UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY

IN THE MATTER OF	**)**	
	)	**FE DOCKET NO. 10-111-LNG**
Sabine Pass Liquefaction, LLC	**)**	
and Sabine Pass LNG, L.P.	**)**	

Sierra Club's Motion for Rehearing and For Stay Pendente Lite

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Pursuant to Section 19(a) of the Natural Gas Act, 15 U.S. C. § 717r(a), and 10 C.F.R. § 590.501, the Sierra Club hereby moves for rehearing and withdrawal of the Department of Energy Office of Fossil Energy's ("DOE/FE") "Final Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas from Sabine Pass LNG Terminal to Non-Free Trade Agreement Nations," DOE/FE Order No. 2961-A., issued August 7, 2012 in the above-captioned matter, and of the "Finding of No Significant Impact for Sabine Pass Liquefaction, LLC" which it adopts as part of that Order.

Sierra Club additionally moves for a stay of the Order pending resolution of this motion, pursuant to Section 19(c) of the Natural Gas Act, 15 U.S.C. § 717r(c), and 10 C.F.R. § 590.502.

All communications regarding this motion should be addressed to and served upon Nathan Matthews, Associate Attorney, and Kathleen Krust, Paralegal, at Sierra Club, 85 2nd St., Second Floor, San Francisco, California 94105.

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I. Statement of the Issues

1. DOE/FE wrongly denied Sierra Club's untimely motion for intervention, because Sierra Club had good cause to intervene, because intervention would not prejudice any other party, and because intervention is consistent with NEPA's background principles regarding public participation.
2. The Order violates the National Environmental Policy Act ("NEPA"), for multiple reaons
    a. NEPA requires agencies to take a "hard look" at the direct, indirect, and cumulative effects of proposed action prior to acting. Here, DOE/FE rested its decision on NEPA documents that fail to analyze the indirect and cumulative effects of additional natural gas production that will be induced by the proposed exports. *Northern Plains Resource Council v. Surface Transportation Board*, 668 F.3d 1067, 1081-82 (9th Cir. 2011), *Wyoming Outdoor Council v. U.S. Forest Serv.*, 165 F.3d 43, 49 (D.C. Cir. 1999), *Potomac Alliance v. U. S. Nuclear Regulatory Comm'n*, 682 F.2d 1030, 1035-36 (D.C. Cir. 1982), *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1096-97 (D.C. Cir. 1973).

b. Here, NEPA required a full Environmental Impact Statement ("EIS"), rather than an Environmental Assessment ("EA"), because the project will have significant impacts. 40 C.F.R. § 1508.27, *Klamath Siskiyou Wildlands Center v. Boody*, 468 F.3d 549, 561-62 (9th Cir. 2006), *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213-14 (9th Cir. 1998). The project will induce additional natural gas production, which will significantly affect the environment. The induced gas production's effects will include air emission of volatile organic compounds and sulfur dioxide, risks to ground and surface water, and industrialization of and fragmentation of landscapes. DOE Secretary Energy Advisory Board Subcommittee 90 Day Report (August 18, 2011); Sierra Club, et al., *Comments on New Source Performance Standards: Oil and Natural Gas Sector; Review and Proposed Rule for Subpart OOOO,* Docket No. EPA-HQ-OAR-2010-0505 (Nov. 30, 2011); New York Department of Environmental Conservation, *Revised Draft Supplemental General Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program* (September 2011) ("NY RDSGEIS"), Catskill Mountainkeeper, *et al.*, Comments *on [NY RDSGEIS]* (Jan. 11, 2012).

c. Because a full EIS was required, NEPA also required a more thorough analysis of alternatives to the proposal and of opportunities to mitigate the project's impacts. The cursory analysis of these issues in the FERC EA which DOE/FE adopts does not meet the standards for an EIS. 40 C.F.R. § 1502.14, *Oregon Natural Desert Ass'n v. Bureau of Land Management*, 625 F.3d 1092, 1109 (9th Cir. 2010).

3. DOE/FE's finding that the project is consistent with the public interest is arbitrary and capricious. Consideration of the public interest includes environmental factors, including effects attributable to induced drilling. DOE/FE cannot conclude that the project is in the public interest until the above impacts have been adequately analyzed pursuant to NEPA, and these impacts demonstrate that the project is contrary to the public interest. *Nat'l Ass'n for the Advancement of Colored People v. Federal Power Commission*, 425 U.S. 662 (1976); *Udall v. Federal Power Comm'n*, 387 U.S. 428 (1967); *Com. of Mass. v. Watt*, 716 F.2d 946, 952 (1st Cir. 1983) *Alaska v. Andrus*, 580 F.2d 465, 485 (D.C. Cir. 1978), *Jones v. District of Columbia Redevelopment Land Agency*, 499 F.2d 502, 512-13 (D.C. Cir. 1974).

II. Argument for Rehearing

A. DOE/FE Erred by Denying Sierra Club's Motion to Intervene

DOE/FE erred when it did not grant Sierra Club's motion to intervene and it should grant that motion on rehearing. Late-filed intervention motions are to be granted for "good cause shown" after considering their impact upon the proceeding. *See* 10 C.F.R. § 590.303(d) (providing intervention standard). Sierra Club had good cause for intervening into these proceedings to protect the interests of its hundreds of thousands of members, and the questions it sought to raise could not have been brought forward any earlier. Further, the intervention would not have negative impacts on the proceeding because Sierra Club raised legal issues that could have been ruled upon by DOE/FE with no undue prejudice to Sabine Pass. Declining to hear Sierra Club's concerns, by contrast, unduly prejudiced Sierra Club's

interests, while leading DOE/FE to legally indefensible conclusions. DOE/FE's determinations to the contrary in Order 2961-A (Aug. 7, 2012) are factually and legally wrong.

1. There Was Good Cause to Grant Sierra Club's Late-Filed Motion to Intervene

DOE/FE conditioned its tentative approval of Sabine Pass's export application upon "the satisfactory completion of the environmental review process" FERC had undertaken for the project and, afterwards, "issuance by DOE/FE of a finding of no significant impact or a record of decision pursuant to NEPA." DOE/FE Order No. 2961 (May 20, 2011). Sierra Club moved to intervene into these proceedings as soon as the FERC process ended and it became clear that DOE/FE would be unable legally to rely upon FERC's EA. Because Sierra Club obviously could not raise these issues until the EA had been finalized, it plainly had good cause to intervene when it did.

When DOE/FE's predecessor agency drafted the procedural regulations which govern this process, it explained that good cause would be present for late intervention when a party with interests in the proceeding "had reason for failure to file on time" and "would provide information material to the proceeding." 49 Fed. Reg. 35,302, 35,305 (Sept. 6, 1984). DOE/FE does not dispute Sierra Club's interests here – and indeed could do not do so, given the thousands of Sierra Club members who will be impacted by natural gas production and rising natural gas and electricity prices. Accordingly, it should have granted Sierra Club's motion to intervene after determining that Sierra Club did, indeed, have a good reason to file when it did, and had provided material information.

Sierra Club met both prongs of this test.

First, Sierra Club carefully explained that it sought intervention as soon as the environmental phase of DOE/FE's consideration began. *See* Sierra Club Motion to Intervene at 3. DOE/FE made clear in Order 2961 that it had deferred environmental considerations for a later date. It stated that it would not finally approve Sabine Pass's application until FERC had completed a NEPA review and DOE/FE had issued its own final decision based upon this environmental review. Order 2961 at 40-41. Thus, DOE/FE anticipated that, after FERC's EA was completed, DOE/FE would have to review FERC's document and make an independent determination in a new phase in this proceeding. Indeed, DOE/FE has since, as promised, reviewed FERC's EA and (wrongly, in Sierra Club's view) made final determinations discharging its own NEPA obligations. *See* Order 2961-A at 27-29. Sierra Club sought specifically to intervene into this final, environmental, phase of DOE/FE's consideration, a phase which the Office had explicitly bifurcated from its earlier review. It did so as soon as that review began, intervening just days after FERC completed its EA. This was manifestly the proper time for Sierra Club to raise the specific concerns with the FERC EA which it presented.

Second, Sierra Club submitted extensive information "material to the proceeding." The protest attached to its motion to intervene extensively canvassed relevant NEPA law, the FERC EA, and the record upon which the EA is based to explain why the EA could not satisfy DOE/FE's

environmental obligations. Sierra Club explained that the EA's narrow focus on the export facility site, rather than upon the broad swath of nationwide environmental impacts which export will cause, meant that it could not support DOE/FE's public interest determination. These arguments, and the information which Sierra Club supplied to support them, are plainly material to these proceedings.

Thus, Sierra Club had good cause to intervene when it did. Indeed, it could not have raised its specific concerns any earlier. Because Sierra Club's protest is grounded upon the inadequacy of the FERC EA to satisfy DOE/FE's separate obligations, it could not be drafted, or filed, until that EA had been finalized, and DOE/FE had begun to review it.

For this reason, DOE/FE's central justification for denying Sierra Club's motion is ill-founded. DOE/FE premises its denial of Sierra Club's intervention principally on the claim that, through Federal Register notices published in 2010, Sierra Club had notice that the Office would be considering the environmental impact of Sabine Pass's application and would be cooperating in FERC's review. Order 2961-A at 24-25. Therefore, according to DOE/FE, Sierra Club should have intervened in these proceedings in 2010 "if it wanted to raise issues regarding the environmental impacts of granting the instant application." *Id*. at 25. But the issue is not whether Sierra Club was generally aware DOE/FE's proposed process for addressing environmental concerns, but whether Sierra Club had good cause for intervening when it became clear that DOE/FE's FERC-dependent process would not satisfy the Office's legal obligations. Because DOE/FE misstated the question, it came to the wrong answer.

Indeed, if anything, DOE/FE's prior statements indicated that intervention at this point was proper. DOE/FE had stated that it would defer a final decision on Sabine Pass's application until the FERC process was done, that it would not weigh environmental impacts on its public interest determination until that time, and that it would make a separate final NEPA decision only after such a review. *See* Order 2961 at 40-41; 75 Fed. Reg. 62,512, 62,513 (Oct. 12, 2010) (DOE/FE affirms that it will not make a final decision "until DOE has met its NEPA responsibilities"); 75 Fed. Reg. 68,347, 68,347-48 (Oct. 29, 2010) (affirming that the FERC EA will seek to develop this information). DOE/FE cannot both defer its environmental analysis to this later proceeding and then deny environmentally-interested citizens the right to participate in the very proceeding it has set aside to consider these issues.

In this regard, the intervention denial is particularly inconsistent with DOE/FE's NEPA obligations. DOE/FE is to "follow the letter and spirit of NEPA," 10 C.F.R § 1021.101, a statute which is deeply rooted in principles of public participation and transparency. *See, e.g.*, *Calvert Cliffs Coordinating Committee v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1114 (D.C. Cir. 1971) (NEPA statements are intended to "aid in the agencies' own decision making process and to advise other interested agencies and the public of the environmental consequences of planned federal action"); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (NEPA is intended for "broad dissemination" of information to drive careful, public, analysis of agency action). Yet, DOE/FE would prevent citizens from intervening to comment upon the adequacy, and legality, of its NEPA process. DOE/FE cannot properly insist on considering

FERC's EA in isolation, free of any public challenges to the adequacy of the EA. Such public challenge and discussion is the essence of the NEPA process. DOE/FE should embrace it, rather than foreclosing it.

For related reasons, DOE/FE's other proffered justification for denying Sierra Club intervention here is ill-taken. DOE/FE suggests that Sierra Club should not be allowed to intervene because it might force this Office to independently consider whether its NEPA obligations can be fulfilled by FERC's EA. But this, of course, is precisely the question at hand. DOE/FE had to make exactly that determination and Sierra Club properly raised it here.

Specifically, DOE/FE asserts that allowing the Sierra Club to intervene "raise[s] a possibility of duplicative or even conflicting administrative proceedings on a matter that has been delegated to and decided by FERC." Order 2961-A. Apparently, because FERC has decided that the EA is sufficient to meet *FERC's* legal obligations, DOE/FE believes it is improper for it to decide otherwise – or even hear argument to the contrary – with regard to *DOE/FE's* separate obligations. This argument is, simply, specious.

As DOE/FE is surely aware, its obligations are quite distinct from FERC's. FERC is charged only with determining where and how to site export terminals. *See* Department of Energy Delegation Order No. 00-004.00A § 1.21 (May 16, 2006). DOE/FE, by contrast, is charged with broadly considering whether export is in the public interest. *See* Department of Energy Redelegation Order No. 00-002.04E § 1.3 (Apr. 29, 2011). Whether or not the EA, which was limited to siting issues, was sufficient to support FERC's decision, it plainly is not adequate to support DOE/FE's decision.

Not only is there absolutely no material conflict between DOE/FE's determination and FERC's, it would be a dereliction of legal duty for DOE/FE to simply rubber stamp FERC's conclusions. Indeed, FERC itself acknowledged that "DOE has separate statutory responsibilities with respect to authorizing the export of LNG from Sabine Pass; thus it has an independent legal obligation to comply with NEPA." FERC Order Denying Rehearing, 140 FERC ¶ 61,076, FERC Docket No. CP11-72-001 (July 26, 2012) (hereinafter "FERC July Order") at ¶ 32. All Sierra Club asked was the right to participate as DOE/FE undertook that separate determination.

At bottom, DOE/FE divided these proceedings, opting to wait to consider environmental matters until after FERC completed its EA and it was proper, therefore, for Sierra Club to appear to critique that EA at the time DOE/FE had set aside. DOE/FE was wrong to refuse to listen to the Sierra Club, which had good cause to intervene when, and how, it did.

2. Sierra Club's Participation Would Not Harm These Proceedings

Sierra Club sought to raise a narrowly-focused set of environmental issues which DOE/FE was already obligated to consider. Its participation would not have harmed or unduly delayed these proceedings, and would have unfairly prejudiced no party. DOE/FE could not properly conclude otherwise.

DOE/FE can identify *no* legitimate undue prejudice to Sabine Pass. It accepts none of Sabine Pass's unsupported assertions of harm, acknowledging that it has not "determine[d] the basis for all of these alleged negative consequences." Order 2961-A at 26. Instead, it merely states, without citing any evidence, that it is "reasonable to conclude" that delaying issuing a final order would harm Sabine Pass's business interests.

Not only is there no record support for this proposition, it is inconsistent with DOE/FE's own obligations. DOE/FE has no statutory or regulatory time table in which to issue its licenses, and these licenses must be founded on a careful consideration of the public interest. Indeed, DOE/FE had committed to Congress to issue *no* licenses until the completion of an economic study which it has not yet finished, or even offered in draft form. *See* Letter from Assistant Secretary Christopher Smith to Representative Edward Markey (Feb. 24, 2012) at 4 (stating DOE/FE will issue no "final order" addressing pending export applications until its study has been completed). Thus, rushing to issue a final order licensing Sabine Pass not only gives short shrift to DOE/FE's statutory obligations to carefully consider export's environmental and economic impacts on the record, it contravenes a clear commitment to Congress. Sabine Pass's abstract desire to receive a license as soon as possible cannot trump these obligations. Indeed, it is far from clear that it is in Sabine Pass's interest to receive a license founded on such shaky foundations.

Moreover, DOE/FE's conclusion that its rush to judgment would not prejudice the Sierra Club is simply wrong. DOE/FE suggests that Sierra Club had been "given an opportunity to litigate the issues that concern it before the FERC," Order 2961-A at 26, which, DOE/FE offers, obviates any need to press its claims here. This claim does not make sense. It would be awkward, to say the least, for Sierra Club to litigate before FERC whether the EA is sufficient to meet DOE/FE's NEPA obligations. Nor could it litigate before FERC whether the environmental impacts of this export proposal – as must be detailed in any legally compliant NEPA analysis – are in the public interest. That determination rests with DOE/FE. In short, the most logical forum for Sierra Club to vindicate its interests as to the final agency action at issue here is here, not a challenge to a entirely separate (and far less consequential) action undertaken by another agency.

Fairly weighed, Sierra Club's pressing interest in being heard on issues which only DOE/FE can decide, and did decide in these proceedings, far outweigh Sabine Pass's interest in a rush to judgment. Sierra Club should have been granted leave to intervene.

3. Conclusion on Intervention

DOE/FE's decision to deny Sierra Club intervention cannot be sustained. It improperly shuts out the voices of hundreds of thousands of concerned citizens from a proceeding of extraordinary environmental consequence. The decision should be reheard, and Sierra Club's motion should be granted.

B. DOE/FE's Final Order Violates NEPA

DOE/FE recognizes that it is "responsible for conducting an independent review" of FERC's analysis and determining whether "the record needs to be supplemented in order for DOE/FE to meets its statutory responsibilities under section 3 of the NGA [(Natural Gas Act)] and under NEPA," Order 2961-A at 27, but DOE/FE failed to properly perform these duties.

DOE/FE's conclusion that its broad authority over the export licensing process did not "require a broader or different environmental analysis than the one performed by FERC," *id.*, is wrong. Unlike FERC, DOE/FE is charged with considering whether export is in the public interest, a broad inquiry which includes the obligation to consider environmental impacts of exports. *See, e.g.*, *Nat'l Ass'n for the Advancement of Colored People v. Federal Power Commission*, 425 U.S. 662, 670 n.4 (citing 15 U.S.C. § 17b as an example of a public interest provision); n.6 (explaining that the public interest includes environmental considerations) (1976); Testimony of Christopher Smith, Deputy Assistant Secretary of Oil and Gas Before the Senate Committee on Energy and Natural Resources (Nov. 8, 2011) ("[a] wide range of criteria are considered as part of DOE's public interest review process, including… [e]nvironmental considerations). DOE/FE *cannot* make this determination without considering the national environmental consequences inherent in the increased production needed to support natural gas export from Sabine Pass.

For this reason, DOE/FE's decision to simply adopt FERC's EA, which does not consider *any* of the national environmental impacts associated with natural gas export, is a fatal legal error. These impacts range from the effect of higher gas exports (and hence prices) on national energy policy and emissions from utilities which might use gas rather than coal to the effect of increased gas extraction. DOE/FE ignored all of these impacts and, most egregiously, "accept[ed] and adopt[ed]" FERC's indefensible determination that "induced shale gas production is not a reasonably foreseeable effect for purposes of NEPA analysis." Order 2961-A at 28. This finding is, simply, wrong. From the beginning, Sabine Pass has premised its application in significant part on its ability to induce and support domestic gas production, and DOE/FE has approved the application in part on that very basis. It cannot refuse to weigh the environmental impacts associated with that production, or to consider alternatives which might reduce those impacts.

At bottom, DOE/FE's decision to put on the same blinders as FERC – while simultaneously acknowledging the economic benefits of the very same production which FERC claims is "impossible" to forecast or analyze – is so contrary to NEPA's goals of informed decisionmaking and transparent public disclosure as to be arbitrary and capricious. It is also exceptionally bad policy, contrary to DOE/FE's stated intent of approving exports only on the basis of full information. Because the public interest determination rests on this fatally-flawed foundation, it must be reheard and rescinded.

1. DOE/FE Violated NEPA by Issuing a Final Order Without Considering The Impacts of Induced Natural Gas Production

DOE/FE's core error is its insistence that is "impossible to meaningfully analyze when, where, and how shale-gas development will be affected" by Sabine Pass's proposal. To state the obvious: the billions of cubic feet of natural gas which Sabine Pass proposes to export must come from somewhere and that production will have substantial, and foreseeable, environmental impacts wherever it occurs – and, in fact, Sabine Pass itself predicts several likely locations. DOE/FE attempts to convert uncertainties as to the particulars of production into purported total uncertainty as to whether *any* production will occur, and have *any* impacts. This analysis does not make sense. Because DOE/FE nonetheless stops its analysis here, DOE/FE lacks information which it must consider under NEPA and the NGA.

NEPA review must inform the substantive decision before the agency, and such, must encompass the scope of that decision. As the Ninth Circuit Court of Appeals recently explained "Because 'NEPA places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action,' the considerations made relevant by the substantive statute driving the proposed action must be addressed in NEPA analysis." *Oregon Natural Desert Ass'n v. Bureau of Land Management*, 625 F.3d 1092, 1109 (9th Cir. 2010) (quoting *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 553, 98 S.Ct. 1197, 55 L.Ed.2d 460 (1978)). Here, the substantive statute—the Natural Gas Act—requires DOE/FE to determine whether the export of natural gas is in the "public interest." As we explain below, this determination includes but is not limited to consideration of impacts on domestic gas supplies, prices, and the environment.

NEPA specifically requires analysis of the direct effects, indirect effects, and cumulative impacts of a proposed action. 40 C.F.R §§ 1502.16, 1508.7, 1508.8; *Northern Plains Resource Council v. Surface Transportation Board*, 668 F.3d 1067, 1081-82 (9th Cir. 2011). Sabine Pass's proposed exports will themselves induce additional natural gas production, and the environmental effects of that production are indirect effects of the proposed action. More generally, all the pending export proposals would, if granted, induce additional production, and the effects of this aggregate production are cumulative effects that must be considered under NEPA. DOE/FE, following FERC's lead, refused to consider any effects of induced production. This refusal violated NEPA.

a. Increased Production Is an Indirect Effect of The Proposed Exports

As noted above, NEPA requires consideration of "indirect effects" of proposed projects. These are effects that are "caused by the action," that "are later in time or farther removed in distance," than direct effects, "but [that] are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). Indirect effects specifically include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effect on air and water and other natural systems, including ecosystems." *Id.* Here, DOE/FE's order and Sabine's application explicitly predict that the proposed exports will cause increases

in domestic natural gas production and rely on this prediction in their economic and public interest analyses. In a study commissioned by DOE/FE, the Energy Information Administration similarly predicts that the majority of exported LNG would come from increased shale gas production. In light of these predictions of induced production, DOE/FE violated NEPA when it "accept[ed] and adopt[ed] [FERC's] determination that induced shale gas production is not a reasonably foreseeable effect for purposes of NEPA analysis." Order 2961-A at 28. DOE/FE and FERC have overstated the level of certainty NEPA requires and understated the strength of the evidentiary record.

DOE/FE's Order, and the FERC orders it incorporates, conclude that induced production is not an indirect effect because of two types of uncertainty: uncertainty regarding the volume of production that would be induced and uncertainty regarding the specific location, timing, and conditions of the production that is induced. Order 2961-A at 27-28. DOE/FE overstates the extent of both types of uncertainty, and neither renders the impacts of induced production less than "reasonably foreseeable" for purposes of NEPA, as we explain below.

i. It Is Reasonably Foreseeable That The Majority of Exported LNG Will Come from Induced Additional Production

The first reason DOE/FE offers for not addressing the effects of induced production is that "it is unknown how much, if any, new shale gas production the Liquefaction Project will rely on for its export volumes." Order 2961-A at 28.[1] Although DOE/FE states that it is "unknown" if "any" new production[2] will result from the proposed exports, every available source concludes that it is *likely* that the majority of exported gas will come from induced additional production, and NEPA's scope is not limited to those impacts that are absolutely certain. NEPA requires "[r]easonable forecasting and speculation," extending beyond certain impacts to those that are likely or even possible. *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973). Any uncertainty surrounding the precise extent to which exports will induce production is too little to remove the effects of induced production from NEPA's ambit.

In its conditional authorization, DOE/FE predicted that almost all gas will come from induced production. DOE/FE's conditional order states that Sabine Pass "submitted substantial evidence" that export would "enhance[] support for continued natural gas exploration and

[1] Whereas DOE/FE merely states that it is "unknown" whether exports will induce any production, FERC goes many steps further, stating that "it is *virtually impossible* to estimate how much, if any, of the export volumes associated with the Liquefaction Project will come from existing or new shale gas production," FERC July Order ¶ 9, and that FERC "*cannot*[] estimate how much of the export volumes," FERC April Order ¶ 98 (emphases added).

[2] Although DOE/FE refers to uncertainty regarding *shale* gas production specifically, Sierra Club's concerns extend to all forms of gas production. Although some of the environmental impacts discussed in Sierra Club's filings are specific or especially pertinent to shale gas production, many of the impacts result from all forms of gas production.

development activities to supply the export market," and that this evidence was unrebutted. Order 2961 at 37-38. DOE/FE concluded that "natural gas production associated with exports in this application will result in increased production that could be used for domestic requirements if market conditions warrant such use." *Id.* 35. Sabine Pass itself states that "The Sabine Pass LNG Liquefaction Project will play an influential role in contributing to the growth of natural gas production in the U.S." Sabine Pass, Application for Long-Term Authorization to Export Liquefied Natural Gas, p. 56 (Sept. 7, 2010). In discussing the effect of exports on domestic gas prices, DOE/FE found that prices would increase because of the "increasing marginal costs of additional domestic production for LNG exports" Order 2961 at 29, *see also id.* at 34, implying the exported LNG would largely come from increased production rather than displacement of domestic consumption. More specifically, Sabine Pass's assertion that exports would benefit the public interest through "[i]ndirect creation of 30,000-50,000 permanent jobs in the E&P sector," which DOE/FE adopted in full, is only valid if these jobs are tied to new production. *Id.* at 30. Jobs associated with production that would occur in the absence of exports, on the other hand, cannot be "created" by exports.

The Energy Information Administration, in a study commissioned by DOE/FE, agrees that if LNG is exported from the US, the majority of this gas will come from increased production, primarily from shale gas. Energy Information Administration, *Effects of Increased Natural Gas Exports on Domestic Energy Markets*, 6, 11 (January 2012) (hereinafter "EIA Study").[3] Specifically, EIA predicts that "about 60 to 70 percent" of the volume of LNG exported would be supplied by increases in domestic production, with the remainder supplied reductions in domestic consumption of current production, and that "about three quarters of this increased production is from shale sources." *Id.* at 6. Simple application of these predictions to Sabine Pass's application estimates that the application would result in at least 1.32 bcf/day of increased domestic production, including roughly 1 bcf/day of new shale gas production. Of course, DOE/FE could and should have engaged in a more sophisticated application of this study to Sabine Pass's Application. Instead of even using these simple estimates, however, and notwithstanding the fact that DOE/FE specifically commissioned this study, DOE/FE's order here does not afford that study any meaningful analysis. Absent any contrary evidence in the record, however, DOE/FE must credit the predictions of the federal study it commissioned to answer this exact question.[4]

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[3] Attached as exhibit 1 to Sierra Club's comment on the Environmental Assessment ("Sierra Club Comment"), and available at available at http://www.eia.gov/analysis/requests/fe/pdf/fe_lng.pdf.

[4] FERC, on the other hand, wrongly dismissed the EIA Study as not specific to Sabine Pass's proposal and as uncertain, concluding that "the report does not assist . . . in reasonably estimating how much of the Liquefaction Project's export volumes will come from current versus future shale gas productions." FERC July Order ¶ 14. FERC clings to the EIA Study's acknowledgment that its predictions are "uncertain" and that future trends in gas production and price may be disrupted by "events that cannot be foreseen," EIA Study at 3, but this uncertainty does not remove it from the realm of "reasonable forecast and speculation" that NEPA requires. Scientists' Inst. for Pub. Info., 481 F.2d at 1092. Similarly, although the report

DOE/FE's conclusion that, despite these predictions, "induced shale gas production is not a reasonably foreseeable effect for purposes of NEPA analysis" misunderstands the level of foreseeability NEPA requires, for at least two reasons.

First, this conclusion unlawfully requires a greater level of certainty for predictions of environmental costs than it does for predictions of economic benefits. In *Scientists' Institute for Public Information*, the Atomic Energy Commission had performed a NEPA analysis for nuclear power plants, and excluded the environmental costs of long term nuclear waste storage and disposal from its NEPA analysis. 481 F.2d at 1097. The Commission had prepared a 30-year cost-benefit analysis touting the project's purported benefits, and had used this analysis in seeking to persuade Congress to fund the project. *Id*. The agency had nonetheless concluded that assessing environmental impacts on this scale would require a "crystal ball inquiry," and the agency accordingly omitted such assessment. *Id*. at 1086, 1092. The court rejected this approach, concluding that there was no reason to believe that environmental forecasts would be any less accurate than the agency's analysis of economic benefits, and that the agency could not impose a higher standard of certainty on environmental review. *Id*. at 1092. *Accord Northern Plains Resource Council v. Surface Transportation Board*, 668 F.3d 1067 (9th Cir. 2011) (discussed *infra*).

Although FERC's order denying Sierra Club's motion for rehearing sought to distinguish *Scientists' Institute for Public Information*, FERC's arguments fail. FERC argued that because the Natural Gas Act's public interest inquiry fulfills a different statutory purpose than that served by NEPA, DOE may use one standard of foreseeability under the NGA and another under NEPA. FERC July Order ¶ 20. This argument crashes head on into the fundamental holding of *Scientists' Institute*: because NEPA informs decisions made for other purposes, the scope of the NEPA analysis must match the scope of other analyses informing the decision. *See also Oregon Natural Desert Ass'n*, 625 F.3d at 1109.[5] FERC then argues that in *Scientists' Institute*, the agency had not prepared *any* NEPA analysis, whereas here, FERC prepared an EA, albeit one that did not analyze the impacts of induced production. FERC July Order ¶¶ 21-22. This distinction is irrelevant: where NEPA requires consideration of an environmental impact, that obligation is in no way relieved by the fact that the agency has considered *other* environmental impacts. Finally, FERC argued that in *Scientists' Institute*, the agency had various information about the impacts that was not present here. *Id.* ¶ 22. As we discuss below, DOE/FE has sufficient information to inform meaningful discussion of the impacts of induced drilling. *Scientists' Institute*, 481 F.2d at 1092 (although NEPA required evaluation of impacts of nuclear energy development program over the next three decades, this analysis did not require "the

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does not specifically address Sabine Pass, it considers LNG exports from the Gulf of Mexico, and FERC offers no reason to doubt whether the general trends predicted by EIA would be instantiated by exports from Sabine Pass.

[5] Moreover, as we explain below and have argued previously, the NGA public interest analysis itself requires consideration of environmental impacts. Both NEPA and the NGA independently require DOE/FE to consider induced drilling.

same detail or . . . the same degree of accuracy" as analyses for more specific and shorter-term projects).

DOE/FE's second error is that, even if DOE/FE had not adopted a lower standard of foreseeability in its prediction of economic benefit, the standard of "reasonable foreseeability" DOE/FE uses for its environmental analysis would nonetheless be too stringent. "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." *City of Shoreacres v. Waterworth*, 420 F.3d 440, 453 (5th Cir. 2005).[6] NEPA requires "[r]easonable forecasting and speculation," and courts "must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'" *Scientists' Inst. for Pub. Info.*, 481 F.2d at 1092. Although DOE/FE and FERC have identified various uncertainties regarding estimates of the amount of production exports will induce, the agencies have not and cannot explain why this uncertainty is so great that a person of "ordinary prudence" would not take these predictions into account.

Indeed, an event can be "sufficiently likely" to warrant consideration when is not the "most likely" outcome or even "likely": agencies must consider even unlikely events that would have significant consequences. For example, the D.C. Circuit recently rejecting the Nuclear Regulatory Commission's refusal to consider possibility of insufficient repository capacity for spent nuclear fuel, finding the agency's conclusion that "reasonable assurance exists" that capacity would become available to be "a far cry" from a finding that the unavailability of storage was "remote and speculative." *New York v. NRC*, 681 F.3d 471, 482 (D.C. Cir. 2012). Similarly, the Ninth Circuit has explained that "in considering the policy goals of NEPA and the rule of reasonableness that governs its application, the possibility of terrorist attack [on a nuclear power plant] is not so 'remote and highly speculative' as to be beyond NEPA's requirements." *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm'n*, 449 F.3d 1016, 1031 (9th Cir. 2006). Agencies may exclude effects from consideration only when they are truly "speculative;" even "probable" impacts must be considered. *Ground Zero Ctr. for Non-Violent Action v. U.S. Dept. of Navy*, 383 F.3d 1082, 1089-90 (9th Cir. 2004) (holding that "foreseeable" impacts are at least probable rather than speculative, and that the Navy was not required to analyze impacts of event with at most a 1 in 100 million chance of occurring). In this case, the evidence in the record demonstrates that exports are likely to induce significant production. But even if DOE/FE concludes, against the weight of this evidence, that such inducement is unlikely, DOE/FE must concede that the possibility of such inducement is neither remote nor speculative. Accordingly, DOE/FE must consider the consequences such inducement would have if it were to occur. As we have demonstrated, and DOE/FE and FERC have not disputed, those consequences would be severe.

[6] In this proceeding, FERC endorses this formulation of "reasonable foreseeability." FERC "Order Granting Section 3 Authorization" 139 FERC ¶ 61,039, FERC Docket CP11-72-001 ¶ 95(April 16, 2012) (hereinafter "FERC April Order").

Finally, we note that the Central New York Oil and Gas Company orders FERC discussed in its denial of Sierra Club's motion for rehearing have no application here. FERC July Order ¶ 12 (citing *Central New York Oil and Gas Company*, LLC, 137 FERC ¶ 61,121 (2011) ("CNYOG Order"), *reh'g* 138 FERC ¶ 61,104 (2012)). In those orders, FERC concluded that increased production was not a reasonably foreseeable consequence of the proposed pipeline because the same gas could be sold in the same markets with or without the pipeline. CNYOG Order ¶¶ 91-92. That is not the case here: natural gas cannot be exported to non-free trade agreement countries without DOE/FE approval. As such, the production necessary to supply this market will not occur absent DOE/FE grant of export licenses. These orders are further distinguished by the fact that there, the project applicant did not assert and predict increased production jobs as an economic benefit of the pipeline. Here, in contrast, Sabine Pass itself predicts increased production as a result of the proposed export, and every other observer joins in this prediction. FERC's order denying rehearing with respect to this matter asserts that here, there is even less certainty with regard to *where* induced drilling might occur. Perhaps so, but as we explain below, the environmental impacts of induced drilling can be foreseen without information as to the precise situs where that drilling will occur. As to the logically prior question of *whether*, rather than *where*, induced drilling will occur, such inducement is much more foreseeable in this case, because exports will inarguably increase demand.

In summary, although there is some uncertainty regarding the extent to which exports will induce additional production, induced production is eminently "reasonably foreseeable." At the very minimum, DOE/FE should have used the percentages produced by the EIA Study to predict that Sabine Pass's proposal to export 2.2 bcf/d of gas would induce at least 1.32 bcf/day of additional domestic production.

ii. The Environmental Impacts of Induced Drilling Can Be Reasonably Foreseen Even If The Location of That Drilling Is Unknown

In addition to asserting that the overall amount of induced production is unknown, DOE/FE concluded that the difficulty in predicting where induced drilling would occur prevented the environmental impacts of such drilling from being reasonably foreseeable. Order 2961-A at 28. Similarly, the FERC order denying rehearing, the reasoning of which DOE/FE adopts, states that "while it may be the case that additional shale gas development will result from the Liquefaction Project, the amount, timing and location of such development activity is simply unknowable at this time." FERC July Order ¶ 9. These assertions are wrong, but, even if they were supportable, meaningful NEPA analysis is still required even if the particular production locations are not known.

First of all, Sabine Pass itself did not find these production locations at all "unknowable" when it applied for its export license. While its application acknowledges that it may draw gas from across the domestic pipeline rid, Sabine Pass identified the "most likely" sources of supply as "the historically prolific Gulf Coast Texas and Louisiana onshore gas fields, the gas fields in the Permian, Anadarko, and Hugoton basins, and the emerging unconventional gas fields in the Barnett, Fayetteville, Woodford, and Bossier basins." Sabine Pass Application at 16. Its

application also trumpets letters of support from elected officials who expect the project to "produce demand for the unconventional gas that is being explored and produced in the northern part of [Louisiana]. *See* Application Ex. C: Letters from State Representative J.P. Perry (July 15, 2010), Lieutenant Governor Scott A. Angelle (July 21, 2010), and Senators Mary Landrieu and David Vitter (along with other LA delegation members) (July 26, 2010). Sabine Pass, in other words, had no difficulty in identifying production fields which it would "most likely" support. DOE/FE's insistence that these fields are, nonetheless, so utterly unknowable as to be impossible to analyze is fundamentally inconsistent with the record.

Nonetheless, as we explained in our petition for rehearing before FERC, the purported inability to predict the location of increased production does not render the environmental impacts of that induced production unforeseeable. Sierra Club Motion for Rehearing and for Stay Pendente Lite, FERC Docket CP11-72-001, at 7 (May 16, 2012). In the context of nuclear waste, the DC Circuit has held that where there are reasonable estimates of the deployment of nuclear power plants, the amount of waste produced, and the land needed to store waste, NEPA required analysis of the impacts of such storage even though the agency could not predict where such storage would occur. *Scientists' Inst. for Pub. Info.,* 481 F.2d 1096-97. The situation here is indistinguishable. As noted above, the EIA has demonstrated the ability to predict the amount of additional gas production that will be induced. From this, DOE/FE can provide a range of estimates of the number of wells that will be induced. Sierra Club introduced into the record information regarding the impacts of gas production, including production from shale and other unconventional sources. NEPA requires, at a minimum, that the agencies then consider the aggregate amount of additional air pollutant emissions, water needs, land disturbance, etc., that would have resulted from induced production, even if these impacts could not be localized. Although FERC acknowledged this argument in its denial of Sierra Club's motion for rehearing, FERC did not respond to it, instead asserting, without explanation, that assessment of environmental impacts is impossible without knowing specifically where and when the additional induced production will occur. FERC July Order ¶ 8. DOE/FE adopts FERC's conclusion without even considering these points. Its failure to do so was arbitrary and capricious.

DOE/FE and FERC's unutilized ability to foresee the environmental effects of induced drilling without knowing exactly where that drilling will occur defeats FERC's attempt to distinguish *Northern Plains Resource Council v. Surface Transportation Board*, 668 F.3d 1067 (9th Cir. 2011). *Northern Plains* reviewed the adequacy of NEPA review for a rail line construction. The agency had concluded that expansion of nearby coal mines was not a reasonably foreseeable consequence of the rail line extension, thereby excluding the effects of such mine expansions from its NEPA analysis. *Id.* at 1081. Petitioners challenged the failure "to address any impacts from the [coal] mines, notwithstanding the fact that the financial justification for the entire [rail] line included hauling Otter Creek coal." *Id.* The court concluded that because the agency "relied on the coal mine development in Otter Creek to justify the financial soundness of the proposal," and further knew that nearby land had been slated for coal development, the agency's conclusion that such development was not reasonably foreseeable was arbitrary and capricious. *Id.* at 1082. The railway under consideration would foreseeably induce coal mining,

and this mining had to be considered in the NEPA analysis. As applied to Sabine Pass's proposal, FERC asserts that *Northern Plains Resource Council* is distinguishable because there, the agency knew exactly where the induced coal mining would take place. FERC July Order ¶¶ 15-16. As explained above, however, although knowledge of specific locations must be obtained and considered when available, the unavailability of this information does not excuse the duty to predict general environmental impacts. Fundamentally, here as in *Northern Plains Resource Council*, the project applicant identified resource extraction that would not occur but for the proposed project and offered this extraction as a benefit of the project, so the environmental effects of this extraction must be considered.

b. DOE/FE Must Consider the Cumulative Impacts of Other Pending Proposals

For the reasons explained above, Sabine Pass's proposal will induce additional gas production, and the environmental impacts of this production are reasonably foreseeable indirect effects of the proposal. NEPA requires DOE/FE to consider these impacts, as well as the cumulative impacts of drilling induced by all other pending and foreseeable export proposals. Cumulative impacts are impacts that are not causally related to the action but that are:

> the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7.

DOE/FE's order does not distinguish between indirect and cumulative impacts. Insofar as DOE/FE contends that induced production is outside the scope of the cumulative impacts analysis because it is not reasonably foreseeable, DOE/FE is mistaken for the reasons explained in the preceding section.

Insofar as DOE/FE implicitly adopts the few passing comments FERC made specifically regarding cumulative impacts, this is a further error. FERC quoted a CEQ guidance document, which 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." FERC April Order ¶ 95: (quoting *Considering Cumulative Effects Under the National Environmental Policy Act*, (CEQ 1997)). Roughly tracking this language, FERC asserted that:

> In this case, wells which could produce gas that might ultimately flow to this project might be developed in any of the shale plays that exist in nearly the entire eastern half of the Untied States. Accordingly, it is simply

> impractical for the Commission to consider impacts associated with additional shale gas development as cumulative indirect impacts resulting from the project which must, under CEQ regulations, be meaningfully analyzed by this Commission.

FERC April Order ¶ 99. Similarly, FERC asserted that "additional development, or any correlative potential impacts, [is not] an 'effect' of the project, as contemplated by the CEQ regulations, for purposes of a cumulative impacts analysis." *Id.* ¶ 96. FERC did not explain why it would be impractical to analyze the effects of the amount of drilling that pending export applications will induce, nor did FERC explain why these impacts are not cumulative "effects," or "truly meaningful" effects, of the project. It appears that these arguments rest on FERC's mistaken premise that analysis of effects of induced drilling cannot occur without knowledge of where each individual well will be drilled. For the reasons stated above, this information is unnecessary.

c. Conclusion on Foreseeability

Exporting huge volumes of LNG, for the first time in U.S. history, is a momentous decision. Those volumes of LNG, as the Energy Information Administration recognizes, will largely come from increased domestic production. That increased production was one of Sabine Pass's application's selling points, was endorsed by DOE/FE in its conditional order, was recognized by FERC in its siting process, and is an inevitable consequence of the license DOE/FE now has issued. That production will have significant impacts.

This decision is a paradigmatic example of the decisions which NEPA is meant to inform. NEPA was designed to ensure that no federal agency takes such a major step without fully considering the environment and alternatives to its action. It is intended to ensure that agencies develop information where it is missing, make informed projections, and, generally, ground their decisionmaking in a frank and fair analysis of its effects. Yet, DOE/FE has instead opted to duck the hard questions here by insisting that because it cannot pinpoint the location of each individual well to be drilled to support Sabine Pass, there is no way meaningfully to analyze, or even acknowledge, the change in U.S. gas production that it, and its companion projects, portend. This failure is dangerous, it is illegal, and it is bad policy. It must be corrected on rehearing.

2. A Full EIS Was Required

If DOE/FE had acknowledged its obligations, it would necessarily have also recognized that FERC's EA was not sufficient and that a full Environmental Impact Statement ("EIS") was and is required for this license. Sierra Club has already explained why an EIS is necessary in its Protest, which it incorporates in full by reference here. Because DOE/FE nonetheless failed even to respond to these arguments, we emphasize them again here.

NEPA requires an EIS where a proposed major federal action would "significantly affect[] the quality of the human environment." 42 U.S.C. § 4332(C). The "significance" of effects is determined by both the context and intensity of the proposed action. 40 C.F.R. § 1508.27. If there is a "substantial question" as to the severity of impacts, an EIS must be prepared. *See Klamath Siskiyou Wildlands Center v. Boody*, 468 F.3d 549, 561-62 (9th Cir. 2006) (holding that the "substantial question" test sets a "low standard" for plaintiffs to meet). Where it is unclear whether a proposal will have significant effects, the agency may prepare an EA to determine whether an EIS is required. Here, FERC issued an EA and finding of no significant impact, declining to prepare an EIS. DOE/FE implicitly joined in this determination without addressing Sierra Club's argument that a full EIS was required.

The determination that the project would not significantly affect the environment, and that no EIS was required, was unlawful because the environmental effects of the reasonably foreseeable induced production will be significant, and because the effects of the project are highly controversial.

a. Induced Production Will Significantly Affect The Environment

In our comment on the Environmental Assessment and our motion to intervene before DOE/FE, Sierra Club concisely summarized the environmental impacts this increased production will have, and we included exhibits providing more exhaustive enumeration of these impacts. Even cursory consideration of the impacts associated with production of the 2.2 bcf/d of gas the project will export (or the fraction thereof that may be reasonably predicted to come from induced additional production) reveals that production of this gas will have significant environmental impacts.[7]

Natural gas production has significant air quality impacts. Gas production emits methane (CH_4), volatile organic compounds (VOCs), nitrogen oxides (NO_x), sulfur dioxide (SO_2), hydrogen sulfide (H_2S), and particulate matter (PM_{10} and $PM_{2.5}$). *See, e.g.*, NY RDSGEIS at 6-113 to 6-117.[8] It further emits listed hazardous air pollutants (HAPs) in significant quantities, and so contribute to cancer risks and other acute public health problems. *Id.* Pollutants are emitted during all stages of natural gas development, including (1) oil and natural gas production, (2) natural gas processing, (3) natural gas transmission, and (4) natural gas distribution. NY RDSGEIS at Executive Summary 15. As summarized by the DOE last August:

> Shale gas production, including exploration, drilling, venting/flaring, equipment operation, gathering, accompanying vehicular traffic, results in the emission of ozone precursors (volatile organic compounds (VOCs), and nitrogen oxides),

[7] At the very least, there are "substantial questions" as to the significance of these effects.
[8] Attached as Exhibit 4 to Sierra Club's EA Comment.

> particulates from diesel exhaust, toxic air pollutants and greenhouse gases (GHG), such as methane.
>
> As shale gas operations expand across the nation these air emissions have become an increasing matter of concern at the local, regional and national level. *Significant air quality impacts from oil and gas operations in Wyoming, Colorado, Utah and Texas are well documented*, and air quality issues are of increasing concern in the Marcellus region (in parts of Ohio, Pennsylvania, West Virginia and New York).

DOE Secretary Energy Advisory Board Subcommittee 90 Day Report, 15 (August 18, 2011) ("SEAB August Report") (emphasis added).[9] *See also* Sierra Club, et al., *Comments on New Source Performance Standards: Oil and Natural Gas Sector; Review and Proposed Rule for Subpart OOOO,* Docket No. EPA-HQ-OAR-2010-0505 (Nov. 30, 2011);[10] Catskill Mountainkeeper, *et al.*, *Comments on [NY RDSGEIS]* (Jan. 11, 2012) ("Comment on NY RDSGEIS").[11]

Natural gas production in general, and shale gas extraction in particular, also significantly impacts water resources. Numerous sources indicate that fracturing a single well requires between 1 and 5 million gallons of water. SEAB August Report at 19; NY RDSGEIS 6-10. Some estimates are even higher, estimating 7.4 million gallons per well. Comment on NY RDSGEIS (Attachment 2, Report of Tom Myers, at 10). Water withdrawals can drastically impact aquatic ecosystems and human communities, by reducing instream flows and by harming aquatic organisms at water intake structures. NY RDSGEIS at 6-3, 6-4. Where water is withdrawn from aquifers, rather than surface sources, withdrawal risks permanent depletion. *Id.* 6-5; DOE Subcommittee First 90 day report at 19 ("in some regions and localities there are significant concerns about consumptive water use for shale gas development."). Next, the fracturing process risks contaminating groundwater resources. Fracturing fluid contains many chemicals that present health risks. NY RDSGEIS at 5-75 to 5-78. Fluid naturally occurring in the target formation "may include brine, gases (e.g. methane, ethane), trace metals, naturally occurring radioactive elements (e.g. radium, uranium) and organic compounds." SEAB August Report at 21. Inadequate well cementing, among other faults, can allow these substances to contaminate groundwater resources with these substances. *Id.* at 20. Separately, storage, transport, and treatment of produced water on the surface create risks of spills and inadequate ultimate disposal, providing another vector for contamination of surface and groundwater resources. *See, e.g.*, NY RDSGEIS at 1-12 (describing risks of fluid containment at the well pad), Comment on NY RDSGEIS (attachment 3, Report of Glen Miller, at 13) (describing difficulty of treating produced water).

[9] Attached as Exhibit 1 to Sierra Club's EA Comment.
[10] Attached as exhibit 6 to Sierra Club EA Comment.
[11] Attached as exhibits 7 and 8 to Sierra Club EA Comment.

Natural gas production also damages landscapes and habitats. Each well pad occupies roughly 3 acres, and associated infrastructure (roads, water impoundments, and pipelines) more than doubles this figure. NY RDSGEIS at 5-5. Many of these acres remain disturbed through the life of the well, estimated to be 20 to 40 years. *Id.* at 6-13. This directly disturbed land is generally no longer suitable as habitat. *Id.* at 6-68. In addition to this direct disturbance, indirect habitat loss occurs as areas around the directly disturbed land lose essential habitat characteristics. "Research has shown measureable impacts often extend at least 330 feet (100 meters) into forest adjacent to an edge." *Id.* at 6-75. These effects will harm rural economies and decrease property values, as major gas infrastructure transforms and distorts the existing landscape. They will also harm endangered species in regions where production would increase in response to Sabine Pass's exports.

As noted above, NEPA requires reasonable efforts to analyze the magnitude of these impacts, even if it is impossible or impractical to predict exactly where they will occur. These impacts will satisfy any definition of significance. Once FERC has assessed these impacts, that assessment must in turn be made available for public comment.

b. The Effects of Induced Production Are Highly Controversial

Further evidence that the project's impacts are "significant" for purposes of NEPA is that the impacts are highly controversial. In evaluating the intensity of impacts, FERC must consider, *inter alia*, "The degree to which the effects on the quality of the human environment are likely to be highly controversial." 40 C.F.R. § 1508.27(b)(4). In particular, there is controversy over the extent to which exports will induce additional drilling, and thus, regarding the magnitude of the environmental effects of induced production. Sierra Club identified this aspect of the controversy in its petition to FERC for rehearing. Sierra Club Motion for Rehearing and for Stay Pendente Lite, FERC Docket CP11-72-001, at 12 (May 16, 2012). FERC ignored this argument, concluding that Sierra Club had failed to show a "dispute over the size, nature or effect of the action." FERC July Order ¶ 27 (quoting *Friends of the Ompompanoosuc v. FERC*, 968 F.2d 1549, 1557 (2d Cir. 1992)). Because the disagreement over the *extent* of induced drilling demonstrates exactly the sort of "controversy" that the cited Second Circuit decision requires, this controversy indicates that the impacts of sufficiently "significant" to require preparation of an EIS. DOE/FE's approval of the application on the basis of an EA and FONSI therefore violated NEPA.

In addition, Sierra Club demonstrated significant political controversy regarding LNG export and the impacts thereof. The dispute in this docket represents one aspect of this controversy. The controversy has also resulted in congressional inquiry. *See* Democratic Staff, House Natural Resources Comm., *Drill Here, Sell There, Pay More: The Painful Price of Exporting Natural Gas* (2012),[12] Hannah Northey and Elana Schor, *Prospect of Export Boom Vexes both Political*

[12] Attached as Exhibit 4 to Sierra Club's Motion to Intervene.

Parties, but in Different Ways, EE News (May 15, 2012).[13] There has also been media controversy regarding the impacts of LNG exports. *See* Steve Duin, *LNG Export? Whoever would have guessed*, The Oregonian (April 18, 2012),[14] Talia Buford, *Mixed response to Sabine Pass approval*, Politico (April 23, 2012).[15]

3. A Full EIS Requires Consideration of Alternatives Beyond Those Considered in FERC's EA

Both NEPA and the Natural Gas Act require consideration of alternatives to Sabine Pass's proposal. The FERC environmental assessment's limited discussion of alternatives does not satisfy this requirement.

Specifically, the Natural Gas Act's public interest analysis requires an "exploration of all issues relevant to the 'public interest'," an inquiry which the Supreme Court held in *Udall* must be wide-ranging. In that case, which concerned hydropower, the regulatory agency was required to consider, for instance, "alternate sources of power," the state of the power market generally, and options to mitigate impacts on wildlife. Here, likewise, FERC and DOE/FE must consider alternatives to the proposal which would better serve the public interest, broadly analyzing other approaches to structuring LNG exports and gas use generally, given exports' sweeping effects on the economy.

NEPA is designed to support this sort of broad consideration. The alternatives analysis is "the heart of the environmental impact statement," presenting sharply defined issues which offer "clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. § 1502.14. Crucially, the alternatives must include "reasonable alternatives not within the jurisdiction of the lead agency," – meaning that DOE/FE must review actions which it cannot directly order – and must include "appropriate mitigation measures not already included in the proposed action or alternatives." *Id.* Because alternatives are so central to decisionmaking and mitigation, "the existence of a viable but unexamined alternative renders an environmental impact statement inadequate." *Oregon Natural Desert Ass'n*, 625 F.3d at 1122 (internal alterations and citations omitted).

FERC's Sabine Pass environmental assessment considers only a no action alternative (which FERC summarily dismisses), the possibility of using alternative energy sources in other countries, rather than LNG, the possibility of exporting from other terminals, and a few facility-level siting configurations. This consideration is not sufficient for DOE/FE's purposes. *See*

[13] Attached as Exhibit 2 to Sierra Club Motion for Rehearing and for Stay Pendente Lite, FERC Docket CP11-72-001 (May 16, 2012).
[14] Attached as Exhibit 3 to Sierra Club Motion for Rehearing and for Stay Pendente Lite, FERC Docket CP11-72-001 (May 16, 2012).
[15] Attached as Exhibit 4 to Sierra Club Motion for Rehearing and for Stay Pendente Lite, FERC Docket CP11-72-001 (May 16, 2012).

Sabine Pass EA at 3-1 – 3-2. Because DOE is considering the impacts of exports on the public interest, it must look much more broadly than facility-level siting alternatives, as *Udall* indicates, and FERC's bare three alternatives which consider this question somewhat more broadly are not sufficient.

FERC's "no action," "alternative energy source," and "alternative [export] system" alternatives are inadequate for several reasons. The "no action" alternative, first, received essentially no consideration because FERC determined that it would not serve what it viewed as the purpose of the facility siting issue before it: to facilitate LNG export and the "development of unconventional, particularly shale, gas-bearing formations in the U.S." Sabine Pass EA at 3-1. Whether or not FERC was correct to reject the no-action alternative on this ground, DOE/FE may not, because the question before this body is precisely *whether* export, and the increased production it would cause, is in the public interest. Thus, DOE/FE must consider the ramifications of denying export in detail, rather than simply dismiss that possibility.

The "alternative energy source" alternative, which posits that some other fuel might be used abroad, is similarly flawed. Not only does this alternative presuppose that the exports of some sort of fuel should be allowed (which, again, DOE/FE cannot take for granted), it accepts as a given that LNG exports produce greatly lower greenhouse gas emissions than coal. *Id.* As we discuss below, this contention is simply not true, meaning that DOE/FE may not accept FERC's discussion.

The "alternative [export] system" alternative, finally, shares many of these flaws. FERC rejects the possibility of exporting gas from Alaska or Canada because those locations could not support export from "gas from the Marcellus and Haynesville shale formations." *Id.* at 3-1 – 3-2. Again, FERC simply assumes that export will occur, and that shale gas production, in particular, must be enhanced. Whether or not FERC could do so for its facility-siting purposes, DOE/FE, again, may not: Because DOE/FE is considering the propriety of export at all, it cannot reject alternatives simply because they would not further export proposals.

Instead, FERC, as lead agency, must prepare an EIA that allows DOE/FE to consider a wide range of alternatives that relate specifically to its broad public interest mandate. Without limiting this consideration, these alternatives should include, at a minimum, consideration of the following:

> (1) Whether, consistent with the EIA study, exports, if allowed, should move forward in smaller quantities or a slower time table to mitigate the domestic economic and environmental impacts associated with large export volumes or rapid export schedules;
>
> (2) Whether export from other locations would better serve the public interest by mitigating economic or environmental impacts or by limiting the cumulative impacts of multiple terminals located in one region (i.e., the Gulf Coast);

(3) Whether limitations on the sources of exported gas – e.g., limiting export from particular plays, formations, or regions – would help to mitigate environmental and economic impacts;

(4) Whether to condition export on the presence of an adequate regulatory framework, including the fulfillment of the recommendations for safe production made by the DOE's Shale Gas Subcommittee, would better serve the public interest by ensuring that the production increases associated with export will not increase poorly-regulated unconventional gas production;

(5) Whether to delay, deny, or condition exports based upon their effect on the U.S. utility market (including changes in air pollution emissions associated with the impacts of increased export demand on fuel choice);

(6) Whether to require exporters to certify that any unconventional gas produced as a result of their proposal (or shipped through their facilities) has been produced in accordance with all relevant environmental laws and according to a set of best production practices (such as that discussed by the DOE's Shale Gas Subcommittee);

(7) Whether to deny export proposals all together as contrary to the public interest.

Other alternatives are, no doubt, also available, but the above, at a minimum, are reasonable alternatives that bear directly on the public interest determination and that must be considered.

C. DOE/FE Violated The Natural Gas Act by Concluding That The Project Is Consistent With The Public Interest without Considering The Environmental Impacts of Exports and Induced Drilling

DOE/FE's decision to approve exports without considering whether the environmental consequences of those exports are consistent with the public interest (and they are not) also violates Section 3 of the Natural Gas Act, 15 U.S.C. § 717b.

Section 3 requires DOE/FE to determine whether or not gas exports themselves are "consistent with the public interest." 15 U.S.C. § 717b(a). As we explained in our motion to intervene and other filings, courts have repeatedly held that this inquiry encompasses environmental impacts. *Nat'l Ass'n for the Advancement of Colored People v. Federal Power Commission*, 425 U.S. 662, 670 n.4, n.6 (1976) (Natural Gas Act grants DOE/FE "authority to consider conservation [and] environmental" issues); *Udall v. Fed. Power Comm'n*, 387 U.S. 428, 450 (1967) (interpreting analogous public interest provision of Federal Water Power Act to require consideration of environmental issues); *N. Natural Gas Co. v. Fed. Power Comm'n*, 399 F.2d 953, 973 (D.C. Cir. 1968) (applying *Udall* to interpretation of the Natural Gas Act). In this proceeding and elsewhere, DOE/FE has acknowledged that the public interest inquiry must include analysis of environmental impacts. DOE/FE Order 2961 at 7, 29, 37, 40; *see also* Testimony of Christopher

Smith, Deputy Assistant Secretary of Oil and Gas Before the Senate Committee on Energy and Natural Resources (Nov. 8, 2011), 10 C.F.R. § 590.202(b)(7), *Phillips Alaska Natural Gas Corporation and Marathon Oil Company*, 2 FE ¶ 70,317, DOE FE Order No. 1473, *22 (April 2, 1999).

The environmental effects of induced production are precisely the types of environmental effects DOE/FE must consider. Economic and market effects of exports that DOE/FE considers include effects on gas supply and prices, factors which are closely tied to whether exports will induce additional production. The environmental impacts of that induced production *are* the primary effects of the export authorization. Indeed, DOE/FE has not disputed that this *type* of impact is outside the scope of the analysis. Because, as shown above, these impacts are foreseeable and susceptible to analysis, DOE/FE violated the Natural Gas Act by failing to consider these impacts.

Tellingly, the public interest analysis DOE/FE actually provides explicitly disclaims analysis of environmental impacts. DOE/FE only discussed the public interest in its order granting conditional authorization, at which time DOE/FE acknowledged that information regarding environmental impacts was not before it. DOE/FE's final order did not revisit the public interest inquiry in light of the environmental impacts of the proposal. Order 2961-A at 29. DOE/FE therefore "entirely failed to consider an important aspect of the problem," *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983), rendering its public interest determination arbitrary, capricious, and in violation of the Natural Gas Act. Failure to revisit the public interest determination after NEPA review concluded also violates NEPA, which prohibits mere "pro forma" or "post hoc" discussions of environmental impacts. *Churchill County v. Norton*, 276 F.3d 1060, 1072 (9th Cir. 2001) *opinion amended on denial of reh'g*, 282 F.3d 1055 (9th Cir. 2002) (pro forma compliance inadequate); *Calvert Cliffs' Coordinating Comm., Inc. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1128 (D.C. Cir. 1971) (same); *Pennaco Energy, Inc. v. U.S. Dept. of Interior*, 377 F.3d 1147, 1159 (10th Cir. 2004) ("post hoc" discussion of environmental impacts inadequate), *accord Sierra Club v. Bosworth*, 510 F.3d 1016, 1026 (9th Cir. 2007), *Dubois v. U.S. Dept. of Agric.*, 102 F.3d 1273, 1289 (1st Cir. 1996).

For these reasons, DOE/FE's final authorization and determination that the project is consistent with the public interest violates DOE/FE's obligations under Section 3 of the Natural Gas Act.

D. DOE/FE Should Stay Its Authorization Pending Resolution of this Motion for Rehearing

DOE regulations provide that "The filing of an application for rehearing does not operate as a stay of the Assistant Secretary's order, unless specifically ordered by the Assistant Secretary." 10 C.F.R. § 590.502. Sierra Club therefore requests an immediate order specifically staying DOE/FE's authorization.

DOE regulations do not provide a standard regarding issuance of stays of DOE orders. DOE should therefore apply the general four-factor test used for stays of agency or judicial orders.

See, e.g., *Wash. Met. Area Transit Comm'n v. Holiday Tours, Inc.*, 559 F.2d 841, 842 n.1 (D.C. Cir. 1977) (citing *Virginia Petroleum Jobbers Association v. FPC*, 259 F.2d 921 (1958)). These factors are "(1) the movant's showing of a substantial likelihood of success on the merits, (2) irreparable harm to the movant, (3) substantial harm to the nonmovant, and (4) public interest." *Davis v. Pension Ben. Guar. Corp.*, 571 F.3d 1288, 1291 (D.C. Cir. 2009), *see also id.* at 1292 (discussing *Wash. Met. Area Transit Comm'n*).

Here, Sierra Club is likely to succeed on the merits. Induced production is no less foreseeable that numerous other indirect effects that circuit courts have required agencies to consider under NEPA, and the facts of this case are particularly analogous to those of *Northern Plains Resource Council*, which supports Sierra Club here.

Second, authorization of export will produce immediate and irreparable environmental impacts. As other companies have asserted in their applications for export authorization submitted to DOE/FE, natural gas producers are likely begin to increase their production in anticipation of export, so that the additional production is available for export when construction of the liquefaction facilities is completed and the terminal is ready to commence operation. *See*, *e.g.,* Freeport LNG, Application for Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Countries, DOE/FE Docket 11-161-LNG, at 20 (Dec. 19, 2011).

Third, a stay would not substantially harm other parties to the proceeding. Construction of the LNG export facilities is a multi-year process, which Sabine Pass initiated in 2010. In light of DOE/FE's obligation to respond to a request for rehearing within 30 days, and the circuit court's obligation, under the Natural Gas Act, to review any appeal on an expedited schedule, resolution of the Sierra Club's challenge will impose only a few additional months of delay. When measured against the broader timeframe for the project, this delay will impose a minimal hardship.

Fourth, the public interest warrants a stay. Export of LNG would represent a major shift in the United States' energy policy and marketplace. It serves the public interest to ensure that the ramifications of this sea change are fully understood before the nation commits to LNG export. Conversely, it would be contrary to the public interest to allow Sabine Pass to embark on this departure from prior policy while these issues are still being resolved.

Accordingly, each of the traditional stay factors supports issuance of a stay in this case. DOE/FE should stay Order 2961-A pending resolution of this motion for rehearing and any judicial appeal of DOE/FE's decision thereon.

III. Conclusion

For the reasons stated above, DOE/FE should grant Sierra Club's motion for rehearing and rescind Order 2961-A, so an EIS for the proposal can be prepared, including consideration of the proposal's inducement of additional natural gas production. DOE/FE should further stay Order 2961-A pending final resolution of this motion for reconsideration and any judicial appeal.

Respectfully submitted,

/s/Nathan Matthews
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UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY

IN THE MATTER OF	)	
	)	**FE DOCKET NO. 10-111-LNG**
Sabine Pass Liquefaction, LLC	)	
and Sabine Pass LNG, L.P.	)	

CERTIFICATE OF SERVICE

I hereby certify that I caused the above documents to be served on the applicant and all others parties in this docket, in accordance with 10 C.F.R. § 590.017, on September 6, 2012.

Dated at San Francisco, CA, this 6th day of September, 2012.

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UNITED STATES OF AMERICA
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IN THE MATTER OF	)	
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Sabine Pass Liquefaction, LLC	)	
and Sabine Pass LNG, L.P.	)	

VERIFICATION

WASHINGTON	§
	§
DISTRICT OF COLUBIA	§

Pursuant to C.F.R. §590.103(b), Nathan Matthews, being duly sworn, affirms that he is authorized to execute this verification, that he has read the foregoing document, and that facts stated herein are true and correct to the best of his knowledge, information, and belief.

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Subscribed and sworn to before me this 6 day of September, 2012.

Notary Public

NICHOLAS JAMES LIFE
Commission # 1951418
Notary Public - California
San Francisco County
My Comm. Expires Sep 9, 2015

My commission expires: 09/09/2015