

FERC Compliance Under NEPA: FERC's Obligation to Fully Evaluate Upstream and Downstream Environmental Impacts Associated with Siting Natural Gas Pipelines and Liquefied Natural Gas Terminals

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ABSTRACT

As the United States navigates the ongoing shale gas boom, advances in exploration technology continue to improve the country's ability to obtain vast quantities of domestic natural gas. However, such advances, specifically hydraulic fracturing, are not without environmental costs and political controversy. While upstream production and downstream consumption of natural gas are often regulated at a local level, the natural gas pipelines and liquefied natural gas terminals subject to the Federal Energy Regulatory Commission's ("FERC") jurisdiction serve as the key vehicles connecting the entire natural gas infrastructure. Therefore, FERC's environmental reviews must include an assessment of both the direct impacts of a project, as well as the indirect impacts associated with induced natural gas production upstream of the project and consumption of the gas downstream of the project.

*Consistent with the requirements of the National Environmental Policy Act ("NEPA"), FERC must assess these upstream and downstream environmental impacts to understand the incremental environmental impacts of authorizing a new natural gas pipeline or liquefied natural gas terminal because these impacts are reasonably foreseeable. In addition, the "causally related" standard, which was relied upon in *Department of Transportation v. Public Citizen*, 541 U.S. 752 (2004) and which links a proposed federal action to a significant environmental impact, does not preclude FERC's assessment of upstream and downstream environmental impacts. Although the scope of NEPA review is largely at FERC's discretion, FERC's decision to ignore upstream and downstream effects contravenes NEPA's requirements because the scope of this review must ensure that complete information is made available. NEPA review supports effective decision-making before federal action leads to irreparable environmental changes, and upstream and downstream impacts must be understood.*

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TABLE OF CONTENTS

I.	Introduction	302
II.	Discussion	305
	A. FERC's Limited Review of Environmental Impacts has Been Upheld Under NEPA	305
	B. The Failure to Consider Upstream and Downstream Impacts Creates an Incomplete Picture of a Project's Environmental Consequences	307
	C. Upstream and Downstream Environmental Impacts are Reasonably Foreseeable Effects of a Natural Gas Pipeline or LNG Export Facility	308
	1. NEPA Does Not Require Absolute Certainty for an Impact to be Reasonably Foreseeable	309
	2. FERC's Statutory Responsibility Under the Natural Gas Act Prohibits a Restrictive Interpretation of the Reasonably Foreseeable Standard	310
	3. Reasonably Foreseeable Impacts are not Confined to Areas Within FERC's Regulatory Jurisdiction	312
	4. Economic Justifications Used to Support FERC Authorization of a Project Must Lead to Reasonably Foreseeable Environmental Impacts	313
	D. The "Causally Related" Standard Established in <i>Public Citizen v. United States</i> Does Not Preclude Evaluation of Upstream and Downstream Impacts in Establishing an Environmental Baseline	315
III.	Future Outlook	317
IV.	Conclusion	318

I. INTRODUCTION

As climate change concerns populate mainstream media, the United States continues to evaluate economic approaches to limit and manage the consumption of fossil fuels to reduce greenhouse gas and carbon pollution.¹ These concerns require policymakers to invest in developing clean and efficient technology, including the responsible development of natural gas resources.² However, responsible development of natural gas resources should not mean unabated exploitation, even as the fuel source becomes increasingly cost-efficient, because the associated environmental impacts are far from negligible.³

1. See generally EXEC. OFFICE OF THE PRESIDENT, THE PRESIDENT'S CLIMATE ACTION PLAN (2013), available at <http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.

2. *Id.* at 19.

3. Natural gas produces roughly half of the carbon dioxide as coal. The U.S. Energy Information Administration estimates that natural gas produces 117.0 pounds of carbon dioxide per million Btu of energy produced as compared to 210.2 pounds of carbon dioxide from coal. See *Carbon Dioxide Emissions*

While the National Environmental Policy Act of 1969 (“NEPA”) provides a procedural framework to force federal decision makers to consider environmental impacts in the evaluation of infrastructure projects, the Federal Energy Regulatory Commission (“FERC”) does not fully utilize the NEPA review process to assess how individual natural gas projects affect the President’s goals of responsible natural gas development.⁴ FERC continues to decline to undertake more comprehensive reviews, allowing development of infrastructure projects that take advantage of abundant domestic natural gas reserves without a commensurate evaluation of how such projects promote natural gas exploration or consumption.⁵ While FERC’s decision to undertake a narrowly focused NEPA review may aid the rapid development of domestic natural gas reserves, NEPA review must include a comprehensive environmental review to ensure the entire environmental impact is assessed.

Congress adopted NEPA to require that federal agencies consider the environmental consequences of their statutory missions.⁶ NEPA is viewed as “more procedural than prophylactic”: it does not provide for specific environmental controls or necessitate an end state of environmental protection.⁷ Instead, NEPA prescribes procedural requirements to ensure that federal agencies undertake an analysis of the environmental impacts of their proposed actions, and that decisions that may significantly affect the environment are not made in a vacuum.⁸

To properly assess an action’s environmental impact early in the decisionmaking process, the agency must determine if the proposed action amounts to that of a “major federal action significantly affecting the quality of the human environment.”⁹ If so, a detailed environmental impact statement (“EIS”) is required.¹⁰ The requirements for the scope and extent of an EIS, or the allowance for a more limited environmental assessment (“EA”) and determination of no significant impact, are administered through regulations set forth by the Environmental Protection Agency’s Council on Environmental Quality (“CEQ”).¹¹

Coefficients, U.S. ENERGY INFO. ADMIN., (Feb. 14, 2013), http://www.eia.gov/environment/emissions/co2_vol_mass.cfm.

4. National Environmental Policy Act, 42 U.S.C. § 4332(C) (2012).

5. See Hannah Northey, *FERC, Greens Spar over ‘Cursory’ Reviews of Gas Projects*, E & E PUBL’G (Oct. 20, 2014), <http://www.eenews.net/stories/1060007573> (noting that FERC, disagreeing with climate change activists, is not evaluating the environmental impacts increased drilling or emissions from natural gas pipelines and export terminal because FERC cannot measure such indirect effects).

6. 42 U.S.C. § 4331 (2012).

7. James J. Hoecker, *The NEPA Mandate and Federal Regulation of the Natural Gas Industry*, 13 ENERGY L.J. 265, 265 (1992).

8. *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 756-57 (2004).

9. 42 U.S.C. § 4332(C) (2012).

10. *Id.*

11. 40 C.F.R. § 1500-08 (2014). Specifically, agencies must evaluate the direct, indirect, and cumulative impacts that are reasonably foreseeable.

To construct a natural gas facility (e.g., an interstate natural gas pipeline or a liquefied natural gas (“LNG”) terminal), one must first obtain a certificate of public convenience and necessity from FERC pursuant to their authority to site such facilities under the Natural Gas Act.¹² The certificate of convenience and necessity is different from the evaluations required by NEPA, and FERC has supplemented the CEQ regulations by implementing agency-specific procedures to ensure compliance with NEPA.¹³ Under these procedures, FERC’s default is to develop an EIS for authorization and certification of LNG facilities and major pipeline projects.¹⁴ However, it is important to note that contrary to CEQ recommendations, FERC has opted to not assess the end use of an authorized project—ignoring the ultimate climate impacts of greenhouse gas emissions.¹⁵

Per CEQ requirements, the scope of the resulting environmental review considers not only the impacts of a proposed action that is subject to FERC jurisdiction but also the impacts of non-jurisdictional facilities constructed with or integral to the proposed action.¹⁶ In this regard, FERC’s responsibilities under NEPA include the evaluation of factors beyond the elements of public convenience and necessity required by the Natural Gas Act.¹⁷ Such disparity may create “incongruent administrative regimens” when the Natural Gas Act’s focus on innovation and light-handed regulation is performed against NEPA’s established procedural mandates.¹⁸

FERC’s challenges in balancing developments of the natural gas industry with NEPA compliance are only increasing. The use of hydraulic fracturing to produce natural gas continues to transform the U.S. energy landscape by shifting from an energy market reliant on natural gas imports to one on the verge of energy independence and positioned to export vast quantities of natural gas.¹⁹ In light of FERC’s exclusive authority to approve natural gas pipeline and LNG terminal applications, environmental concerns associated with an increasing use of natural gas lead to questions of the degree to which FERC’s NEPA review must consider the impacts of increased natural gas use above and beyond the physical impacts of a specific pipeline or terminal.

12. Natural Gas Act, 15 U.S.C.A. § 717(f) (West 2013).

13. 18 C.F.R. § 380.

14. *Id.* at § 380.6 (stating that FERC does not have to prepare an EIS if an EA concludes that the proposed action is not a major Federal action significantly affecting the quality of the human environment or if a proposed action with adverse environmental effects is not approved).

15. See Northey, *supra* note 5 (citing the Cove Point Liquefaction Project in discussing FERC’s justification for ignoring downstream natural gas use because of its inability to measure indirect effects).

16. Regulations Implementing National Environmental Policy Act of 1969, 52 FR 47,897-01, at 47,904 (1987) [hereinafter FERC Order 486] (to be codified in 18 C.F.R. Parts 2, 157, and 380).

17. See Hoecker, *supra* note 7, at 266 (noting that NEPA requires consideration of values which appear unrelated to the factors governing a determination of public convenience and necessity).

18. See Hoecker, *supra* note 7, at 268.

19. Steven Miles & Thomas Eastment, *U.S. Debate on LNG Exports Centered at Energy Department*, 111 OIL & GAS J. 4 (2013).

This note argues that with FERC's siting authority comes a legal responsibility to fully consider the associated upstream and downstream environmental impacts of natural gas exploration and increased consumption because FERC is best positioned to undertake a holistic evaluation of such impacts. First, upstream and downstream environmental impacts must be considered as a part of the NEPA-required cumulative impacts analysis to establish an environmental baseline. Next, these impacts are reasonably foreseeable when FERC authorizes a natural gas pipeline or LNG export facility. Finally, these impacts are causally related to such authorized projects and cannot be ignored as indirect effects. If FERC does not fully undertake this legal responsibility, the aggregate environmental effects of expanding natural gas infrastructure will bypass a full NEPA review and subsequently be overlooked.

II. DISCUSSION

A. FERC'S LIMITED REVIEW OF ENVIRONMENTAL IMPACTS HAS BEEN UPHELD UNDER NEPA

A constitutional argument can be made that FERC, as an independent agency removed from direct presidential control, does not need to comply with NEPA requirements as implemented through CEQ.²⁰ However, FERC Order 486 voluntarily complies with such implementation.²¹ FERC's NEPA implementation should not only meet the CEQ requirements but also uphold the overall intent and purpose behind NEPA. While FERC Order 486 does not conflict with the intent and purpose of NEPA, FERC's environmental reviews fall short. Only if FERC's accompanying environmental review for a natural gas pipeline or LNG export facility includes an assessment of both the direct impacts of the project and the indirect effects associated with induced natural gas production upstream of the project and consumption downstream of the project can FERC truly comply with NEPA's mandate.

Federal courts "refus[ed] to delimit an agency's [FERC's] NEPA responsibilities at the jurisdictional boundary" during early criticism of FERC's NEPA implementation.²² In *Henry v. Federal Power Commission*, the D.C. Circuit ruled that in evaluating jurisdictional tap and valve facilities for the introduction of coal gas from a non-jurisdictional coal gasification facility, FERC (then known as the Federal Power Commission) had to consider the environmental impacts of the gasification project as a whole and not just the impacts of the jurisdictional tap and valve facility when granting a certificate of public convenience and necessity.²³ Limiting the environmental review to only the incremental impacts would

20. See Hoecker, *supra* note 7, at 274-75, n. 53.

21. FERC Order 486, *supra* note 16, at 47,897.

22. Hoecker, *supra* note 7, at 281.

23. *Henry v. Fed. Power Comm'n*, 513 F.2d 395, 406-07 (D.C. Cir. 1975).

defeat NEPA's purpose: serving as a comprehensive and integrated assessment of environmental damage.²⁴

However, recent agency decisionmaking has limited the scope of NEPA reviews to what is within FERC's regulatory jurisdiction under the Natural Gas Act when the overarching project is driven by private industry.²⁵ Evaluation of environmental impacts attributed to activity outside of FERC's regulatory jurisdiction has been further limited by designating such impacts as not sufficiently causally related²⁶ or too speculative to assess.²⁷ As a result, developers of infrastructure subject to FERC jurisdiction can circumvent a broad NEPA review of environmental impacts by simply not associating the subject infrastructure with any specific natural gas production facilities.²⁸

The records of decision established by recent FERC actions pursuant to NEPA fall short of ensuring that the environmental impacts associated with the expansion of natural gas production and export are fully evaluated in accordance with NEPA's intent. FERC must proactively undertake a more expansive NEPA approach because judicial intervention and associated deference to FERC decision-making will only overturn decisions that are arbitrary and capricious.²⁹ An expansive NEPA approach by FERC must ensure that cumulative impact analysis is not limited by FERC's jurisdictional reach, the reasonable foreseeability standard is not applied so rigidly that it precludes meaningful evaluations of indirect effects, and the causally related standard for environmental impacts is not applied to exclude effects of non-jurisdictional activity. Without such an approach, a complete understanding of the true environmental impacts associated with natural gas pipeline expansion and LNG terminal siting inclusive of natural gas exploration, hydraulic fracturing, and consumption, will not be made available to the public.

24. *Id.*

25. *See, e.g.,* S. Coast Air Quality Mgmt. Dist. v. FERC, 621 F.3d 1085, 1093 (9th Cir. 2010) (holding that FERC's EIS sufficiently analyzed the environmental impacts of eventual combustion of gas because FERC reasonably anticipated that the gas would comply with Californian regulations of the gas).

26. *See* Coal. for Responsible Growth & Res. Conservation v. FERC, 485 Fed. App'x 472, 474 (2d Cir. 2012) (rejecting Sierra Club's challenge of FERC's determination that induced shale production is too speculative to address).

27. *See Sabine Liquefaction, LLC*, 140 FERC ¶ 61,076 (2012) (order denying rehearing and stay).

28. *See* Erik Swenson & Jeff Williamson, NORTON ROSE FULBRIGHT, *FERC Rejects Assertion that NEPA Analysis of LNG Terminals Must include Impacts of Gas Production from Shale Formations* (Aug. 2, 2012), <http://www.nortonrosefulbright.com/knowledge/publications/93634>.

29. *See, e.g.,* Ctr. for Envtl. Law & Policy v. U.S. Bureau of Reclamation, 655 F.3d 1000, 1005 (9th Cir. 2011) ("[O]ur review is limited to whether the agency took a 'hard look' at the proposed action as required by a strict reading of NEPA's procedural requirements."); *see also* Coal. for Responsible Growth & Res. Conservation 485 Fed. App'x. at 474; N. Plains Res. Council, Inc., v. Surface Transp. Bd., 668 F.3d 1067, 1075 (9th Cir. 2011).

B. THE FAILURE TO CONSIDER UPSTREAM AND DOWNSTREAM IMPACTS CREATES AN INCOMPLETE PICTURE OF A PROJECT'S CUMULATIVE ENVIRONMENTAL CONSEQUENCES

An adequate NEPA review of a proposed federal action must include cumulative impacts analysis. As defined by CEQ and adopted by FERC, cumulative impacts include the incremental impact of the proposed action when added to past, present, and reasonably foreseeable effects of future actions, regardless of who is responsible for such effects.³⁰ Therefore, to properly understand the cumulative impacts, a NEPA review must consider the incremental effects of the proposed action against the baseline effects of activity by the natural gas industry at large beyond just the specific component falling under FERC jurisdiction.

To perform a proper cumulative impact analysis, FERC must review and evaluate information on the aggregate effects of past and ongoing shale gas development and infrastructure within the areas linked to the proposed action. This information must go beyond a hypothetical discussion of impacts that could be expected from future development and must provide meaningful insight on project environmental damage. Without doing so, the FERC will not have a rational basis for determining if the proposed action will cross “thresholds of environmental change” that must be provided for complete public understanding.³¹

FERC has been criticized for not establishing an adequate baseline prior to determining that a federal action will not significantly affect the environment.³² However, the Second Circuit recently upheld FERC's decision not to issue an EIS when it authorized the building and operation of the MARC I Hub Line Project's natural gas pipeline through three counties in Pennsylvania. The court concluded that FERC did not need to consider all natural gas projects within the project area as a part of the cumulative impact analysis.³³ In relying on this conclusion, the court focused on FERC's reasonableness in determining that overall development of the Marcellus Shale was not sufficiently causally related to the project.³⁴

FERC's determination ignores the baseline environmental impacts associated with prior, current, and future development of the Marcellus Shale formation. Such development, including non-jurisdictional pipelines, compressor stations, drilling, and gathering activities conducted in the same region and time period have significant effects on the environment. These baseline effects must be understood to properly determine whether all cumulative impacts of the MARC I project would significantly affect the environment and warrant an EIS.

30. FERC Order 486, *supra* note 16, at 47,904.

31. Brief for Petitioner at 6, *Coal. for Responsible Growth & Res. Conservation v. FERC*, 485 Fed. App'x. 472 (2d Cir. 2012) (No. 12-566) 2012 WL 1667728 [hereinafter *Coalition Reply Brief*].

32. *See, e.g., id.* at 3.

33. *Coal. for Responsible Growth & Res. Conservation*, 485 Fed. App'x. at 474.

34. The MARC I Hub Line Project provides for a 39-mile long, 30-inch diameter natural gas pipeline which would provide access to interstate markets for natural gas produced from the Marcellus Shale. *Id.* at 474.

FERC's subject review, which admittedly did not include environmental effects associated with Marcellus Shale development and only provided generalized speculation of environmental affects that could be associated with Marcellus Shale development, likely does not meet the "hard look standard" an agency must fulfill in determining the need for an EIS.³⁵ The general statements about possible effects and risk do not constitute a hard look because, in order to be useful to decision makers, FERC must provide some quantified or detailed information.³⁶ However, FERC's shortfall was not egregious enough to warrant remand by the court under the arbitrary and capricious standard of review. Without establishing that the proper baseline included non-jurisdictional activities, FERC made an assessment of the environmental impacts of the MARC I project in a vacuum. The scope of the incremental effects examined for NEPA purposes were, therefore, only related to the physical construction and operation of the pipeline itself, divorcing the project from the potentially greater environmental concerns associated with the contents within the pipeline: past, present, and continued collection of natural gas through hydraulic fracturing.

C. UPSTREAM AND DOWNSTREAM ENVIRONMENTAL IMPACTS ARE REASONABLY FORESEEABLE EFFECTS OF A NATURAL GAS PIPELINE OR LNG EXPORT FACILITY

FERC's assessment of environmental impacts must include direct and indirect effects that are a reasonably foreseeable consequence of the proposed action. In addition to direct effects caused at the same time and place by the proposed action, FERC must also evaluate indirect effects caused by the action, although further removed in time or distance.³⁷ While a federal agency does not have to engage in a "crystal ball inquiry" to determine all possible environmental consequences that could be associated with a proposed action, a certain degree of forecasting is implicit in NEPA.³⁸ Specifically, while NEPA does not require absolute certainty for an impact to be reasonably foreseeable, FERC's statutory responsibilities require an expansive view of reasonable foreseeability; reasonably foreseeable impacts are not confined to what FERC can regulate and any impact used as an economic justification to support FERC project authorization falls into the scope of reasonably foreseeable for NEPA purposes.

35. Coal. Reply Brief, *supra* note 31, at 7-8; Natural Res. Def. Council, Inc. v. U.S. Dep't of Agric., 613 F.3d 76, 84 (2d Cir. 2010) (the hard look standard requires FERC to make "an adequate compilation of relevant information, analyzed it reasonably, has not ignored pertinent data, and has made disclosures to the public").

36. N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1076 (9th Cir. 2011).

37. 40 C.F.R. § 1508.8(b) (2014).

38. Natural Res. Def. Council v. Morton, 458 F.2d 827, 837 (D.C. Cir. 1972) (noting that NEPA's "reasonable alternatives" requirement does not require a "crystal ball inquiry").

1. NEPA Does Not Require Absolute Certainty for an Impact to be Reasonably Foreseeable

Recently, FERC has narrowly applied the reasonable foreseeability standard to preclude thorough reviews of the upstream and downstream effects of its actions. In April 2012, FERC granted authorization to site, construct, and operate facilities for liquefaction and subsequent export of domestically-produced natural gas at the Sabine Pass LNG terminal in Cameron Parish, LA.³⁹ FERC issued authorization after a finding of no significant impact, which was supported by an EA on the siting, construction, and operation of the Sabine Pass facilities.⁴⁰ However, FERC conducted this review without assessing the shale gas production that would be induced by operation of Sabine Pass.⁴¹

FERC acknowledged that induced production of shale gas might occur as a result of Sabine Pass,⁴² but stated that the location and specific production activity is unknown and too speculative to assess.⁴³ FERC further relied on the interconnected nature of natural gas pipeline systems to justify the difficulty of linking specific natural gas reserves to Sabine Pass.⁴⁴ It would be economically inefficient to have a pipeline or terminal dedicated to an individual gas reserve; therefore, all of these FERC-controlled facilities touch multiple reserves in multiple states. However, precluding an evaluation of the environmental impacts associated with induced production simply because the data is somewhat speculative would allow FERC to bypass its NEPA responsibilities for any natural gas pipeline or LNG terminal.

FERC states that Sabine Pass will export up to 2.2 billion cubic feet of domestically-produced natural gas per day.⁴⁵ Although this gas will include both conventional and shale reserves and Sabine Pass will not be the sole driver increasing gas production in the surrounding areas, FERC must make a reasonable attempt at estimating a possible range. Instead of undertaking the predictive assessment required by NEPA, FERC forgoes such an evaluation, deeming it impractical by relying on the specific development activity being less than

39. Sabine Pass Liquefaction, LLC, 140 FERC ¶ 61,076, 1 (2012) (order denying rehearing and stay) [hereinafter Sabine Pass Liquefaction].

40. *Id.* at 2.

41. FERC continues to limit the consideration of induced natural gas exploration and development of an EIS when siting LNG export facilities. *See* Dominion Cove Point LNG, LP, 148 FERC ¶ 61,244 (2014) (authorizing the operation of facilities for the liquefaction and export of LNG from the Cove Point Liquefaction Project under sections 3 and 7 of the NGA). FERC relied on an Environmental Assessment to conclude that the impacts associated with production of natural gas from the Marcellus shale region are not reasonably foreseeable or quantifiable. Sabine Pass Liquefaction, *supra* note 39, at 2.

42. The Sabine Pass project is significant as it is the first project given long-term authorization to export domestic LNG to non-free trade agreement countries. *See* Sabine Pass Liquefaction, LLC, DOE/FE Order No. 2961, n. 26 (2011).

43. *See* Sabine Pass Liquefaction, *supra* note 39, at 4.

44. *Id.* at 3.

45. *Id.* at 1.

certain.⁴⁶ In doing so, FERC assumes that the reasonable foreseeability standard would only require the evaluation of induced gas production specifically dedicated to Sabine Pass. Ignoring any less-than-certain effects falls short of taking a hard look at the proposed action as required by NEPA.

Divorcing Sabine Pass from the environmental effects of induced gas production runs counter to the NEPA evaluations other federal agencies conduct. In *Northern Plains Resource Council, Inc. v. Surface Transportation Board*, the Ninth Circuit ruled that the Department of Transportation's Surface Transportation Board did not fully evaluate the cumulative environmental impacts of reasonably foreseeable coal bed methane development as a part of their review of construction of a 130-mile railroad line to haul coal.⁴⁷ Just as FERC concluded that Sabine Pass could induce development of gas reserves, the Board acknowledged that simultaneous development of coal bed methane wells with operation or construction of the railroad may result in cumulative environmental impacts.⁴⁸ As a result, the Board evaluated coal bed methane well projects in the area over a five-year period and concluded that no projects would overlap the railroad. Evaluations beyond a five-year period were precluded because the Board claimed that doing so would be speculative.⁴⁹ However, the court found that even though specific coal bed methane construction timelines and locations beyond five years were not known, such projects were still reasonably foreseeable.⁵⁰ The Board's limited review thus fell short of the NEPA requirement to take a hard look at reasonably foreseeable environmental effects.⁵¹ Under this reasoning, FERC must go beyond evaluation of specific gas reserves linked to the project and assess speculative out-year development in the case of Sabine Pass to satisfy NEPA's hard look standard.

2. FERC's Statutory Responsibility Under the Natural Gas Act Prohibits a Restrictive Interpretation of the Reasonably Foreseeable Standard

To ensure that environmental impacts of shale gas exploration are evaluated and presented to the public, FERC cannot take a restrictive view of what constitutes a reasonably foreseeable impact. The Natural Gas Act designates FERC as the lead agency for NEPA reviews, and FERC, utilizing interagency

46. *Pendente Lite, Sabine Pass Liquefaction, LLC and Sabine Pass LNG, L.P.*, 140 FERC ¶ 61,076, 4 (2012) (No. CP11-72-000) (motion for rehearing and stay) [hereinafter *Sierra Club Motion*].

47. *N. Plains Res. Council, Inc.*, 668 F.3d 1077.

48. *Id.* at 1078.

49. *Id.* at 1077.

50. *Id.* at 1079.

51. *Id.* at 1078-79; *cf. Scientists' Inst. for Pub. Info v. Atomic Energy Comm'n*, 481 F.2d 1079, 1096 (D.C. Cir. 1973) (holding that the Atomic Energy Commission must evaluate the environmental impacts of commercial implementation of the Liquid Metal Fast Breeder Reactor Program even if a particular facility or particular project is not identified).

cooperation, has often filled this role.⁵² FERC's responsibility is further bolstered by its exclusive jurisdiction over states in siting natural gas pipelines and LNG terminals. In *National Fuel Gas Supply Corporation v. Public Service Commission of New York*, the Second Circuit held that FERC's authority under the Natural Gas Act preempted the enforcement of a state law requiring a natural gas company to obtain a state-based "certificate of environmental compatibility and public need" for a proposed natural gas pipeline and regulator station within New York.⁵³ Although the subject issue was not related to the adequacy of the NEPA review, the court deliberately noted that a site-specific environmental review undeniably regulates a facility under FERC's jurisdiction.⁵⁴ The court further ruled that the environmental matters the state sought to regulate were directly considered by FERC and therefore preempted from state engagement. Instead of allowing the state to engage in a concurrent site-specific environmental review, the court encouraged the state to intervene in FERC's NEPA review.⁵⁵

Granting FERC expansive and sole authority for environmental reviews surrounding facilities linked to the interstate transportation and sale of natural gas limits the ability of states to evaluate environmental impacts not deemed reasonably foreseeable during FERC's NEPA analysis. While the Natural Gas Act prevents FERC from regulating the exploration and development of individual gas reserves, states may not be able to evaluate the cumulative environmental impact these reserves may have in the aggregate. If FERC declined to evaluate the attenuated environmental impacts of facilities linked to the interstate transportation and sale of natural gas while its authority simultaneously preempted states from the same assessment, it would create a regulatory void. Although states could possibly assess individual wells, FERC's infrastructure decision would receive great deference under the arbitrary and capricious standard of judicial review.⁵⁶ The Department of Energy would also contribute to this regulatory void, because its authorization of LNG exports defers to FERC's evaluation of environmental concerns around induced natural gas production.⁵⁷

FERC must fill this regulatory void. Only if FERC includes a holistic environmental assessment can the impacts of domestic natural gas expansion,

52. Sierra Club Motion, *supra* note 46 at 3 (citing Natural Gas Act, 15 U.S.C. § 717(n)).

53. *Nat'l Fuel Gas Supply Corp. v. Pub. Serv. Comm'n of N.Y.*, 894 F.2d 571, 579 (2d Cir. 1999).

54. *Id.* at 576.

55. *Id.* at 579.

56. *Coal. for Responsible Growth & Res. Conservation*, 485 Fed App'x 472, 474 (2d Cir. 2012).

57. Jessica Fore & Jerrod L. Harrison, *From Sabine Pass to Freeport: Implications of DOE Orders*, LAW360 (June 4, 2013) (discussing the impact of DOE's authorization to export LNG from the Freeport LNG project, the second such authorization to a non-free trade agreement country, and noting specifically that "if a participant raises an issue in the FERC proceeding, and FERC considers but does not resolve the issue in the way that a participant would have preferred, the dissatisfied participant likely will not receive a second bite at the apple on the same issue before the DOE.").

specifically hydraulic fracturing, be properly assessed on a regional scale to aggregate multiple natural gas drilling, production, and delivery actions.

3. Reasonably Foreseeable Impacts are not Confined to Areas Within FERC's Regulatory Jurisdiction

FERC often defaults to state-based regulations when it declines to assess the environmental impacts of upstream natural gas exploration or downstream natural gas use. FERC's environmental review associated with the MARC I Project did not assess Marcellus Shale well development, in part because FERC maintains neither a role in nor any control over such development.⁵⁸ FERC did, however, acknowledge that the vast majority of environmental concerns raised by experts were related to a desire for a comprehensive review of the impacts of such well development.⁵⁹ Regardless of what FERC can control, the MARC I Project will affect well development, and even if state regulators can assess this impact during future construction and operation of well development facilities, it will be too late: the major federal action has already occurred and no other appropriate federal action supports such a comprehensive review of the total impacts.

Outside the MARC I Project assessment, FERC has assessed environmental impacts associated with the downstream use of natural gas beyond its regulatory jurisdiction as a result of a proposed action. In approving the North Baja Pipeline project plan to create a pipeline to import foreign-sourced natural gas through Arizona and into southern California, FERC evaluated the environmental impacts associated with burning the imported natural gas.⁶⁰ As a part of the NEPA process, a local environmental group raised concerns with increased air pollution associated with the use of hotter-burning foreign sources of natural gas.⁶¹ In response, FERC required the project to deliver only gas that, when combusted, would meet the strictest air quality standards established by state regulatory agencies on downstream users.⁶² In justifying such state-based emissions limits, FERC compared those limits to available data to determine that the introduction of gas meeting these limits will not result in material changes to air quality in the region.⁶³

The Ninth Circuit held that FERC's evaluation as a part of the EIS was adequate, noting that FERC imposed specific conditions on the project's certifi-

58. Cent. N.Y. Oil & Gas Co., LLC, 138 FERC ¶ 61,104, 14 (2012) (order on rehearing, clarification and stay).

59. *Id.* at 20.

60. S. Coast Air Quality Mgmt. Dist. v. FERC, 621 F.3d 1085, 1089-90 (9th Cir. 2010).

61. *Id.*

62. *Id.*

63. *Id.*

cate in direct response to comments received on the initial EIS.⁶⁴ Since FERC voluntarily considered the environmental impacts of the emissions resulting from burning the gas transported by the project, the court did not evaluate or rule on whether FERC was required to do so.⁶⁵ However, CEQ requires such a review to be integrated with project planning.⁶⁶ Even though FERC does not set gas quality limits for state consumption, the proposed federal action would bring gas into the region and lead to environmental impacts associated with its use. If FERC did not conduct such a review and include the specific conditions on the project's certification, it is not clear that end use of the natural gas would be controlled to state limits or sufficiently evaluated through public comment. The desire for FERC to conduct an expansive NEPA review is not limited to environmental activists, but also shared by other federal agencies participating in FERC's NEPA review.⁶⁷

NEPA requires environmental reviews before agencies make decisions because NEPA's purpose is to anticipate environmental problems at an early stage.⁶⁸ Environmental reviews cannot simply be added onto agency decisions that have already been made.⁶⁹ This mandate should require FERC to consider the upstream and downstream environmental impacts associated with proposed actions, regardless of FERC's regulatory control of the environmental factors (e.g., fracking fluid constituents and end use natural gas quality) since evaluation of these impacts, even if meeting state regulatory limits, will not occur in conjunction with decision-making on FERC's proposed action.

4. Economic Justifications Used to Support FERC Authorization of a Project Must Lead to Reasonably Foreseeable Environmental Impacts

The scope of FERC's evaluation of natural gas infrastructure for the public convenience and necessity pursuant to the Natural Gas Act is not necessarily the same as that required by NEPA. The former requires an evaluation of supply and demand for a proposed facility, while the latter requires an evaluation of the effects external to the regulatory decision.⁷⁰ However, if the economic benefits

64. *Id.* at 1093-94.

65. *Id.* at 1093.

66. *See* 40 C.F.R. § 1501.2 (2014).

67. Letter from Jeffrey Lapp, Assoc. Dir., Office of Env'tl. Programs, to Kimberly Bose, Sec'y, Fed. Energy Regulatory Comm'n (Nov. 15, 2012) (on file with FERC's Online eLibrary) (stating that FERC, with respect to the Planned Cove Point Liquefaction project, should expand the scope of the NEPA analysis to include indirect effects related to gas drilling and combustion regardless of whether FERC has jurisdiction over such effects).

68. *See, e.g.,* Dep't of Transp. v. Pub. Citizen, 541 U.S. 752, 768 (2004) (one of NEPA's goals is to "ensure that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts.") (*quoting* Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989)).

69. Hoecker, *supra* note 7, at 293, n. 143 (*quoting* Letter from Dinah Bear, Gen. Counsel, CEQ, to Lois D. Cashell, Sec'y, FERC (Oct. 29, 1994) (filed as an initial comment to revise FERC's certificate process)).

70. *See* Hoecker, *supra* note 7, at 265-66.

attributed to increased sources of natural gas or an increased demand for natural gas are used to justify FERC's authorization of a project involved in the interstate transportation or sale of natural gas, the reasonably foreseeable environmental impacts of those benefits must be evaluated as well. NEPA's standard for reasonable foreseeability is not based on absolute specifics or certainty, but simply on that which is "sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision."⁷¹ Therefore, if upstream processes or downstream use can be expected to produce economic benefits for a proposed action, the associated environmental impacts should be assumed to follow.

As discussed above, the Ninth Circuit held in *Northern Plains* that because financial justification for the subject rail line included coal to be hauled from the Otter Creek mines, the cumulative environmental impacts of the mines must be considered in conjunction with the rail line.⁷² The Board had initially ruled that the mining development was too speculative to be considered a reasonably foreseeable impact as a part of their EIS, but the court found both that the EIS included a map indicating the location of the future coal mines and that the Board relied on coal tonnage forecasts from future mines in justifying the financial soundness of the proposed rail line in holding that they were not too speculative.⁷³

Following the Ninth Circuit's holding in *Northern Plains*, FERC cannot dismiss the impacts of future upstream or downstream uses of natural gas as too speculative to be considered reasonably foreseeable if such uses justify FERC's issuance of a certificate of public convenience and necessity wholly or in part. Just as it would be reasonably foreseeable that a new coal rail line would induce coal mining, it is reasonably foreseeable that a new natural gas pipeline or LNG export terminal would induce natural gas drilling. Such precedent was not supported by FERC in its recent order denying the Sierra Club's request for rehearing and stay of Sabine Pass⁷⁴ and the associated Cheniere Creole Trail Pipeline.⁷⁵ Should similar arguments be raised in federal court during the appeal of future projects, FERC's connection of the economic benefits resulting from increased shale gas production may require environmental review of such induced production, proving existing EAs deficient.⁷⁶

71. *City of Shoreacres v. Waterworth*, 420 F.3d 440, 453 (5th Cir. 2005) (quoting *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992)).

72. *N. Plains Res. Council, Inc., v. Surface Transp. Bd.*, 668 F.3d 1067, 1081-82 (9th Cir. 2011).

73. *Id.* at 1081-82.

74. *See Sabine Pass Liquefaction*, *supra* note 39, at 1.

75. *Cheniere Creole Trail Pipeline*, 145 F.E.R.C. ¶ 61,074 (2013) (order denying rehearing and stay).

76. FERC's reliance on prior decisions in approving the Dominion Cove Point LNG Project without an environmental impact statement evaluating induced natural gas exploration was recently issued and may be further appealed. *See Northey*, *supra* note 5; *Dominion Cove Point LNG, LP*, *supra* note 41.

D. THE CAUSALLY RELATED STANDARD ESTABLISHED IN *PUBLIC CITIZEN V. UNITED STATES* DOES NOT PRECLUDE THE EVALUATION OF UPSTREAM AND DOWNSTREAM IMPACTS IN ESTABLISHING AN ENVIRONMENTAL BASELINE

The required scope of a NEPA evaluation includes the direct and indirect environmental effects caused by an agency's proposed action. A causal relationship must exist between the proposed action and the direct and indirect environmental effects to find that the action itself has a significant effect on the human environment.⁷⁷ The causal relationship does not restrict the entire NEPA evaluation, but instead governs the boundaries and definitions of a proposed action when the proposing agency decides it is a major federal action requiring an EIS. Causation simply frames the action itself but does not limit NEPA mandates on a federal agency. If the causally related standard were applied too narrowly for NEPA purposes, a proposed action would be evaluated in a vacuum and may trivialize the assessment.⁷⁸

Department of Transportation v. Public Citizen provides precedent for limiting what is deemed causally related to a proposed action to that which falls within a federal agency's area of control.⁷⁹ The Supreme Court held that the Federal Motor Carrier Safety Administration ("FMCSA") did not have to evaluate the eventual car emissions in an EIS when it created regulations to grant operating authority and conduct associated safety inspections to Mexican motor carriers operating in the United States.⁸⁰ Specifically, the FMCSA did not have the statutory authority to prevent the effect, so FMCSA's proposed action could not be considered a legally relevant cause of the environmental effects.⁸¹ The court clarified that FMCSA had no statutory authority to impose or enforce emissions controls because the agency focuses on motor carrier safety.⁸²

The EA published by FMCSA evaluated the environmental effects as a result of an increased number of roadside inspections due to the proposed regulations. Litigants disputed the degree to which FMCSA's EA must consider increases in trade volume between the United States and Mexico stemming from the proposed regulation and the subsequent introduction of trucks.⁸³ However, the court noted that the increases in trade volume could not be attributed to FMCSA's safety regulations, but would occur as a result of the President's lifting of a moratorium on new grants of operating authority for Mexican motor vehicles. The court

77. See *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 754 (2004) ("NEPA requires a 'reasonably close causal relationship' akin to proximate cause in tort law.").

78. See, e.g., *Sierra Club Motion*, *supra* note 46, at 12-13 (arguing that even by assuming that drilling in the Marcellus Shale is not causally related to the MARC I Project, FERC examined the project in a vacuum by excluding such baseline effects from the cumulative impact analysis).

79. *Pub. Citizen*, 541 U.S. at 768.

80. *Id.* at 753.

81. *Id.* at 769.

82. *Id.* at 759.

83. *Id.* at 765.

found that the resulting environmental impact of the increased trade volume was not an “effect” of FMCSA’s proposed action.⁸⁴ In making this determination, the court stated that the increase in trade volume could not be countermanded or affected by the agency’s proposed action since the increase in trade volume was separately approved by federal law.⁸⁵ Although reasonably foreseeable when FMCSA evaluated its regulations, the lifting of the moratorium predicated FMCSA’s regulations, not the other way around. As a result, FMCSA’s proposed action was not causally related to the increased cross-border activity, and related environmental effects did not have to be considered when determining that the proposed action was not a major federal action significantly affecting the environment.⁸⁶

FERC incorrectly relies on *Public Citizen* when it assumes that environmental impacts from upstream and downstream activity are not relevant to NEPA review.⁸⁷ *Public Citizen* specifically addressed whether an agency with limited statutory authority could affect the eventual environmental issues. The court noted that a “but for” causal relationship was insufficient to make an agency responsible for a particular indirect effect under NEPA.⁸⁸ The required causal relationship for NEPA purposes was instead akin to proximate cause from tort law, meaning that an agency must have the ability to prevent the environmental effects. Otherwise, implementation of NEPA would be contrary to the “rule of reason.”⁸⁹ Unlike FMCSA, which could not prevent increased trade with safety regulations, FERC has much more authority to site natural gas facilities pursuant to the Natural Gas Act. FERC’s mandate requires it to act in the public interest, and the scope of what relevant information can affect such a decision is far greater than what the FMCSA could apply.

The holding in *Public Citizen* further stated that the non-causally related impacts of increased trade volume were not to be factored into the delineation of FMCSA’s action to have significant *indirect* environmental impacts, but did not state that such non-causally related impacts could be ignored altogether.⁹⁰ To the contrary, the court stated that NEPA’s cumulative impact regulation counseled FMCSA to evaluate the incremental impact of their proposed safety regulations in the context of the overarching environmental impacts associated with the

84. *See id.* at 763-65.

85. *Id.* at 766.

86. *Id.* at 770.

87. *See* Coal. Reply Brief, *supra* note 31, at 10-12.

88. *See Public Citizen*, 541 U.S. at 767 (stating that a finding of causation where motor vehicle operators obtained a permit through FMCSA, would rest “on a particularly unyielding variant of ‘but for’ causation” since FMCSA has no authority to prevent the effect).

89. *Id.* at 767.

90. *Id.* at 768.

increased trade volume.⁹¹ Therefore, such non-causally related impacts must still be factored into the environmental baseline that a cumulative impact assessment builds upon. For FERC's purposes, upstream and downstream impacts of commercial natural gas activity must be evaluated at the outset, even if not induced by the proposed action, to determine if the combined effects of any environmental impacts caused or induced by the proposed action lead to a significant environmental impact.

III. FUTURE OUTLOOK

FERC's wide deference in applying NEPA to agency decision-making was recently limited by the D.C. Circuit in *Delaware Riverkeeper Network v. FERC*, which provided a win to environmentalists by pushing FERC to improve cumulative impact analysis.⁹² The court evaluated FERC's approval of the Tennessee Gas Pipeline Company's Northeast Project⁹³ and held FERC's NEPA review to be deficient because it impermissibly segmented the Northeast Project from three other closely related pipeline projects and failed to evaluate the cumulative impact of all four pipelines.⁹⁴ The court criticized FERC's justification for segmenting the project based on separate contracted-for volumes of gas between each of the four connected pipeline projects, noting that such justification did not even cite the applicable CEQ regulations governing segmentation.⁹⁵ Therefore, the court concluded that FERC acted arbitrarily in evaluating the Northeast Project independent of the connection actions associated with these related upgrades.⁹⁶

Although encouraging, the impacts of the court's decision will likely be limited to forcing the expansive environmental reviews argued for therein. The reasoning focused mostly on NEPA's segmentation requirements—not cumulative impact requirements.⁹⁷ Even in looking at the cumulative impacts noted in the decision, the court places an obligation on FERC to evaluate the Northeast Project impacts, in conjunction with the three other upgrades, on groundwater, habitat, soil, and wildlife concerns without mentioning induced natural gas exploration.⁹⁸ As a result, the decision will likely be of little use in requiring

91. *Id.* at 769-70. The court separately noted that there was no evidence that application of the proposed safety inspections would have a noticeable effect on air quality. *Id.* at 765.

92. *Del. Riverkeeper Network v. FERC*, 753 F.3d 1304 (D.C. Cir. 2014).

93. The Northeast Project included five new segments of 30-inch diameter pipe, which ran a total of 40 miles, as a part of over 200 miles of pipe upgrades within the much larger 300-line natural gas pipeline. *Id.* at 1307.

94. *Id.* at 1320.

95. *Id.* at 1314-15.

96. *Id.* at 1319.

97. *Id.* at 1320 (Brown, J., concurring) (noting that the court's decision should have focused on the need for a more thorough cumulative impacts analysis instead of a segmentation review).

98. *Id.*

deeper evaluation of cumulative impacts.⁹⁹ However, as natural gas development continues, additional challenges to the environmental reviews of pipeline and LNG projects will be ripe for further application of the arguments that did not gain traction in challenges to the Sabine Pass and MARC I projects.

Even if more data becomes available that links discrete infrastructure projects to increased natural gas exploration or consumption, continued court deference to agencies will pose difficulty to FERC's challenges premised on cumulative impacts, reasonable foreseeability, and causality. Therefore, any change to FERC's environmental reviews will likely need to come from the agency itself. FERC's position has not been that NEPA does not give it the latitude to evaluate the environmental impacts of gas use but rather that the agency is not required to do so.¹⁰⁰ This has led to the contention that FERC itself could update its regulations, consistent with guidance from CEQ, to provide for consideration of climate change impacts associated with its project authorizations.¹⁰¹

IV. CONCLUSION

In establishing NEPA, Congress recognized that man's activity has a profound impact on the natural environment and the federal government has a continuing responsibility to ensure that reasonable decision-making occurs before a federal action leads to an irreparable environmental change. FERC's regulatory reach and control of the natural gas infrastructure places it in the best position to discharge the federal government's responsibilities under NEPA in the context of the ongoing domestic natural gas boom. This responsibility is not limited to evaluating the direct environmental impacts of natural gas pipelines and LNG terminals; it also concerns the indirect effects associated with upstream and downstream commercial natural gas activity. Upstream and downstream activity must be evaluated to establish a baseline for an assessment of any incremental environmental impact attributed to authorizing a natural gas pipeline or LNG terminal. Such activity is a reasonably foreseeable impact of such authorization, and cannot be ignored based on the causally related standard established in *Public Citizen*.

This responsibility is not overly cumbersome, as NEPA does not require FERC to act beyond its statutory authorization and deliver an absolute or specific environmental result. Rather, NEPA simply mandates that the related environmen-

99. Subsequent to *Del. Riverkeeper Network*, the D.C. Circuit declined to remand FERC's NEPA analysis of a natural gas compressor station in Minisink, New York for inadequate evaluation of cumulative impacts associated with an adjacent project because, unlike the Northeast Project, the project of concern was not pending before FERC at the same time. *Minisink Residents for Env'tl. Pres. & Safety v. FERC*, 762 F.3d 97, 113 n.11 (D.C. Cir. 2014).

100. See Northey, *supra* note 5.

101. STEVEN WEISSMAN & ROMANY WEBB, ADDRESSING CLIMATE CHANGE WITHOUT LEGISLATION, VOLUME 2: FERC (2014), available at http://www.law.berkeley.edu/files/CLEE/FERC_Report_FINAL.pdf.

tal impacts are brought to light to aid both the public and federal actors to fully understand the consequences of proposed actions and ensure reasonable decision-making. Furthermore, FERC has substantial deference to determine how the environmental impacts of upstream and downstream natural gas development should be evaluated, to decide what data should be considered, and to defer to state regulatory requirements as the basis for assessing such impacts. If FERC does not shoulder this responsibility, irreversible environmental consequences will be blurred by the draw of cheap energy.