

FERC COMPLIANCE WITH NEPA: UPSTREAM AND DOWNSTREAM IMPACTS

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INTRODUCTION

In recent years, shale gas and hydraulic fracturing (fracking) have led to what has widely been described as the “shale gas revolution” in the United States.¹ The consequences of this *revolution* indeed are profound, with its impact felt in energy supply, energy prices,² carbon dioxide (CO₂) levels,³ energy security,⁴ energy independence,⁵ and renewable energy.⁶ Natural gas now fuels nearly one-third of electricity generation,⁷ and most recent estimates report that the United States has enough natural gas to last about 86 years.⁸ Low-cost shale gas is also credited as a catalyst for a “manufacturing renaissance” in America—“revitalizing the chemical industry and enhancing the global competitiveness of energy-intensive manufacturing sectors such as aluminum, steel, paper, glass, and food.”⁹

Liquefied natural gas (LNG) terminals, which previously were built to receive imports across the country, lie idle.¹⁰ Although, there is a boom in the construction of new LNG export terminals, the United States is expected to become a net exporter of natural gas on an average annual basis by 2018,¹¹

1. See Richard Middleton et. al., *The Shale Gas Revolution: Barriers, Sustainability, and Emerging Opportunities*, 199 APPL. ENERGY 88-95 (2017).

2. Vipin Arora and Yiyong Cai, *US natural gas exports and their global impacts*, AUSTL.NAT'L UNIV. CRAWFORD SCH. OF PUB. POLICY, Working Paper No. 22, (2014).

3. See David Biello, *Fact or Fiction?: Natural Gas Will Reduce Global Warming Pollution*, SCIENTIFIC AMERICAN (Aug. 3, 2015), <https://www.scientificamerican.com/article/fact-or-fiction-natural-gas-will-reduce-global-warming-pollution/>.

4. See Jasmin Cooper et al., *Shale Gas: A Review of the Economic, Environmental, and Social Sustainability*, 4 ENERGY TECH. REV. 772 (2016) (“Recent estimates of large shale gas reserves across the globe have raised expectations for cheap energy and improved security of supply....”).

5. See Daniel Yergin, *Congratulations, America. You're (Almost) Energy Independent. Now what?*, POLITICO, Nov. 2013, <https://www.politico.com/magazine/story/2013/11/congratulations-america-youre-almost-energy-independent-now-what-098985>.

6. See Garvin Heath et al., *Harmonization of initial estimates of shale gas life cycle greenhouse gas emissions for electric power generation*, 111 PROC. NATL ACAD. SCI. E3167-76 (2014) (“Natural gas, consisting mostly of methane, has the lowest amount of carbon per unit of energy among fossil fuels and has been promoted as a transition to lower carbon economy....”).

7. See *FAQ: What is U.S. electricity generation by energy source?* U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>.

8. See *FAQ: How Much Natural Gas Does the United States Have, and How Long Will It Last?* U.S. ENERGY INFO. ADMIN. Apr. 9, 2018, <https://www.eia.gov/tools/faqs/faq.php?id=58&t=8>.

9. See Mark Barteau & Sridhar Kota, U. Mich., *Shale Gas: A Game-Changer for U.S. Manufacturing* 5 (2014), <http://fliphtml5.com/izxr/tmlq>.

10. See Naureen Malik, *Loneliest Natural Gas Terminal in U.S. Bucks Pipeline Trend*, BLOOMBERG, July 12, 2016, <https://www.bloomberg.com/news/articles/2016-07-12/pipeline-phobia-keeps-new-england-s-unlikely-trade-route-open>.

11. See Katie Dyl, *Liquefied Natural Gas Exports Expected to Drive Growth in U.S. Natural Gas Trade*, U.S. ENERGY INFO. ADMIN.: *TODAY IN ENERGY* at 1 (Feb. 22, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=30052>

and by 2040 U.S. LNG exports will grow to 8.4 trillion cubic feet (Tcf) or 23 billion cubic feet per day (23 Bcf/d).¹² The Sabine Pass facility in Louisiana became the first operating LNG export facility in the lower 48 states in 2016, shipping its first cargo of domestically sourced natural gas to Brazil.¹³ As of January 24, 2018, the Federal Energy Regulatory Commission (FERC) approved ten other U.S. LNG export terminals, six of which are currently under construction.¹⁴ FERC has an additional 12 pending applications for LNG export terminals, in addition to three others that are in pre-filing status.¹⁵

This bounty has not come without its problems and controversies. Environmental concerns such as: drinking and groundwater contamination,¹⁶ induced seismic activity due to wastewater disposal,¹⁷ and fugitive emissions are gaining the most public attention.¹⁸ To be sure, natural gas is not environmentally neutral, but it is much cleaner compared to other fossil fuel alternatives.¹⁹ However, health concerns raised quickly, especially as shale gas development moved closer to highly developed areas not used to mineral extraction—such as the enormous Marcellus Shale near large population centers on the East Coast.²⁰ Vermont was the first state to ban fracking in

12. *Id.* at 2.

13. See *Natural Gas Weekly Update*, U.S. ENERGY INFO. ADMIN., Feb. 25, 2016, https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2016/02_25/index.php.

14. FERC, *North American LNG Import/Export Terminals Approved*, Jan. 24, 2018, <https://www.ferc.gov/industries/gas/indus-act/lng/lng-approved.pdf>.

15. FERC, *North American LNG Export Terminals Proposed*, as of July 13, 2018, <https://www.ferc.gov/industries/gas/indus-act/lng/lng-proposed-export.pdf>.

16. Executive Summary, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States*, EPA (Dec. 2016), at 9,13, https://www.epa.gov/sites/production/files/2016-12/documents/hfdwa_executive_summary.pdf.

17. *How is Hydraulic Fracturing Related to Earthquakes and Tremors?* U.S. GEOLOGICAL SURVEY (Sept. 25, 2018), https://www.usgs.gov/faqs/how-hydraulic-fracturing-related-earthquakes-and-tremors?qt-news_science_products=0#qt-news_science_products.

18. Science, *Fugitive emissions from shale gas: our Q&A*, CARBON BRIEF, (May 29, 2012), <https://www.carbonbrief.org/fugitive-emissions-from-shale-gas-our-qa>.

19. See *Natural Gas and the Environment*, U.S. Energy Information Administration, August 22, 2018, https://www.eia.gov/energyexplained/index.cfm?page=natural_gas_environment. (“Burning natural gas for energy results in fewer emissions of nearly all types of air pollutants and carbon dioxide (CO₂) than burning coal or petroleum products to produce an equal amount of energy. About 117 pounds of carbon dioxide are produced per million British thermal units (MMBtu) equivalent of natural gas compared with more than 200 pounds of CO₂ per MMBtu of coal and more than 160 pounds per MMBtu of distillate fuel oil”).

20. See ALANDRA KAHL, *MANAGEMENT OF ENVIRONMENTAL IMPACTS* (Francis J. Hopcroft ed., 201

2012.²¹ New York banned the practice in 2014, Maryland followed suit in March 2017, and 22 states passed local ordinances to limit fracking.²²

The nexus of this controversy is the matter of natural gas pipelines, which are necessary to transport the gas. Many pipelines exist already. In years to come many more will connect from processing plants in producing regions to LNG export facilities, power plants, factories, and—ultimately—consumers. As part of this process, under section 7 of the Natural Gas Act (NGA), FERC reviews applications to construct and operate natural gas pipelines.²³ Furthermore, besides natural gas pipelines, FERC has exclusive authority to review LNG terminal applications under Section 3 of the NGA.²⁴ FERC, as a federal agency, must take into account “environmental effects of their proposed actions prior to making decisions” as mandated by the National Environmental Policy Act of 1969 (NEPA). Also, the NGA designates FERC as the lead agency to do so.²⁵ Therefore, FERC is a significant actor in the shale gas revolution. FERC is in a dominant position not just to shape the course of American energy independence and security, but also the environmental impact these developments will cause.²⁶

FERC’s siting decisions are increasingly unpopular with environmental activists, affected landowners, and their elected representatives. These decisions are increasingly challenged in court. One of the substantive issues raised in connection with this, is the scope of FERC’s review under NEPA.²⁷ This paper explores the following question: to what degree must FERC

21. Editorial, *Vermont First State to Ban Fracking*, CNN, (May 17, 2012), <https://www.cnn.com/2012/05/17/us/vermont-fracking/index.html>.

22. James Cromwell & Pramilla Malick, Opinion, *New York State's Final Chance to Stop Fracking is Slipping Away*, THE HILL, (Aug. 25, 2017), <http://thehill.com/blogs/pundits-blog/energy-environment/347983-new-york-states-final-chance-to-stop-fracking-is>; see also John Hurdle, *With governor's signature, Maryland becomes third state to ban fracking*, ST. IMPACT PENN., (Apr. 4, 2017), <https://stateimpact.npr.org/pennsylvania/2017/04/04/with-governors-signature-maryland-becomes-third-state-to-ban-fracking/> (Asserting Maryland banned fracking in 2017).

23. FERC *Gas Pipelines*, <https://www.ferc.gov/industries/gas/indus-act/pipelines.asp>.

24. *LNG*, FERC (Jul. 26, 2018), <https://www.ferc.gov/industries/gas/indus-act/lng.asp>.

25. National Environmental Policy Act of 1969, 42 U.S.C. § 4321, 4332(1)(C) (1970); see also Natural Gas Act, 15 U.S.C. § 717a(b)(1) (2011) (“Commission shall act as the lead agency...”).

26. National Environmental Policy Act of 1969, 42 U.S.C. § 4821 (1969).

27. Ellen M. Gilmer, *Pipelines Appeals court tosses major challenge to FERC eminent domain use*, E&E NEWS (July 26, 2018), <https://www.eenews.net/stories/1060091229> (litigants challenged FERC’s practice of letting pipeline builders use eminent domain to take land); Office of Gov. Phil Murphy, *AG Grewal Challenges Federal Government's Inadequate*, ST. OF NJ. (July 26, 2018), <https://nj.gov/governor/news/news/562018/approved/20180726b.shtml> (New Jersey Attorney General “joins comments urging [FERC] to focus on climate change impacts when approving new pipelines”); Jamison Cocklin, *Delaware Riverkeeper Challenging FERC in Court Over PennEast*, NGI’S DAILY GAS PRICE INDEX (May 16, 2018), <https://www.naturalgasintel.com/articles/114397-delaware-riverkeeper-challenging-ferc-in-court-over-penneast> (Delaware riverkeeper is seeking a federal court order that would force FERC to respond to the organization’s request that the Commission rehear the January certificate authorizing PennEast Pipeline).

consider upstream and downstream impacts, including the consequences of hydraulic fracturing. This paper contends: (1) that FERC's current review excluding upstream impacts is appropriate and in the public interest, as defined under the regulatory framework; and (2) these upstream and downstream impacts can be most effectively addressed by Congress amending the NGA to designate FERC and the Environmental Protection Agency (EPA) as co-leads for NEPA's mandated pipeline and LNG terminal review.

I. NEPA OVERVIEW

Signed into law on January 1, 1970, NEPA establishes a "national policy [to] encourage productive and enjoyable harmony between man and his environment." NEPA was intended to reduce or eliminate environmental damage and to promote "the understanding of the ecological systems and natural resources important to" the United States.²⁸ NEPA was the first major environmental law in the United States and is often referred to as the *Magna Carta* of Federal environmental laws.²⁹

The purpose of NEPA is two-fold: (1) to ensure that the agency proposing a major federal action "will have available, and will carefully consider, detailed information concerning significant environmental impacts";³⁰ and (2) to guarantee that the relevant information will be made available to the larger public audience.³¹ However, "NEPA itself does not mandate particular results" to accomplish these ends.³² Rather, it imposes only procedural requirements on federal agencies to analyze the environmental impact of their proposals and actions.³³ In the words of the Ninth Circuit, NEPA is considered "more procedural than prophylactic."³⁴ Specifically, where legislation and major federal actions significantly affect the quality of the human environment, NEPA requires federal agencies to include a detailed statement in every recommendation or report on proposals. This detailed statement is called an Environmental Impact Statement (EIS).³⁵

EIS are made by the responsible officials on:

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28. National Environmental Policy Act of 1969, 42 U.S.C. § 4321 (1970).
 29. *Council on Env. Quality*, EXEC. OFF. OF THE PRESIDENT (Sept. 26, 2018), <https://www.whitehouse.gov/ceq/>.
 30. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).
 31. *See* 42 U.S.C. § 4332(2)(c).
 32. *See* *Robertson*, 490 U.S. at 350.
 33. *Id.*
 34. *See* *South Coast Air Quality Mgmt. Dist. v. FERC*, 621 F.3d 1085, 1092 (9th Cir.2010), (quoting James J. Hoecker, *The NEPA Mandate and Federal Regulation of the Natural Gas Industry*, 13 *Energy L.J.* 265, 265 (1992)).
 35. National Environmental Policy Act, 42 U.S.C. § 4332(2)(C) (1970).

- (i) the environmental impact of the proposed action;
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented;
- (iii) alternatives to the proposed action;
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
- (v) any irreversible and irremediable commitments of resources which would be involved in the proposed action should it be implemented.³⁶

The President's Council of Environmental Quality (CEQ), established by Title II of NEPA, has the following duties: (1) ensuring that federal agencies meet their obligations under NEPA; (2) overseeing federal agency implementation of the environmental impact assessment process; and (3) issuing regulations and other guidance to federal agencies regarding NEPA compliance.³⁷

NEPA sets out procedures that federal agencies must follow to ensure that the environmental effects of proposed actions are "adequately identified and evaluated."³⁸ If an agency's proposed action is neither categorically excluded from the requirement to produce an EIS nor would clearly require the production of an EIS, the CEQ regulations allow an agency to prepare a more limited document. This document is called an Environmental Assessment (EA). The EA is to be a "concise public document" that "[b]riefly provide[s] sufficient evidence and analysis for determining whether to prepare an [EIS]."³⁹ According to CEQ regulations, agencies must evaluate the direct, indirect, and cumulative impacts that are reasonably foreseeable.⁴⁰

Specifically, regarding FERC, the Energy Policy Act of 2005 amended the NGA to provide that FERC shall act as the lead agency for purposes of complying with NEPA. Also, for purposes of conducting environmental, safety, and security reviews of LNG plants and related pipeline facilities. This includes siting natural gas pipelines and LNG terminals.⁴¹ As the lead

36. *What is the National Environmental Policy Act?*, EPA, <https://www.epa.gov/nepa/what-national-environmental-policy-act> (emphasis added).

37. *What does NEPA Require?*, EPA <https://www.epa.gov/nepa/what-national-environmental-policy-act>. (last visited Nov. 3, 2018).

38. *See* 40 C.F.R. § 1501.4(a)–(b).

39. 40 CFR § 1508.9(a) (2017).

40. Council on Env'tl. Quality, 40 C.F.R. § 1508.25(a)(3)–(c) (2017).

41. Natural Gas Act, 15 U.S.C. § 717n(b)(1).

agency, FERC is to supervise the preparation of the EIS if more than one federal agency is involved in the same action, including the EPA.⁴² LNG exports have a slightly different process and are a joint procedure shared by the Department of Energy (DOE) and FERC.⁴³ Under the NGA, an entity seeking to export natural gas to other countries must obtain DOE's authorization.⁴⁴ Section 3 of the NGA requires that DOE *shall issue* such authorization unless it finds that the proposed export “will not be consistent with the public interest.”⁴⁵ In 2016, the D.C. Circuit held that DOE has sole authority to authorize LNG exports. Therefore, FERC could not be considered the legally relevant or proximate cause of the alleged effects of those exports.⁴⁶ For purposes of NEPA, the court in *Freeport* held that FERC had no legal authority to consider the environmental effects of those exports, and thus no NEPA obligation stemmed from those effects.⁴⁷ That said, licensing for LNG export terminal siting is solely under the jurisdiction of FERC. FERC is accountable for purposes of NEPA.

II. FERC'S CONSIDERATION OF UPSTREAM AND DOWNSTREAM IMPACT: APPROPRIATE AND IN THE PUBLIC INTEREST?

To be sure, there are legitimate concerns about fracking and the upstream and downstream impacts of natural gas pipelines and LNG terminals. These are activities that FERC has exclusive jurisdiction over. However, FERC meets and exceeds congressionally mandated goals in NGA and NEPA, and CEQ regulations in the current review process.⁴⁸ Reconciling these environmental concerns about fracking in particular and FERC's interests are discussed further in Section III.

FERC assesses direct greenhouse gas (GHG) impacts from construction and operation of projects in the NEPA reviews—this is not as controversial.⁴⁹ But we must consider if upstream and downstream impacts are even contemplated under CEQ's regulations. These regulations require agencies

42. See 40 C.F.R. § 1501.5(a).

43. Department of Energy, Federal Registrar, *Small-Scale Natural Gas Exports*, Vol 83, No. 143 (2018).

44. 15 U.S.C. § 717(3)(a) (2012).

45. *Id.*

46. See *Sierra Club v. FERC*, 827 F.3d 36, 40 (2016) (mentioning *Freeport* and the fact that the commission authorized that pipeline and the broad authorization supporting the commission's decision).

47. See *Sierra Club*, 827 F.3d at 40.

48. *Id.*

49. See *Sierra Club v. FERC (Sabal Trail)*, 867 F.3d 1357, 1365 (D.C. Cir. 2017). (noting that a grievance under NGA by a FERC order can be challenged under NEPA).

to examine the direct, indirect, and cumulative impacts of proposed actions.⁵⁰ Since they are not direct impacts, upstream and downstream impacts would fall under the *indirect impact* category. According to the regulations, indirect impacts are defined as those “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”⁵¹ Furthermore, indirect effects “may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and, other natural systems, including ecosystems.”⁵² Therefore, to determine whether an impact should be studied as an indirect impact, FERC must determine whether it: (1) is caused by the proposed action, and (2) is reasonably foreseeable.⁵³

This section is divided as follows: Part A explores the question of to what degree the Commission must consider upstream impacts, and Part B similarly, for downstream impacts. Part C addresses policy arguments relevant to upstream and downstream impacts, and Part D addresses legal precedent and arguments relevant to both.

A. Upstream Impacts — Overview

FERC’s view on upstream impacts, including fracking, is that they do not meet the definition of indirect impacts., Therefore, “NEPA does not require [its] review to include induced upstream natural gas production.”⁵⁴ As FERC states, “the environmental effects resulting from natural gas production are generally neither caused by a proposed pipeline (or other natural gas infrastructure) project nor are they reasonably foreseeable consequences of our approval of an infrastructure project, as contemplated by CEQ regulations.”⁵⁵ To be sure, CEQ did release a 34-page document in August 2016, recommending federal agencies to quantify a proposed action’s projected direct and indirect GHG emissions.⁵⁶ However, the change in

50. 40 C.F.R. § 1508.25(c) (1978).

51. 40 C.F.R. § 1508.8(b) (1978).

52. *Id.*

53. Gillian Giannetti, *FERC Takes a Step Backward on Environmental Impacts*, BLOG (May, 21 2018), <https://www.nrdc.org/experts/gillian-giannetti/ferc-takes-step-backward-environmental-impacts>.

54. Aaron Flyer, Note, *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*, 27 *Georgetown L. Rev.* 301, 305 (2012).

55. *Id.* at 305.

56. *Fact Sheet: White House Council on Environmental Quality Releases Final Guidance on Considering Climate Change in Environmental Reviews*, THE WHITE HOUSE: PRESIDENT BARACK OBAMA, (Aug. 2, 2016), <https://obamawhitehouse.archives.gov/the-press-office/2016/08/02/fact-sheet-white-house-council-environmental-quality-releases-final>.

administration and dissolution of this initiative renders the guidance moot for present purposes. FERC has successfully defended its view repeatedly before courts that:

[a] causal relationship sufficient to warrant Commission [NEPA] analysis of the non-pipeline activity . . . as an indirect impact would only exist if the proposed pipeline would transport new production from a specified production area and that production would not occur in the absence of the proposed pipeline (i.e., there will be no other way to move the gas).⁵⁷

To date, FERC “has not been presented with a proposed pipeline project that the record shows will cause the predictable development of gas reserves.”⁵⁸ Although this FERC interpretation was challenged, the court’s acceptance of them has remained intact post-*Sabal Trail*. This case changed things drastically in relation to downstream impact analysis, as discussed below.⁵⁹

In relation to upstream impact, for a limited period of time, despite not being required to do so by a court or as part of NEPA or any other regulatory requirement, FERC decided to provide upstream impact information.⁶⁰ FERC did so “to provide the public additional information.”⁶¹ On November 28, 2017, an “order issuing certificate” for the Valley Lateral Project (Millennium Pipeline) was issued. The certificate gives GHG emissions estimate for upstream impact.⁶² However, FERC won concerning upstream impact at *Sabal Trail*. The case caused the agency to modify its strategy in relation to providing a quantitative estimate of the impact of upstream emissions. It remains to be seen if this becomes the norm for upstream analysis. Currently, FERC still toes the line that it is not required to assess

57. See e.g., *Northwest Pipeline LLC*, Fed. Energy Reg. Comm’n, Docket No. CP17-441-000, Order Issuing Certificate and Approving Abandonment 164 FERC ¶ 61,038, at ¶ 32 (July 19, 2018).

58. *Id.* at 155; Fed. Energy Reg. Comm’n, Docket No. PL18-1-000, 1, 2 Order Issuing Certification 163 (2018).

59. See *Sabal Trail*, 867 F.3d at 1357.

60. *Dominion Transmission, Inc.*, Fed. Energy Reg. Comm’n, Docket No. CP14-497-001, Order Denying Rehearing, 163 FERC ¶ 61,128, at ¶ 41 (May 18, 2018) (“For a short time, the Commission went beyond that which is required by NEPA, providing the public with information regarding the potential impacts associated with unconventional natural gas production and downstream combustion of natural gas, even where such production and downstream use was not reasonably foreseeable nor causally related to the proposals at issue. That information was generic in nature and inherently speculative, providing upper-bound estimates of upstream and downstream effects using general shale gas well information and worst-case scenarios of peak use.”) (hereinafter *New Market*).

61. FED. ENERGY REG. COMM’N, DOCKET NO. CP16-486-000, ORDER ISSUING CERTIFICATE 159 (2017).

62. *Id.* at 1, 160–62.

upstream impacts as a part of NEPA analysis—and the courts agree. Sections C and D below, further discuss upstream impacts from the legal and policy perspective.

B. Downstream Impacts — Overview

A 2017 D.C. Circuit Court had a significant impact on FERC, relating its policy on assessing downstream impacts. FERC adjusted its policies to take this decision into account.⁶³ In *Sabal Trail*, the Southeast Market Pipelines Project was at issue. This project comprised of three natural gas pipelines under construction in Alabama, Georgia, and Florida—the lynchpin of which was the Sabal Trail pipeline connecting the upstream and downstream pipelines.⁶⁴ FERC’s EIS was challenged as inadequate by environmental groups.⁶⁵ The court ultimately held that “where it is known that the natural gas transported by a project will be used for end-use combustion, the Commission should ‘estimate[] the amount of power-plant carbon emissions that the pipelines will make possible.’”⁶⁶

Overall, the court agreed with the Sierra Club and its partners that FERC’s refusal to analyze “downstream” emissions violated NEPA.⁶⁷ In the words of the court: “We conclude that the EIS for the [project] should have either given a quantitative estimate of the downstream GHG that will result from burning the natural gas that the pipelines will transport or explained more specifically why it could not have done so.”⁶⁸ The court reasoned that because “FERC could deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment, the agency is a ‘legally relevant cause’ of the direct and indirect environmental effects of pipelines it approves.”⁶⁹ This directly addressed a Supreme Court-approved argument that the agency had successfully used repeatedly concerning downstream impact. The argument was espoused in *Public Citizen*: that when the agency has no legal power to prevent a particular environmental effect, there is no decision to inform, and the agency need not analyze the effect in its NEPA

63. See *Sabal Trail*, 867 F.3d at 1357.

64. *Id.* at 1363.

65. *Id.* at 1357.

66. See *Id.* at 1357.

67. See *South Coast Air Quality Mgmt. Dist. v. FERC*, *supra*, (quoting James J. Hoecker, *The NEPA Mandate and Federal Regulation of the Natural Gas Industry*, 13 *Energy L.J.* 265, 297 (1992));; Elly Benson, *In Major Climate Decision, D.C. Circuit Rejects Federal Approval of Sabal Trail Pipeline*, *Sierra Club*, (August 28, 2017), <https://www.sierraclub.org/planet/2017/08/sabal-trail-pipeline-ferc-fracked-gas-pipeline>.

68. *Sabal Trail*, 867 F.3d at 1374.

69. *Id.*

review.⁷⁰ However, the court here found that FERC was, in fact, more potent than it claimed to be. Congress had given it the power to deny a pipeline certificate—it has the power to prevent such environmental effects caused downstream, and therefore had to consider them.⁷¹

Subsequently, FERC took action to incorporate this requirement for downstream impact: a quantitative estimate of the downstream GHG that will result from the project, in an effort to apparently satisfy what the court required the Commission to consider for downstream impact purposes. In September 2017, FERC issued a supplemental EIS for Sabal Trail.⁷² It also took similar action in other projects it was approving. For example, on November 28, 2017, FERC issued an “order issuing certificate” for the Millennium Pipeline, giving downstream GHG emissions estimate.⁷³ The GHG estimate was calculated using “EPA’s GHG Equivalencies Calculator and references.”⁷⁴

It appeared that going forward such practice would become the *modus operandi*, but this changed on May 18, 2018 when FERC shifted course and stated that it will no longer discuss upstream and downstream environmental impacts it deems to be outside of NEPA.⁷⁵ Two of the five commissioners dissented, disagreeing with the policy change.⁷⁶ A nonprofit group, with which six states⁷⁷ and the District of Columbia have sided, is contesting at the agency’s decision the D.C. Circuit.⁷⁸

Sections C and D further discuss downstream impacts from the legal and policy perspective.

70. See *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752 (2004) (arguing that when the agency can’t prevent a certain environmental effect, there is no decision to inform, and the agency need not analyze the effect in its NEPA review).

71. See *Sabal Trail*, 867 F.3d at 1373.

72. *Sabal Trail Draft Supplemental EIS*, FERC, Sept. 27, 2017, <https://www.ferc.gov/industries/gas/enviro/eis/2017/09-27-17-DEIS/supplemental-DEIS.pdf>.

73. FED. ENERGY REG. COMM’N, DOCKET NO. CP16-486-000, ORDER ISSUING CERTIFICATE 1, 163–65 (2017).

74. See *Greenhouse Gas Equivalencies Calculator*, EPA, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator> (last visited Nov. 3, 2018).

75. *New Market*, *supra* note 60, at ¶44 (“Accordingly, to avoid confusion as to the scope of our obligations under NEPA and the factors that we find should be considered under NGA section 7(c), we will no longer prepare upper-bound estimates . . . where, as here, the upstream production and downstream use of natural gas are not cumulative or indirect impacts of the proposed pipeline project, and consequently are outside the scope of our NEPA analysis.”).

76. *Id.*, Dissents of Commissioner LaFleur and Glick.

77. New York, Maryland, New Jersey, Oregon, Washington, and Massachusetts.

78. See Ellen M. Gilmer, *N.Y. group takes FERC climate issue to federal court*, E&E NEWS, July 16, 2018, <https://www.eenews.net/stories/1060089313>

C. Policy Arguments

FERC's actions concerning upstream and downstream impact consideration are appropriate and meet the standard of public interest. FERC's mandate requires it to act in the public interest, and the agency undoubtedly serves this goal. FERC's mission is to "[a]ssist consumers in obtaining reliable, efficient and sustainable energy services at a reasonable cost through appropriate regulatory and market means."⁷⁹ The actions that FERC takes by assessing pipelines and LNG terminals thoroughly and on a timely basis are well documented.⁸⁰ Thus, FERC also succeeds in achieving the principal purpose of the NGA, which is "to encourage the orderly development of plentiful supplies of ... natural gas at reasonable prices."⁸¹

Going beyond calculating the GHG levels of upstream and downstream impact, which was implemented post-*Sabal Trail* until *New Market*, for FERC would be exceeding its congressionally mandated role and ability to act appropriately and serve the public interest. For example, regarding upstream impact FERC's argument made time and again is persuasive; whether or not FERC builds a pipeline, new drilling will occur. To be sure, there is no other practical way to transmit natural gas except by pipelines, but it is not FERC's role to stop the drilling. As put by FERC:

The fact that natural gas production and transportation facilities are all components of the general supply chain required to bring domestic natural gas to market is not in dispute.⁸² This does not mean, however, that approving this particular project will induce further shale gas production. Rather, as we have explained in other proceedings, a number of factors, such as domestic natural gas prices and production costs drive new drilling.⁸³

79. *About FERC*, FED. ENERGY REG. COMM'N (Sept 26, 2018), <https://www.ferc.gov/about/about.asp>.

80. *Federal Energy Regulatory Commission, Performance and Accountability Report*, 2014 FERC. On Performance and Accountability.

81. *Public Utilities Commission of California v. FERC*, 900 F.2d 269, 281 (D.C. Cir. 1990) (quoting *NAACP v. FPC*, 425 U.S.662, 670 (1976)).

82. *See generally* Department of Energy, *Understanding Natural Gas and LNG Options 2* (Oct. 2017) https://www.energy.gov/sites/prod/files/2017/11/f46/Understanding%20Natural%20Gas%20and%20Ln%20Options%20October%2011%202017_1.pdf.

83. FED. ENERGY REG. COMM'N, DOCKET NO. CP16-486-000, ORDER ISSUING CERTIFICATE 157 (2017).

Any further restrictive action by FERC at the upstream level would be treading on dangerous ground, as it essentially would be moving beyond pipeline regulation and venturing into regulating drilling activity: FERC's ability to act on the findings is limited.⁸⁴ Necessarily, this policy argument is what *Public Citizen* held in legal form, and why the court repeatedly sides with FERC: when the agency has no legal power to prevent a certain environmental effect, there is no decision to inform, and the agency need not analyze the effect in its NEPA review.⁸⁵ Because FERC has no legal power to stop fracking and drilling, FERC has no duty to analyze. Calculating potential GHG level increases due to downstream—which is what FERC started to implement post-*Sabal Trail*—is very different from shutting down a project based on potential environmental concerns upstream (i.e., fracking).⁸⁶ The regulation of fracking itself is well beyond FERC's purview. This is unlike the direct, indirect, and cumulative environmental analysis FERC does at present regarding the pipelines themselves for NEPA purposes; ordering a pipeline to take a slightly different route (which is something that does happen as a result of such analysis) is very different from asking a company to drill elsewhere. To be sure, upstream data may be useful information for other agencies, but that is about it: FERC's mandate is set forth and limited by Congress.⁸⁷ This is, therefore, a powerful policy and legal argument.

As for downstream impacts, FERC has no blank check to go beyond its legal boundaries. In *Sabal Trail*, the court held that because FERC could deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment, the agency is a “legally relevant cause” of the direct and indirect environmental effects of pipelines it approves.⁸⁸ The consequences remain to be seen. As discussed above, FERC initially decided to provide data about the downstream impact for other projects, and then changed its course in *New Market*, and now the matter is pending before the D.C. Circuit. That said, there are policy implications to consider in this regard. Although, as the court points out, Congress indeed has given FERC the authority to deny applications based on downstream environmental impact, the denial of a pipeline on such grounds would be contrary to FERC's mission to provide reliable, efficient, and cost-effective energy.⁸⁹ Especially

84. See *Sabal Trail*, 867 F.3d at 1372-73 (establishing when FERC's ability to act is limited and when it is not).

85. See *Dep't of Transp. v. Public Citizen*, 541 U.S. 752,752-54 (2004).

86. *Sabal Trail*, *supra*, 867 F.3d at 1383.

87. *What FERC Does?*, FERC, <https://www.ferc.gov/about/ferc-does.asp?csrt=1109683367713> (last visited Nov. 3, 2018).

88. *Sabal Trail*, 867 F.3d at 1374.

89. *Id.* at 1373.

if the pipeline is a prestigious project, FERC's denial could possibly result in a backlash from Congress (the Keystone Pipeline is beyond the scope of this paper, but the controversy it has resulted in is worth recalling).⁹⁰ The famous *TVA v. Hill* case is a relevant reminder of how Congress can amend legislation if Congress considers agency action under the statutory directive beyond the legislative intent.⁹¹

That said, environmental concerns about upstream and downstream activity—fracking-related—is legitimate, and this article addresses the solutions to these fears.

D. Legal Precedent and Arguments

As discussed, FERC temporarily quantified downstream GHG emissions before reversing course. Whether this will be considered in compliance with NEPA by the courts, especially in light of *Sabal Trail*, remains a pending question before the D.C. Circuit.⁹² FERC also had gone above and beyond what the court in *Sabal Trail* mandated by additionally providing upstream numbers for GHG, before changing tack on that as well.⁹³ Either way, assuming that FERC is in compliance with NEPA, the court will only overturn FERC if they are acting “arbitrary and capricious.”⁹⁴ In the words of the D.C. Circuit in *Sabal Trail*:

[a]n EIS is deficient, and the agency action it undergirds is arbitrary and capricious, if the EIS does not contain sufficient discussion of the relevant issues and opposing viewpoints,” or if it does not demonstrate ‘reasoned decision-making.’ ... The overarching question is whether an EIS's deficiencies are significant enough to undermine informed public comment and informed decision-making.⁹⁵

Previously, courts have accepted the following types of explanations argued by FERC: (1) FERC need not engage in a “speculative analysis”

90. Sam Brodey, *Obama Blocks Keystone Pipeline, Ending Debate for Rest of Term*, MINN. POST (Nov. 6, 2015), <https://www.minnpost.com/dc-dispatches/2015/11/obama-blocks-keystone-pipeline-ending-debate-rest-term/>.

91. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 (1978), *superseded by statute*, Endangered Species Act Amendments of 1978, Pub. L. No. 95-632, 92 Stat. 3751 (1978) (now codified as 16 U.S.C. § 1531-43 (1988)).

92. *Otsego 2000 et al. v. FERC*, Case No. 18-1188 (D.C. Cir.).

93. *Sabal Trail*, 867 F.3d at 1360.

94. *Id.* at 1374.

95. *Id.*

because there is no standard methodology for quantifying the downstream environmental effects of GHG emissions that result from a pipeline project;⁹⁶ (2) Projects would not significantly contribute to the cumulative impact of GHG emissions, given that the power plants that contracted for the Projects' capacity would use much of the delivered natural gas to replace the burning of higher-emissions coal;⁹⁷ and (3) the *Public Citizen* argument discussed in the previous section. The D.C. Circuit will soon have to decide whether any or all of these options are extinguished or limited in the post-*Sabal Trail* world.

It is important to note that it has been argued on Constitutional grounds that FERC, as an independent agency removed from direct presidential control, does not need to comply with NEPA requirements as implemented through CEQ.⁹⁸ However, FERC Order 486 voluntarily complies with such implementation.⁹⁹ This independent acceptance is appropriate: FERC has been traditionally granted broad latitude throughout its existence—even before 1977, when FERC was known as the Federal Power Commission.¹⁰⁰ Congress, through its actions,¹⁰¹ allowed FERC's rules to become the law of the land. This broad latitude granted by Congress combined with the "arbitrary and capricious" standard means that courts rarely override FERC's decisions (including holding the Commission accountable for FERC's own rules).¹⁰² Balancing the need to meet continuing demand for domestic natural gas with potential adverse impacts on landowners and surrounding communities is a challenging task; one ultimately entrusted to the Commission by Congress.¹⁰³ Explored below are some critical legal points that have been used to challenge FERC's review under NEPA of upstream and downstream impact.

96. Brief of Respondent at 22, *Sierra Club et al. v. Fed. Energy Reg. Comm'n*, 867 F.3d 1357 (2017) (No. 16-1329 and 16-1387).

97. *Id.* at 21.

98. James Hoecker, *The NEPA Mandate and Federal Regulation of the Natural Gas Industry*, 13 ENERGY L.J. 265, 272 (1992).

99. U.S. Federal Energy Regulatory Commission, Opinion No. 486, 47, 897 (Oct. 19, 2006).

100. Philip L. Cantelon, *The Regulatory Dilemma of the Federal Power Commission, 1920–1977*, 61, 84 (2012)
[http://www.shfg.org/resources/Documents/FH%204%20\(2012\)%20Cantelon%202.pdf](http://www.shfg.org/resources/Documents/FH%204%20(2012)%20Cantelon%202.pdf).

101. Department of Energy Organization Act, 42 U.S.C. § 7101 (1979). Public Utilities Regulatory Act, 16 U.S.C. § 791 (1978). Energy Policy Act of 2005, 42 U.S.C.A. § 15801 (2005). Department of Energy Organization Act in 1977, Public Utilities Regulatory Policy Act of 1978, the Energy Policy Act of 2005, et al.

102. *Ctr. for Env'tl L. & Pol'y v. U.S. Bureau of Reclamation*, 655 F.3d 1000, 1005 (9th Cir. 2011).

103. *See* Brief of Petitioner at 33, *Sierra Club v. FERC*, 867 F.3d 1357 (D.C. Cir. 2017). (No. 16-1329).

1. Reasonably Foreseeable Effects

As discussed *supra*, in order to determine whether an impact should be studied as an indirect impact, FERC must determine whether the impact: (1) is caused by the proposed action and (2) is reasonably foreseeable. Both prongs have proved sources of a legal challenge.¹⁰⁴ It has been argued that upstream and downstream environmental impacts are reasonably foreseeable effects of a natural gas pipeline or LNG export facility.¹⁰⁵ FERC, since *Sabal Trail*, started and then stopped including downstream impact in its analysis, but however the D.C. Circuit rules on this there are limits. An agency is only required to include “such information as appears to be reasonably necessary under the circumstances for evaluation of the project rather than to be so all-encompassing in scope that the task of preparing it would become either fruitless or well-nigh impossible.”¹⁰⁶ Furthermore, courts have not included the upstream impacts of fracking to be part of the reasonably foreseeable analysis.

It is worth further discussing reasonable foreseeability and the court’s reasoning in *Sabal Trail*, as this was a central issue of contention. Reminding that “indirect effects” in NEPA means “reasonably foreseeable,” the court noted that this, in turn, meant “sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision.”¹⁰⁷ Then it stepped away from precedent: “What are the ‘reasonably foreseeable’ effects of authorizing a pipeline that will transport natural gas to Florida power plants?¹⁰⁸ First, that gas will be burned in those power plants. This is not just “reasonably foreseeable,” it is the project’s entire purpose, as the pipeline developers themselves explain . . . It is just as foreseeable, and FERC does not dispute, that burning natural gas will release into the atmosphere the sorts of carbon compounds that contribute to climate change.”¹⁰⁹

The court addressed whether and to what extent the EIS for this pipeline project needed to discuss these “downstream” effects of the pipelines.¹¹⁰ The court concluded “FERC should have estimated the amount of power-plant

104. Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 774 (1983).

105. Aaron Flyer, *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*, 27 GEO. INT’L ENVTL. L. REV. 301, 308 (2016).

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

107. EarthReports, Inc. v. FERC, 828 F.3d 949, 955 (D.C. Cir. 2016) (quoting City of Shoreacres v. Waterworth, 420 F.3d 440, 453 (5th Cir. 2005)).

108. See *Sabal Trail*, 867 F.3d at 1371–72.

109. *Id.*

110. *Id.*

carbon emissions that the pipelines will make possible.”¹¹¹ This was a remarkable change in tack. It is also worth noting that the court prescribed this as a “minimum.”¹¹² It remains to be seen if courts will retain or expand this standard, but at least for now this is where the legal landscape stands. FERC’s supplemental EIC appears to have sufficed by simply including GHG emission estimates of downstream impact.¹¹³ That said, subsequent action taken in *New Market* introduces some uncertainty by demonstrating that FERC intends to limit *Sabal Trail*’s EIC as a ‘unique’ scenario.¹¹⁴

Putting aside discussion of whether or not *Sabal Trail*’s holding is incorporated into FERC’s procedures,¹¹⁵ there are limits: NEPA requires “reasonable forecasting,” but an agency need not “engage in speculative analysis” or “to do the impractical, if not enough information is available to permit meaningful consideration.”¹¹⁶ For upstream impacts, the argument discussed in the previous section relating to *Public Citizen* remains valid: because FERC has no legal authority to stop drilling to prevent its environmental effect, there is no decision to inform, and the agency need not analyze the effect in its NEPA review. That said, FERC may—and as discussed, has chosen to for Millennium Pipeline—may choose to do so voluntarily.

2. Cumulative Analysis

As discussed, CEQ’s regulations require agencies to examine the direct, indirect, and cumulative impacts of proposed actions.¹¹⁷ One frequently raised criticism is that the failure to consider upstream and downstream impacts creates an incomplete picture of a project’s cumulative environmental consequences.¹¹⁸ As defined by the CEQ and adopted by

111. *Id.*

112. *Id.*

113. *Sabal Trail Draft Supplemental EIS, supra* note 72.

114. Appellee Brief filed by FERC, *Otsego 2000 et al. v. FERC* (January 25, 2018)

(“Contrary to Otsego’s contention, this court’s [*Sabal Trail*] decision did not replace the commission’s obligation to analyze potential impacts on a case-by-case basis with an absolute rule that downstream emissions are always an indirect effect of natural gas transportation projects . . . The unique record in this case — which does not establish any specific end use for the gas transported by the project or what fuels it might displace — does not support a finding that any increase in greenhouse gas emission associated with the end use of gas is reasonably foreseeable.”).

115. FED. ENERGY REG. COMM’N, DOCKET NO. CP16-486-000, ORDER ISSUING CERTIFICATE 111 (2017).

116. *Northern Plain Resources Council, Inc. v. Surface Transportation Board.*, 668 F.3d 1067, 1078-79 (9th Cir. 2011).

117. EPA, *Consideration of Cumulative Impacts In EPA Review of NEPA Documents* 1, 2 (1999), <https://www.epa.gov/sites/production/files/2014-08/documents/cumulative.pdf>.

118. Flyer, *supra* note 105, at 307.

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.¹¹⁹ Although, FERC has been criticized for not establishing an adequate baseline prior to determining that federal action will not significantly affect the environment.¹²⁰ The courts have dismissed this criticism, including in *Sabal Trail*: “Perhaps FERC could have said more, but the discussion it undertook of the cumulative impacts of the proposed route fulfilled NEPA’s goal of guiding informed decision-making.”¹²¹

Before *Sabal Trail*, the Second Circuit famously 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. Focusing on FERC’s reasonableness in determining that overall development of the Marcellus Shale was not sufficiently causally related to the project.¹²² Indeed, it is well beyond FERC’s purview to engage in such a large-scale study. The agency’s focus was and should remain the physical construction and operation of the pipeline itself.¹²³ As discussed below, however, this does not mean that another agency should not take the lead on the environmental review of such projects.

3. Causally Related

As discussed *supra*, when determining whether an impact should be studied as an indirect impact, one of the questions FERC must decide is whether the proposed action caused it: “NEPA requires ‘a reasonably close causal relationship’ between the environmental effect and the alleged cause” in order “to make an agency responsible for a particular effect under NEPA.”¹²⁴ The most powerful argument under this prong against FERC’s practices was that the causally related standard established in *Public Citizen* does not preclude the evaluation of upstream and downstream impacts in environmental reviews.¹²⁵ *Sabal Trail* perhaps dented this understanding, but

119. *Kern River Gas Transmission Co.*, 117 F.E.R.C. ¶ 61,077, 47, 486, 497 (2006).

120. See Brief of 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 (arguing that FERC has been criticized for not having an adequate baseline).

121. See *Sabal Trail*, 867 F.3d at 1357.

122. Brief of Petitioner, *supra* note 6, at 6.

123. FED. ENERGY REG. COMM’N, DOCKET NO. CP16-486-000, ORDER ISSUING CERTIFICATE 159–162 (2017).

124. See *Public Citizen*, *supra* note 752, at 767 (quoting *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 774 (1983)).

125. Flyer, *supra* note 103, at 315.

as discussed in previous sections *Public Citizen* remains very much alive: especially in regards to upstream impacts, but also with downstream impacts.

FERC often cites the Supreme Court holding that the agency is not required to “examine everything for which the [Projects] could conceivably be a ‘but-for cause’ in order to satisfy NEPA.”¹²⁶ Thus, “[s]ome effects that are ‘caused by’ a change in the physical environment in the sense of ‘but for’ causation,” will not fall within NEPA if the causal chain is too attenuated.¹²⁷ Such an expansive examination would neither be appropriate nor in the public interest—and is certainly contrary to Congressional intent. In sum,

FERC’s responsibility to study downstream impacts is limited in scope: to estimate the amount of GHG that the pipelines as was required in *Sabal Trail* remains the outer limit.

III. FILLING THE GAP: PROPOSAL FOR A NEW SYSTEM

As discussed, FERC’s current review that provides limited quantified data about upstream and downstream impacts is appropriate and in the public interest and is on stable ground both from a legal and policy standpoint—even in the post *Sabal Trail* world. Whether under NEPA FERC is required to estimate the upstream and downstream impact of pipelines and LNG terminals on the environment is limited only to the *Sabal Trail* pipeline or more broadly is something the D.C. Circuit will have to decide.¹²⁸ Nonetheless, either way the actual impacts themselves remain unaddressed in both scenarios. This section addresses the following issues: (A) the problem with states attempting to resolve this issue individually, and necessity of a national solution; (B) a proposal for a revision of the NGA to designate FERC and EPA joint review for NEPA-mandated review of pipelines and LNG terminals; (C) and why the proposal would be a win-win-win for FERC, EPA, and the public.

A. The Problem with States and Need for a National Solution

In the absence of a comprehensive national regulatory strategy to address, the upstream impacts of pipelines and LNG terminals (i.e. fracking),

126. See *Id.* at 308. See also *Sierra Club v. FERC*, 827 F.3d 36,46 (2016) (citing *DOT v. Pub. Citizen*, 541 U.S. 752,767 (2004)).

127. *Metropolitan Edison Co.*, at 774.

128. FED. ENERGY REG. COMM’N, DOCKET NO. CP16-486-000, ORDER ISSUING CERTIFICATE 159–165 (2017).

states have stepped in with a patch work of different regulations.¹²⁹ Many states passed effective legislation to address concerns about fracking.¹³⁰ However, one major problem is “segmentation;” a strategy to break up a pipeline project into different segments in order to avoid a full environmental impact being measured.¹³¹ Just one example of such practice is the Atlantic Sunrise Project.¹³² This is something that neither state-based regulators nor FERC’s system, as designed, are meant to address.¹³³

Another problem with a local approach is that economic incentives combined with lobbying at the local level militate against broader environmental considerations. Since 2009, the industry has spent more than \$59 million lobbying state legislators, and contributed \$9.5 million to campaigns and political action committees, according to data released in October 2017 by the watchdog group Common Cause, with some estimates running higher.¹³⁴ Furthermore, the debate is divisive and extreme: while some states have been very welcoming of fracking and reluctant to impose any restrictions, others have enacted total bans on drilling.

Therefore, there is a need for the federal government to address this issue. American energy independence and security is too important to be left to the individual states. The government needs to address the environmental issues resulting from fracking nation-wide. The current system by FERC and the states does not address broader cumulative risk or impact for the environment: each project is essentially provided with its own individual analysis.¹³⁵ The time has come for a solution that allows FERC to perform its job of providing reliable, efficient, and sustainable natural gas at a reasonable cost, while ensuring the environmental consequences from fracking are checked.

Why is now the right time to go ahead with this change? Environmental damage caused by fracking and resulting public backlash is a growing problem. Additionally, the recent court decision in *Sabal Trail* is an

129. See Brad Plumer, *How States are Regulating Fracking (In Maps)*, WASHINGTON POST, July 16, 2012, https://www.washingtonpost.com/news/wonk/wp/2012/07/16/how-states-are-regulating-fracking-in-maps/?utm_term=.b3325d90d140.

130. See generally Brad Plumer, *How states are regulating fracking (in maps)*, WASHINGTON POST, July 16, 2012 (demonstrating how states like Ohio and Pennsylvania are states that have passed fracking legislation).

131. Jenny Mandel, *FERC’s Quorum Problem Opens New Lines of Attack*, E&E NEWS, (Mar. 14, 2017), <https://www.eenews.net/stories/1060051393>.

132. *Id.*

133. 40 C.F.R. § 1508.7-1508.8(a)–(b) (2017).

134. See Alexander Kaufman, *This Is What It Looks Like When An Industry Controls A State’s Politics*, HUFFINGTON POST (Oct. 19, 2017, 11:43 AM), https://www.huffingtonpost.com/entry/gas-pennsylvania-severance-tax_us_59e7bd04e4b00905bdae9bfc.

135. Transcript of Proceedings at 78, Federal Energy Regulatory Commission Public Scoping Meeting (Nov. 14, 2007) (relating back to the Palomar Gas Transmission Pipeline Project).

indication of the shift taking place. President Trump's rhetoric on environmental change is significantly different from President Obama. The President's Climate Action Plan, issued in June 2013, was cancelled. On November 3, 2017 the U.S. government published a report prepared by 13 federal agencies clearly stating that humans are the dominant cause of the global temperature rise that has created the warmest period in the history of civilization.¹³⁶

B. Proposal for a Revision of the NGA to Designate FERC and EPA Joint Review for Upstream and Downstream Impact

To address the concerns regarding upstream and downstream impact, this article proposes that the NGA be amended for FERC and EPA to act as co-leads for the purposes of NEPA review of pipelines and LNG terminals. This arrangement would be similar to DOE and FERC sharing authority regarding LNG exports. At present, EPA already is part of the environmental review process for purposes of NGA Section 7 mandate. This simply would be elevating status—but solely for purpose of upstream and downstream impact.¹³⁷ The problem lies in a fundamental conflict of interest in the mission of FERC and goals of NGA versus regulating upstream and downstream impact.¹³⁸ Therefore, upstream and downstream impact analysis should be undertaken jointly by FERC and EPA, an agency beyond FERC's control, with EPA designated as lead—solving the dilemma.

This arrangement would be closer to the original intent of NEPA: "EPA is the day-to-day watchdog of NEPA compliance, responsible for reviewing and commenting upon all federal actions which have significant environmental impact CEQ, in turn, is assigned the task of reviewing problem cases which EPA brings to its attention."¹³⁹ Section 309 of the Clean Air Act requires EPA to review the EIS of other federal agencies and to comment on the adequacy and the acceptability of the environmental impacts of the proposed action.¹⁴⁰ Yet under the current structure, EPA is powerless beyond that.¹⁴¹ For example, in June 2016 EPA said FERC's

136. See *Climate Science Special Report, U.S. Global Change Research Program*, Nov. 3, 2017, <https://science2017.globalchange.gov/>.

137. See *Sierra Club v. FERC (Sabal Trail)*, 867 F.3d 1357, 1364 (D.C. Cir. 2017).

138. *About FERC*, FED. ENERGY REG. COMM'N (Sept 26, 2018), <https://www.ferc.gov/about/about.asp>; see also *Natural Gas Act*, 15 U.S.C. § 717(n)(b)(1) (2011).

139. See *William Andreen, In Pursuit of NEPA's Promise: The Role of Executive Oversight in the Implementation of Environmental Policy*, 64 *Ind. L.J.* 205, 231 (1989).

140. *What is the National Environmental Policy Act?*, EPA, <https://www.epa.gov/nepa/what-national-environmental-policy-act>.

141. Hannah Northey, *EPA Blasts FERC Reviews, Seeks 'Definitive Resolution'*, E&E NEWS, (Oct. 13, 2016), <https://www.eenews.net/stories/1060044234>.

review of the Leach Xpress project was “insufficient.” The EPA suggested further analysis of alternative routes, ways to protect forested lands and aquatic resources, and environmental justice as well as for the commission to conduct and include an analysis of greenhouse gases and climate change.¹⁴² However, these recommendations were ignored by FERC, leading to a letter containing strong criticism and reiteration of recommendations by the EPA.¹⁴³ This letter was received, but FERC largely disregarded the letter.

EPA already has a lot of authority over fracking (e.g. Clean Water Act), has done a lot of work on the subject, and has a lot of knowledge in this matter, so transition should not be difficult.¹⁴⁴ EPA acting alone, would not do here because the goal is to have both agencies exercising their authority equally on this subject for purposes of NEPA; EPA on the upstream and downstream impact, FERC on the project itself (pipeline or LNG terminal).¹⁴⁵ This review is essentially what FERC already performs. Please note that Congress would have to enact this change. The NGA was amended by the Energy Policy Act of 2005, which provided that FERC shall act as the lead agency for purposes of complying with NEPA for purposes of conducting environmental, safety, and security reviews of LNG plants and related pipeline facilities, including siting natural gas pipelines and LNG terminals.¹⁴⁶ What Congress gives an agency, it can take away (or in this case, redistribute).

C. A Win-Win-Win for the FERC, the Public, and the EPA

Congress and FERC have been at a place of transition before. For example, the passage of NGA in 1938 was meant to fill a gap in how natural gas regulation was being unsuccessfully regulated on a state-level patchwork, without federal supervision.¹⁴⁷ Another example of adjusting to such change in the past was the creation of DOE and FERC (then known as the Federal Power Commission) in 1977 as response to the 1973 oil crisis.¹⁴⁸ Necessity is the mother of invention.

142. *Id.*

143. Letter from Kenneth Westlake, EPA, to Kimberly Bose, FERC, (Oct. 11, 2016), RE: FINAL ENVTL. IMPACT STATEMENT (FEIS) FOR COLUMBIA GAS TRANSMISSION, LLC – LEACH XPRESS PROJECT, AND COLUMBIA GULF TRANSMISSION, LLC – RAYNE XPRESS EXPANSION PROJECT, (FERC Docket Nos. CP15-514-000 and CP15-539-000 Respectively) (CEQ No. 20160203).

144. Mike Soraghan, *The fracking 'loophole' that just keeps growing*, E&E NEWS (Aug. 15, 2015), <https://www.eenews.net/stories/1060023558>.

145. *See id.*

146. *See also* Natural Gas Act, 15 U.S.C. § 717(n).

147. *The History of Regulation*, NATURALGAS.ORG, <http://naturalgas.org/regulation/history/> (last visited May 30, 2019).

148. *Id.*

The delegation of upstream and downstream impact analysis would be good for FERC, the public, and the EPA: a win-win-win. FERC Commissioners and staff are known to undertake significant efforts to prepare detailed reports, such as hearings, solicitation of comments, etc. For the Sabal Trail Project, FERC painstakingly assembled a 477-page EIS developing “a complete record on potential Project impacts to all impacted resource categories: geology; water resources; fisheries and wetlands; vegetation and wildlife; land use and recreation; socioeconomics; cultural resources; air quality; noise; reliability and safety; and cumulative impacts.”¹⁴⁹ This was an outstanding and detailed report, but yet was challenged—with partial success—because it failed to address upstream and downstream impact.

FERC has very competent Commissioners and staff, but environmental review beyond the level at present for upstream/downstream is neither appropriate nor necessary as per NEPA—as affirmed by the courts (especially in *Sabal Trail*). Although the D.C. Circuit will ultimately have to decide following *New Market*, it appears that FERC is fully in compliance with the law and taking action that is appropriate and in the public interest.

This recommended change doesn’t mean that FERC would no longer have to do any NEPA-related work. The direct and indirect environmental impacts on pipelines and LNG terminals would have to still be conducted, that is everything minus upstream/downstream impact. But, the lead for upstream and downstream impacts would fall on EPA. To measure upstream and downstream impact FERC already has experience calculating GHG using EPA’s GHG Equivalencies Calculator-Calculations and References. Allowing EPA to use its own methodology to conduct a broader, in-depth, and cumulative analysis (i.e. combine with different projects) would give the U.S. government a broader picture to make a decision, which would benefit the American public.

With EPA taking the lead in this aspect of reviews, FERC can avoid the massive amount of litigation and legal challenges that fill its dockets and keep its very skilled Office of General Counsel busy. The appellate review process for hearings is proof of the problem of overcrowded dockets.¹⁵⁰ Although the federal Natural Gas Act requires the agency to issue a decision on appeals within 30 days, FERC can extend the deadline indefinitely by

149. Brief of Petitioner, *supra* note 6, at 6.

150. Motion to Dismiss for Lack of Jurisdiction, *Weymouth v. FERC*, Nos. 17-1135, 17-1139, U.S. App. (D.C. Cir. 2017), <https://www.ferc.gov/legal/court-cases/briefs/2017/DC17-1135etalTownofWeymouthMassMotiontoDismiss.pdf>.

issuing what is called a “tolling order.”¹⁵¹ Often, tolling orders are issued at 30 days, granting the agency unlimited time.¹⁵² In some recent cases, FERC issued its decision after the pipes were already in the ground with the gas flowing. Therefore, by the time a challenge makes its way through the court system, the pipeline is operational or close to being operational and will need to be decommissioned, making the point moot or incredibly expensive to correct. This also creates uncertainty for pipeline companies, and was a concern felt by the Sabal Trail and Millennium Pipeline.¹⁵³ Breaking down the division of labor in a predictable manner—like how FERC and DOE divide up responsibility for LNG exports—would make the system more predictable and business-friendly.¹⁵⁴

Finally, a national solution backed by both FERC and the EPA would address public fear of fracking and demolish the rationale behind states banning fracking, which primarily rests on environmental concerns. EPA, with its mission to protect the environment, is well-suited for the task of assessing upstream and downstream impacts. EPA is well-trusted by the public—and environmental groups—in this regard.¹⁵⁵ Having an agency separate and independent from FERC to make this assessment would help build a stronger consensus on the solution.

CONCLUSION

FERC’s mission is to provide a steady source of energy to consumers. The agency additionally has a responsibility under NEPA to evaluate the direct and indirect environmental impacts of natural gas pipelines and LNG terminals. The agency, even before *Sabal Trail*, was in the process of starting to consider indirect downstream impacts. FERC’s actions since the D.C. Circuit Court’s decision—such as the Millennium Pipeline—placed FERC on solid ground. Changes introduced with *New Market* provide some uncertainty, which the D.C. Circuit will have to resolve, but even if the challengers win the victory will be limited: quantifying the downstream environmental effects of GHG emissions from pipeline projects, not actually

151. Susan Phillips, *Lawyers Say FERC Hinders Appeals on Pipeline Projects*, STATE IMPACT PENN., Oct. 20, 2015 at 5, <https://stateimpact.npr.org/pennsylvania/2015/10/20/lawyers-say-ferc-hinders-appeals-on-pipeline-projects/>.

152. Morgan Bettex, *FERC Orders Unlimited Time to Rethink LNG Terminal*, LAW 360, Oct. 21, 2008, <https://www.law360.com/articles/73660/ferc-orders-unlimited-time-to-rethink-lng-terminal>.

153. *Id.*

154. *Liquefied Natural Gas (LNG)*, DEP’T OF ENERGY, <https://www.energy.gov/fe/science-innovation/oil-gas/liquefied-natural-gas> (last visited May 30, 2019).

155. Pew Research Center, *Beyond Distrust: How Americans View Their Government* 58–68 (Nov. 23, 2015), <http://www.pewresearch.org/wp-content/uploads/sites/4/2015/11/11-23-2015-Governance-release.pdf>

addressing the impact. As for indirect effects associated with upstream commercial natural gas activity (i.e. fracking), FERC currently—rightly—does not consider this part of its required assessment under NEPA. FERC started “to provide the public additional information,” based on its “order issuing certificate” from November 2017 for the Millennium Pipeline and then stopped doing so, but even when it did provide such information, the data was minimal. As argued in this paper, the right way to address the legitimate concern of upstream and downstream impacts for pipelines and LNG terminals for the purposes of NEPA is not just FERC alone, but jointly with EPA. This collaboration would be a victory for both agencies as well as the American people they serve, allowing all of us to continue to thrive from our great shale gas revolution.