities is dependent upon there being concomitant commodity authorization, as we have previously stated, it would be inappropriate for the Commission to consider issues in its public interest determination that could duplicate, and possibly contradict, DOE’s own determinations.⁸⁵ To the extent Sierra Club finds fault with

⁸² *Id.* at 22.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ Had DOE denied Freeport LNG any authorization to export the commodity, it is highly unlikely that the company would have pursued its application before the Commission to construct facilities, because without commodity authorization, the facilities would have no use. Similarly, if DOE ultimately denies export authorization, the project would likely no longer be financially feasible, notwithstanding the Commission’s issuance of its section 3 authorization to construct the facilities.

DOE's public interest determination, the Commission is not the proper venue in which to raise such a challenge.⁸⁶

The Commission orders:

Sierra Club's request for rehearing and clarification of the July 30, 2014 Order is denied as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

⁸⁶ As noted in the July 30 Order at P 32, Sierra Club raised identical concerns in Freeport LNG's export authorization proceeding, which DOE considered in its public interest determination. Similarly, Sierra Club also notes that the Commission, as lead agency for the NEPA review, must inform DOE's analysis of the environmental impacts. As noted above, DOE was a cooperating agency in the preparation of the EIS, and has conditioned its authorization for Freeport LNG to export natural gas on issuance of its own, independent record of decision pursuant to NEPA. Indeed, as a cooperating agency with jurisdiction by law, DOE has an independent legal obligation to comply with NEPA. *See* 40 C.F.R. § 1506.3 (2014). In its conditional export authorizations, DOE/FE noted that, if "a participant in the FERC proceeding actively raises concerns over the scope or substance of environmental review but is unsuccessful in securing that agency's consideration of its stated interest, DOE/FE reserves the right to address the stated interests" within its own proceeding. *See* DOE/FE May 17, 2013 Order No. 3382 at 121, and DOE/FE November 15, 2013 Order No. 3357 at 164.