

**BEFORE THE UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

Adelphia Gateway, LLC)	Docket Nos. CP18-46-000
Adelphia Gateway Project)	CP18-46-001

**PETITION FOR REHEARING OF DELAWARE RIVERKEEPER NETWORK
AND THE DELAWARE RIVERKEEPER OF ORDER ISSUING CERTIFICATE
FOR THE ADELPHIA GATEWAY PROJECT AND REQUEST FOR STAY OF
CERTIFICATE**

Pursuant to section 19(a) of the Natural Gas Act (“NGA”), 15 U.S.C. § 717r(a) and Rule 713 of the Federal Regulatory Energy Commission’s (“FERC”, “Commission”) Rules of Practice and Procedure, 18 C.F.R. § 385.713, Delaware Riverkeeper Network and the Delaware Riverkeeper (collectively, “DRN”) respectfully request rehearing of the Commission’s “Order Issuing Certificates,” issued December 20, 2019 in the above-captioned proceeding (“Certificate Order”).¹ The Order approved Adelphia Gateway, LLC’s (“Adelphia”) proposed Adelphia Gateway Project (“AGP”).

DRN timely intervened in Docket No. CP18-46-000 via motion for leave to intervene filed with the Commission on January 16, 2018. DRN timely intervened in Docket No. CP18-46-001 via motion for leave to intervene filed with the Commission on September 28, 2018. Neither motion was opposed, and thus DRN’s motions to intervene were granted by operation of 18 C.F.R. § 385.214. DRN is thus a party within the meaning of 18 C.F.R. § 385.214(c) with standing to seek rehearing.² DRN also participated extensively throughout the National Environmental Policy Act (“NEPA”) process regarding the AGP, including commenting on the Environmental Assessment (“EA”). Further, this request for rehearing is timely filed within 30 days of the

¹ See Adelphia Gateway, LLC, 169 FERC ¶ 61,220 (Dec. 20, 2019).

² See 15 U.S.C. § 717r(a); 18 C.F.R. § 385.713(b).

Commission's December 20, 2019 Certificate Order.³

I. INTRODUCTION

The Adelpia Gateway Project is yet another pipeline project in a long line of natural gas infrastructure expansions within the last several years that have adversely impacted communities, watersheds, and quality of life across the Commonwealth of Pennsylvania. Despite repeated arguments from DRN and others, FERC continues to take a narrow view – despite its legal obligations and authority to the contrary – of whether these projects are even needed, of the cumulative impacts of project after project in the same geographic area, of the harms inflicted on landowners, businesses, and the natural resources in their path, and of the ramifications of this continued fossil fuel infrastructure expansion at a time when we have very little time left to prevent irreversible climate change impacts.

FERC's approval of the Adelpia Gateway Project unfortunately continues this trend, doing so with a decision that is internally contradictory, fails to reach a decision on the significance of one of the most pressing issues in our existence (i.e. climate change), and then states that in any event, greenhouse gas (“GHG”) emissions and climate change impacts from the Adelpia Gateway Project are not significant at all. For instance, the Adelpia Gateway Project decision will rely on an argument (e.g. there is need for the Adelpia Gateway Project because of the end uses to be served, as reflected by precedent agreements only), and then turn around and take the opposite position in order to, for instance, claim that FERC does not know what most of the Adelpia Gateway Project's

³ The 30th day following FERC's grant of the Certificate Order fell on Sunday, and the following Monday (January 20, 2020) was a legal public holiday under 5 U.S.C. § 6103(a). Therefore, DRN has submitted its request on the next business day, or Tuesday, January 21, 2020. 18 C.F.R. § 385.2007(a)(2).

downstream uses are, so it cannot address GHG emissions and climate change impacts. Indeed, it seems as if, as the courts have gotten clearer and clearer about FERC's NEPA and NGA obligations particularly as to climate change, GHG emissions, and exports, FERC has sought to backtrack on making clear decisions on these issues and on obtaining requisite information (despite its obligation to do so under NEPA). Indeed, despite requests in the record for clearer information from Adelphia Gateway, LLC on end uses as late as September 2019, FERC did not seek out such information, and ultimately, said it did not have enough specifics to determine downstream GHG emissions and climate change impacts (contrary to the record).

These patterns run throughout FERC's approval of the Adelphia Gateway Project. FERC's Adelphia Gateway Project approval demonstrates a lack of reasoned decisionmaking, reflects arbitrary and capricious determinations as to environmental and economic impacts and the need for the Adelphia Gateway Project, fails to properly balance the relevant interests as required under the NGA, and otherwise violates NEPA and the NGA. Decisions like FERC's approval of the Adelphia Gateway Project have major ramifications for those in the path of natural gas infrastructure projects. These people and communities deserve to have their interests held in at least the same importance as the companies seeking FERC approval.

II. CONCISE STATEMENT OF ERRORS AND STATEMENT OF ISSUES

A. Concise Statement of Errors

FERC Violated the NGA and NEPA Because the Project's Assertion of Need Is Contradicted By The Preponderance Of The Evidence, and Is Largely A Statement Of Industry Desires Rather Than Public Need

FERC Violated NEPA and the NGA by Excluding "Cumulative" and "Similar Actions" That, when Considered with the AGP, Would Have Shown

Cumulatively Significant Impacts on the Environment and That the AGP Is Contrary to the Public Interest

FERC Violated NGA and NEPA by Ignoring or Improperly Discounting and Minimizing Impacts Required to be Addressed by NEPA and as Part of FERC's NGA Balancing Inquiry, Thus Substantially Tilting Its Balancing Inquiry in Favor of Approval

FERC's Alternatives Analysis is Fundamentally Flawed

FERC's Decision Elevates Alleged Need, as Demonstrated Solely by Precedent Agreements, above All Other Costs Associated with the AGP, Which it Ignores or Improperly Minimizes, in Violation of the NGA and NEPA

The Environmental Assessment Prepared For the AGP is Woefully Inadequate and the AGP, Properly Considered Will Cause a Substantial Impact on the Environment and Requires an Environmental Impact Statement

B. Statement of Issues

The section numbering in Section IV. correspond to the errors listed in Part II.A., above, and set forth DRN's position, including supporting authority, with respect to the identified issues. DRN submitted substantial comments to FERC in these proceedings, and hereby incorporates by reference in support of this request for rehearing all arguments, evidence, and reasoning contained in DRN's comments submitted to FERC, and the letters submitted by other parties to FERC.

III. BACKGROUND

A. Project Description

Adelphia Gateway, LLC ("Adelphia") is a new company created for the purposes of the Adelphia Gateway Project ("AGP", "Project").⁴ Adelphia is a wholly-owned subsidiary of NJR Pipeline Company, a subsidiary of New Jersey Resources

⁴ Abbreviated Application Of Adelphia Gateway, LLC For Certificates Of Public Convenience And Necessity Authorizing Acquisition, Construction, And Operation Of Certain Pipeline Facilities And For Related Authorizations, Docket No. CP18-46-000 ("Adelphia CP18-46-000 Application"), pp.3, 6.

Corporation.⁵ NJR Pipeline Company (and, in turn, New Jersey Resources Corporation), also have a 20 percent stake in the PennEast Pipeline Project (“PennEast”).⁶

Adelphia proposes to purchase and convert an existing 84.2 mile, 18-inch-diameter mainline running from Marcus Hook, PA to Lower Mount Bethel Township, PA (“Existing System”) owned by Interstate Energy Company, LLC (“IEC”) and to construct two new 16-inch-diameter pipeline laterals. In addition, the Project will also include construction of compressor stations and other facilities in both Delaware and Pennsylvania.

The Existing System includes:

- One mainline of 84.2 miles of 18-inch diameter pipeline built in the 1970s referred to as Zone North A and Zone South with the existing Quakertown meter station (Texas Eastern interconnect) at MP 50 in Bucks County, PA as the separation point:⁷
 - (1) Zone North A is the northern 34.5 mile-long section of the 18-inch mainline which begins in Bucks County, PA and ends in Lower Mount Bethel Township, Northampton County, PA at a Transco system interconnect. Zone North A has been transporting natural gas exclusively since 2014.
 - (2) Zone South is the southern 49.4 mile-long segment running from the Quakertown Texas Eastern (“TETCO”) interconnect in Bucks County, PA to Marcus Hook, PA. This segment has been out of service since 2014 and was last used to transport oil.
- Zone North B is 4.4 miles of existing 20-inch-diameter pipeline constructed in 2002 and used to transfer oil and natural gas from the most northern point of Zone North A (Transco interconnect) to Martins Creek Station.

⁵ Adelphia CP18-46-000 Application, p.9; see also id. at Exhibits A, D; Amendment To The Abbreviated Application Of Adelphia Gateway, LLC for Certificates Of Public Convenience And Necessity Authorizing Acquisition, Construction, And Operation Of Certain Pipeline Facilities And For Related Authorizations, CP18-46-001 (“Adelphia Amendment Application”), pp. 3-4, 11-12; Certificate Order, ¶ 3.

⁶ PennEast Pipeline Company, LLC, 162 FERC ¶ 61,053 (2018) (¶ 3 n.3.)

⁷ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001 (“AGP EA”) Accession No. 2019104-3005 at 3.

- Four meter stations along Zone North A at mileposts 50, 68, 80, and 84.

The Zone North A and Zone North B facilities currently transport natural gas to Lower Mount Bethel Energy, LLC, a 555 megawatt combined-cycle plant, and Martins Creek, an approximately 1,708-megawatt conventional steam boiler plant, both of which generate electricity for the region (“Existing Shippers”).⁸ Adelpia has stated that it plans to continue service to these Existing Shippers. Adelpia also plans to “flow on a firm basis 75,000 Dth/d of gas from Zone North A into Zone South.”⁹

The existing Zone South facilities will have their flow reversed from south-to-north to north-to-south and be converted to carry natural gas instead of oil. Zone South will offer natural gas to the “markets near Philadelphia and surrounding areas that need additional natural gas for end-use consumption.”¹⁰ This conversion of the Existing System will require construction of new appurtenant facilities, which include:

- one new 5,625 horsepower (hp) compressor station in Delaware County, Pennsylvania (Marcus Hook Compressor Station);
- one new 5,625 hp compressor station in Bucks County, Pennsylvania (Quakertown Compressor Station);
- two 16-inch-diameter laterals (Parkway (0.3 miles) and Tilghman (4.4 miles))
- five meter and regulator stations (Quakertown, Delmarva, Monroe, Transco, and Tilghman);
- seven blowdown assembly valves (Chester Creek, Paoli Pike, French Creek, Cromby, Schuylkill River, Perkiomen Creek, and East Perkiomen Creek);

⁸ Adelpia Gateway Project Amendment to Application, Docket No. CP18-46-001, Accession No. 20180831-5215 at 5-6.

⁹ Adelpia Gateway Project Amendment to Application, Docket No. CP18-46-001, Accession No. 20180831-5215 at 6.

¹⁰ Adelpia Gateway Project Amendment to Application, Docket No. CP18-46-001, Accession No. 20180831-5215 at 6.

- two mainline valves;
- two tap valves (Quakertown and Skippack); and
- four pig launcher and receiver facilities.

Adelphia's original application proposed that the Project transport 775,000 Dth/d of natural gas.¹¹ On August 31, 2018, Adelphia filed an amendment to its application under Docket No. CP18-46-001 seeking to increase the design capacity of the Zone North A segment of the Project, from 175,000 dekatherms per day (Dth/d) to 250,000 Dth/d. Adelphia had determined, after consultations with the design engineers, that it can flow an extra 75,000 Dth/d of natural gas from Zone North A into Zone South. In the amendment to its application, Adelphia only sought "Commission authorization to make necessary design and rate modifications."¹² In total, the Project proposes to transport 850,000 Dth/d (850 million cubic feet per day) of natural gas. This is because the Project would result in the transport of an additional 250,000 Dth/d of natural gas in Zone South and 250,000 Dth/d along the Zone North A end and no change to the existing 350,000 Dth/d capacity of the Zone North B.

B. Geographic Setting and Ongoing Pipeline Buildout

The AGP affects an area of Southeastern Pennsylvania that has been under heavy assault from new and proposed pipelines and expansions and conversions of existing pipelines. Within the last five years alone, no less than *eight (8)* pipeline projects have been proposed impacting Chester County alone.¹³

¹¹ Estimation based off of numbers provided in AGP EA.

¹² Adelphia Gateway Project Amendment to Application, Docket No. CP18-46-001, Accession No. 20180831-5215 at 1.

¹³ Chester County Planning Commission, Pipeline Information Center; <https://www.chescoplanning.org/pic/ProjectsAll.cfm>

The AGP intersects the Mariner East 2 project in Chester County, Pennsylvania. It will interconnect with the Transco Leidy system, Columbia Gas transmission system, and Texas Eastern¹⁴ (“TETCO”) transmission system, both through new and existing facilities.

The AGP and the PennEast Pipeline Project – both connected with NJR – intersect in the Zone North A section of the AGP and would run within less than several miles of each other along stretches of the AGP Zone North A line through Northampton County, Pennsylvania.¹⁵ If built, both the AGP and PennEast would be interconnected via an approximately several mile portion of Columbia Transmission pipeline in Northampton County.¹⁶

IV. ARGUMENT

A. **FERC Violated the NGA and NEPA Because the Project’s Assertion of Need Is Contradicted By The Preponderance Of The Evidence, and Is Largely A Statement Of Industry Desires Rather Than Public Need**

NEPA requires that an environmental assessment “[s]hall include brief discussion of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.”¹⁷

Further, Section 7 of the NGA, 15 U.S.C. § 717f, and FERC’s Statement of Policy for Certification of New Interstate Natural Gas Pipeline Facilities (“Certificate Policy Statement”)¹⁸, require the Commission to determine whether the Project facilities are “in

¹⁴ Formerly part of Spectra Energy, now part of Enbridge, which acquired Spectra Energy. Enbridge also has a stake in the PennEast Pipeline project.

¹⁵ Certificate Order, ¶ 232; See also, e.g., Comments of Arianne Elinich, February 27, 2019.

¹⁶ January 11, 2018 Adelphia Application, Exhibit F; PennEast DEIS, p.2-2; Appendix B, Drwg. No. 024-03-00-001.

¹⁷ 40 CFR 1508.9(b).

¹⁸ 88 FERC ¶ 61,227 (1999), clarified, 90 FERC ¶ 61,128 (2000), further clarified, 92 FERC ¶ 61,094

the public interest” and whether the proposed pipeline is “required by the public convenience and necessity.” Specifically, the Certificate Policy requires the Commission to balance the alleged need for a project against the adverse impacts on affected landowners and the surrounding communities.¹⁹ The need statement drives the environmental analysis, the analysis of the AGP’s other impacts, the options for alternatives, and ultimately, FERC’s decision whether to approve the project.

FERC violated the NGA and NEPA by fully adopting Adelphia’s assertion of need again in the Certificate Order, as it did in the EA, without examination or scrutiny, in the face of significant evidence in the record that contradicts Adelphia’s assertions and the fact that Adelphia’s claim of “need” are merely and largely a statement of industry need and desires rather than public need.²⁰ FERC ignores the overwhelming evidence presented to it, including of pipeline overbuilding and the harms from eminent domain, dismissing such evidence as “no[t] compelling”,²¹ or that it has no role in whether a company has eminent domain authority,²² even though it approves the very certificate that hands the company such authority and the D.C. Circuit has already questioned such reasoning by FERC.²³

As detailed below, FERC’s summary dismissals of the evidence and reliance on Adelphia’s limited and in many cases, unsubstantiated, bases for need do not constitute an adequate explanation of the Project’s “underlying purpose and need” as required by NEPA²⁴ in the Commission’s environmental review. Likewise, Adelphia’s information

(2000).

¹⁹ 88 FERC ¶ 61,747.

²⁰ Certificate Order, ¶¶ 33, 34, 37.

²¹ Certificate Order, ¶ 37.

²² Certificate Order, ¶ 45.

²³ City of Oberlin, Ohio v. FERC, 937 F.3d 599, 607 (D.C. Cir. 2019).

²⁴ 40 CFR 1502.13.

fails to provide an adequate basis of accurate information for FERC to conduct its public interest determination under the NGA.

The Project's statement of need does not assert an actual need for the project:

Adelphia states that the purpose of its proposed Project is to provide a clean, safe, and low-cost supply of natural gas pipeline capacity to the Greater Philadelphia industrial region with potential to serve additional markets in the Northeast while continuing to provide uninterrupted service to two existing power plants at the northern end of the Existing System, the Lower Mount Bethel Power Plant, and the Martins Creek Power Plant.²⁵

This does not allow the public or the reviewers to know what the intent, purpose, or rationale for the project is. For example, Adelphia has not identified underserved markets or discussed foreseeable issues in the current service offered. Further, Adelphia has not identified all end uses of the gas, and thus it could go to Philadelphia or somewhere else in the Northeast. While the Lower Mount Bethel Power Plant and Martins Creek Power Plant already receive service at the same capacity proposed by Adelphia, they do not provide a "need" for the type of expansion activity that AGP proposes, particularly in Zone South. Similarly, "provid[ing]" a "supply of natural gas pipeline capacity to the Greater Philadelphia industrial region with potential to serve additional markets in the Northeast" does not imply an actual public need for the project, but only an industry desire.

The need statement is contradicted by evidence of excessive natural gas and already-served markets. According to expert reports and analysis, there is no need for the gas Adelphia would carry to the Greater Philadelphia region. Pennsylvania is fully

²⁵ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 2.

supplied. As noted in the expert report DRN submitted in the record from Arthur Berman, “Pennsylvania has no unfulfilled demand.”²⁶ And to the degree that Adelphia wants to assert it is delivering the gas to other unknown, unidentified states in the Northeast markets—in order to substantiate this claim and subject it to the public process that is required by NEPA, more detail is required that actually identifies the states and the users.

Lack of “need” for gas in Pennsylvania is also asserted by a Labyrinth Consulting reaction to a recently-released report advocating for more pipelines for similar goals as Adelphia – i.e., to fulfill an asserted need for gas and to reduce prices in the region. In this responsive analysis, the assertion of a need for the gas was proven false with facts:

First, Pennsylvania exported 3.23 Bcfd to other regions of the country in 2015 an amount almost equal to its 2014 consumption of 3.3 Bcfd. There is plenty of existing pipeline capacity to meet Pennsylvania’s demand and enough left over to send out of the state.²⁷

An additional expert report generated by Skipping Stone on the PennEast Pipeline Project similarly finds a lack of need for the capacity in the region of the AGP. According to Skipping Stone, similar to Labyrinth Consulting:

Local gas distribution companies in the Eastern Pennsylvania and New Jersey market have more than enough firm capacity to meet the needs of customers during peak winter periods. Our analysis shows there is currently *49.9% more capacity than needed to meet even the harsh winter experienced in 2013.*²⁸

In its application materials, Adelphia states that the AGP is designed to provide

²⁶ *Professional Opinion of Proposed PennEast Pipeline Project*, Arthur E. Berman, Petroleum Geologist, Labyrinth Consulting Services, Inc., February 26, 2015.

²⁷ Id.

²⁸ *Analysis of Public Benefit Regarding PennEast*, Skipping Stone, March 9, 2016.

“shippers access to diverse and abundant natural gas supplies through existing interconnects with three interstate pipelines and access to demand centers and end-users near the greater Philadelphia area and the Marcus Hook Industrial Complex,” a “state-of-the-art terminalling and natural gas liquids storage facility.”²⁹

Given that Adelphia failed to demonstrate any need for the gas in the Greater Philadelphia area or other Northeast markets and that natural gas can sell at a significantly higher price overseas as compared to domestically, it is both reasonable and foreseeable that at least some of the Adelphia-transported gas will be transported to Marcus Hook for export.³⁰

However, FERC dismisses even the export argument, saying, *inter alia*, that Marcus Hook does not handle liquefied natural gas (“LNG”) and that “no jurisdictional LNG export terminal interconnects with or is in the vicinity of the project.”³¹ The problem with this statement is threefold. First, Adelphia’s *own application* advertises its connection to Marcus Hook.³² Second, what FERC considers “jurisdictional” under internal policy regarding LNG export/import terminals is sharply limited from what it *actually* has jurisdiction over under the Natural Gas Act and its own regulations.³³ Third, there is an LNG export terminal presently under construction several miles upriver in Gibbstown.

Beyond that, FERC takes the position that, even if there were a jurisdictional

²⁹ See Adelphia Gateway LLC’s Abbreviated Application of Adelphia Gateway, LLC for Certificates of Public Convenience and Necessity Authorizing Acquisition, Construction, and Operation of Certain Pipeline Facilities and for Related Authorizations. January 11, 2018.

³⁰ For more discussion on end uses, see also Section IV.C.5.b. and IV.C.6.c.-e.

³¹ Certificate Order, ¶ 39 & n. 68.

³² Adelphia CP18-46-000 Application, p.5.

³³ 15 U.S.C. § 717a(11), 18 C.F.R. § 153.2(d), 18 C.F.R. § 157.21(a); contrast Shell U.S. Gas & Power, LLC, 148 FERC ¶ 61163 (Sept. 4, 2014).

LNG export terminal involved here, it *still* would not matter as part of FERC’s calculus because the FERC does not approve the importation or exportation of natural gas.³⁴ While FERC cites Sierra Club v. FERC (“Freeport”)³⁵ in support of its position, that case does not address the Commission’s obligations *under the Natural Gas Act*. Further, the case is inapposite, which the D.C. Circuit openly noted in Sierra Club v. FERC (“Sabal Trail”).³⁶ Sabal Trail made clear that, when acting in the NGA Section 7 context (in contrast to the narrow context of licensure of actual export facilities), “FERC is not so limited” in what it could consider as part of its obligations under NEPA.³⁷ “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.*”³⁸ Further, the D.C. Circuit Court of Appeals recently remanded a matter to FERC because it failed to appropriately address the public need and benefit as to natural gas exports.³⁹ Notably, despite commenters requesting that FERC seek updated information on whether any AGP gas would be exported,⁴⁰ FERC failed to do so, contrary to Birckhead v. FERC. Instead, FERC claimed that the record lacked evidence of gas exportation, but in doing so, appears to have relied on representations from Adelphia from earlier in the NEPA process in which

³⁴ Certificate Order, ¶ 39 (“Further, even if there was evidence that some of the gas would be exported, the Commission does not have jurisdiction over the exportation or importation of the natural gas commodity. Such jurisdiction resides with the Secretary of Energy, who must act on any applications for natural gas export or import authority.”)

³⁵ 827 F.3d 36 (D.C. Cir. 2016). Certificate Order, ¶ 39.

³⁶ 867 F.3d 1357, 1373 (D.C. Cir. 2017)

³⁷ Id.

³⁸ Id. (referencing Freeport, 827 F.3d at 47 (emph. added).

³⁹ City of Oberlin, Ohio v. FERC, 937 F.3d 599 (D.C. Cir. 2019).

⁴⁰ Pipeline Safety Coalition, Sept. 11, 2019 Letter requesting that FERC obtain and make public “[t]he proposed Adelphia Project sites (ports, facilities, geographic locations) of delivery of fuels specific to domestic and export use.”

Adelphia disclaimed knowledge of the “ultimate end-use of gas for the shipper . . . for the Zone South region.”⁴¹ This is a significant concern because Adelphia did disclose that the shipper is receiving gas at Adelphia’s Transco interconnect. This provides a means to ship the gas to the Cove Point export facility in Maryland. However, despite commenters’ requests for updated information, FERC chose to keep itself in the dark to avoid having to potentially confront the export issue as directed by Oberlin, in violation of NEPA.⁴²

FERC failed to thoroughly assess Adelphia’s claims regarding the need for the project in its balancing of the likely public benefit against the adverse impacts associated with the project. The claim that this pipeline is “needed” in order to provide “low-cost” gas to Pennsylvania customers is not a “need” and cannot be an expected outcome of this project.

To the contrary, construction of the AGP may contribute to an *increase* in gas prices for many in Adelphia’s identified service areas, contrary to the public interest under the NGA.

Natural gas prices are lowest in the regions in which gas is produced. For many years, the lowest natural gas prices in the East were found at Henry Hub, located near the Gulf of Mexico where much of the natural gas in the United States was produced. With the increase in shale gas production, however, the lowest natural gas prices in the country are now found at trading points in and around the Marcellus and Utica shale plays in Pennsylvania, West Virginia, and Ohio.

Availability of pipeline infrastructure to send natural gas to other regions has a

⁴¹ Certificate Order, ¶ 39; Adelphia July 27, 2018 Response to FERC Staff July 12, 2018 Data Request, p.2.

⁴² Birckhead v. FERC, 925 F.3d 510, 520 (D.C. Cir. 2019).

direct impact on the price of natural gas in those regions—greater gas take-away capacity allows more natural gas to be produced, and an increase in supply will lead to a decline in price in those regions that receive additional gas. However, improved access to higher priced markets via additional pipeline infrastructure will *raise* the price of natural gas in the producing region, which also will increase production – in this case the producing region is Pennsylvania; therefore it is not a given that prices would in fact be low or reduced.

The implication that increased pipeline capacity will *necessarily* result in reduced gas prices is challenged by other experts considering the issue when responding to claims that pipeline capacity is needed to reduce prices for Eastern Pennsylvania end users:

The correlation between volume of gas production and the price of gas for power generation is poor because there are other factors besides production volume that affect the price of gas. Still it seems unlikely that more gas production in Pennsylvania would result in a cost reduction since production already exceeds consumption by almost 100%.⁴³

A second report issued by Arthur Berman further clarifies that:⁴⁴

“There is no evidence...that more gas supply [would] result[] in lower costs to consumers”

“All leading companies in the Marcellus and Utica plays reported net losses for the second quarter of 2015”

“U.S. gas production is declining and shale gas output is down almost 2.5 Bcf per day”

1. The Lack of Established Need and Consequences of FERC Certification Demanded That FERC Take a Harder Look at Whether the AGP is Truly Needed

⁴³ Labyrinth Consulting responding to “A Pipeline For Growth Report”

⁴⁴ *Opinion on the PennEast Pipeline*, Arthur Berman, Petroleum Geologist, Labyrinth Consulting Services, Inc., September 11, 2016.

It is an abuse of process and power, and a violation of the NGA and NEPA for FERC to allow Adelphia's self-serving claims to fulfill the requirement of "need." While FERC concludes its inadequate Purpose and Need section of the EA by stating that "The Commission does not direct the development of the gas industry's infrastructure regionally or on a project-by-project basis, or redefine an applicant's stated purpose," this does not excuse FERC from independently examining the company's claims of "need" in order to accurately assess the project's underlying purpose and need in its environmental review, as required by NEPA. The EA's statement of "need" fails to provide an adequate basis of accurate information to conduct its public interest determination and fairly balance the alleged need for the project against the adverse impacts, as required by the NGA and outlined in the Certificate Policy Statement.

FERC has plenty of guidance to ensure it adequately assesses a pipeline company's claim of need for a project as required by NEPA and the NGA. As Commissioner Glick explains in his dissent of the Spire STL Pipeline LLC's certificate order:

The Commission's Certificate Policy Statement contemplates a range of additional indicia of need including, but not limited to, "demand projections, potential cost savings to consumers, or comparison of projected demand with the amount of capacity currently serving the market." This evidence would permit the Commission to make an independent assessment of the need for the project⁴⁵

Commissioner LaFleur stated in her dissent of the Spire STL Pipeline LLC, that "[i]n cases where adverse effects are present, as is the case here, the amount of evidence

⁴⁵ Commissioner Richard Glick, Dissent on Spire STL Pipeline LLC, 164 FERC ¶ 61,085, Docket no. CP17-40-000 and CP17-40-0001, 2018.8.3.

necessary to establish need increases.”⁴⁶ As demonstrated in this rehearing request and through the comments and other evidence in the record, the AGP would clearly impose adverse effects on the public and, therefore, FERC must thoroughly assess Adelphia’s claims of need, including considering expert reports, evidence cited in this rehearing and included in DRN’s comments, and other evidence on the record.

FERC’s past review of projects has not considered this evidence and has arbitrarily ignored evidence put forth by other groups that shows pipeline infrastructure is in fact not needed.

But the Commission does not explain why the additional evidence in support of the Project is meaningful and the evidence against it is not. Instead, the Commission selectively points to evidence of expected demand only in instances where it backs the Commission’s conclusions, while summarily rejecting the same type of evidence when it does not support the Project. I oppose this inconsistent and arbitrary application of the Certificate Policy Statement for the purposes of evaluating project need.⁴⁷

FERC has made it clear that it does not “look behind the contracts to determine whether the customer commitments represent genuine growth in market demand” or need.⁴⁸

FERC does this again here. Such an arbitrary review process, when taken to its logical conclusion, leads to absurd results. Indeed, to the extent the contracts are artificially manufactured and do not represent “genuine growth in market demand,” FERC essentially admits that, to the extent any representations to FERC are fraudulent, such representations are sufficient for a decision approving the certificate. Likewise,

⁴⁶ Commissioner Cheryl A. LaFleur, Dissent on Spire STL Pipeline LLC, 164 FERC ¶ 61,085, at p.4 (citations omitted).

⁴⁷ Commissioner Richard Glick, Dissent on NEXUS Gas Transmission, 164 FERC ¶ 61,054, at p.4.

⁴⁸ See also NE Hub Partners, L.P., 90 FERC ¶ 61,142 (2000).

FERC openly disregards the concerns about new pipelines “stealing” customers from existing pipelines, expressed in its Certificate Policy. Indeed, despite NJR’s involvement in both PennEast and the AGP, FERC did not bother to look behind the curtain to determine whether the AGP is actually supported by “new” need, or by entities who are hedging their bets and think that the AGP will come online sooner than PennEast. FERC fails to make a determination on “genuine market growth” and thus its approval is arbitrary and capricious and violates the NGA and NEPA.

Approving construction, expansion, and/or upgrading of a pipeline project is a weighty matter. FERC approval means AGP may gain certain exemptions from state and local laws, and that AGP obtains the power of eminent domain. It allows companies like Adelphia to take private property, as well as publicly preserved parks, forests and natural lands, all so the pipeline company can achieve its independent goal of greater profits. Such practices are unacceptable and subject communities to the threat and reality of pipeline accidents, incidents and explosions (which happen with concerning regularity) without a legitimate need that warrants these property takings and associated harms. Ultimately, it saves industrial entities like AGP money at the expense of landowners and communities in the path of these projects.

Given the significant level of impacts that will be inflicted by the AGP on Pennsylvania and Delaware and beyond (when considering the far-reaching climate change impacts), and that the project will necessarily result in unavoidable and unmitigatable harm to the environment and communities, a lack of demonstration of genuine need for the AGP is a fatal flaw. It is improper for FERC, to presume “need” rather than require the project applicant to affirmatively demonstrate it.

2. FERC’s Failure to Require Adelphia to Demonstrate Genuine Need Exacerbates Pipeline Overbuild

Adelphia’s failure to demonstrate genuine need for the AGP in the face of record evidence to the contrary is exacerbated by the predictions and concerns of experts that the industry is proposing an “overbuild” of pipelines from the Marcellus and Utica shales:⁴⁹

“Speaking to attendees at the 21st Annual LDC Gas Forums Northeast conference in Boston Tuesday, [RBN Energy LLC President Rusty] Braziel said an evaluation of price and production scenarios through 2021 suggests the industry is planning too many pipelines to relieve the region’s current capacity constraints.”

“What we’re really seeing is the tail end of a bubble, and what’s actually happened is that bubble attracted billions of dollars’ worth of infrastructure investment that now has to be worked off,” Braziel said.

As reported by the Institute for Energy Economics and Financial Analysis, pipeline companies have an incentive to overbuild, and no reason to self-moderate or limit their construction.⁵⁰ The failure of FERC to provide any independent review or oversight over self-serving claims of “need” undermines the requirements of the law and the actual needs of the public:

- “...current low natural gas prices in the Marcellus and Utica region are driving a race among natural gas pipeline companies An individual pipeline company *acquires a competitive advantage* if it can build a well-connected pipeline network...; thus, pipeline companies competing to see who can build out the best networks the quickest. This is likely to result in more pipelines being proposed than are actually needed to meet demand in those higher-priced markets.”⁵¹
- “...[T]he regulatory environment created by FERC encourages *pipeline overbuild*. The high returns on equity that pipelines are authorized to earn by FERC and the fact that, in practice, pipelines tend

⁴⁹ *Marcellus/Utica on Pace for Pipeline Overbuild, Says Braziel*, Natural Gas Intelligence, June 8, 2016.

⁵⁰ Institute for Energy Economics and Financial Analysis, *Risks Associated with Natural Gas Pipeline Expansion in Appalachia*, April 2016.

⁵¹ Institute for Energy Economics and Financial Analysis, *Risks Associated with Natural Gas Pipeline Expansion in Appalachia*, April 2016 (emph. added).

to earn even higher returns, mean that the pipeline business is an attractive place to invest capital. And because ... *there is no planning process for natural gas pipeline infrastructure*, there is a high likelihood that more capital will be attracted into pipeline construction than is actually needed.”⁵²

- “The pipeline capacity being proposed exceeds the amount of natural gas likely to be produced from the Marcellus and Utica formations over the lifetime of the pipelines. An October 2014 analysis by Moody’s Investors Service stated that pipelines in various stages of development will transport an additional 27 billion cubic feet per day from the Marcellus and Utica region. This number dwarfs current production from the Marcellus and Utica (approximately 18 billion cubic feet per day).”⁵³

Commissioner LaFleur acknowledged the risk of pipeline overbuild that comes with the Commission’s refusal to ensure demonstrated, genuine need for a project in her dissent of the Spire STL Pipeline LLC’s certificate order:

Ultimately, because need has not been demonstrated, there is a significant risk of overbuilding into a region that cannot support additional pipeline infrastructure. Pipelines are long-lived assets and we should be careful not to authorize infrastructure that is not needed. The Commission has not established need, and has not shown the pipeline’s benefits outweigh its harms. I do not find the proposed project is required by the public convenience and necessity.⁵⁴

In its Certificate Order, the Commission again fails to address its central role in the overbuilding context, effectively saying it cannot predict the future because factors such as natural gas prices, environmental factors, and regulatory environments can change. It claims that it is being asked to pick the best project amongst the batch, which DRN has not asserted. Therefore, FERC ultimately merely relies on what a pipeline company says the need is – the very company with a vested interest in making a profit on

⁵² Id. (emph. added).

⁵³ Id.

⁵⁴ Commissioner Cheryl A. LaFleur, Dissent on Spire STL Pipeline LLC, 164 FERC ¶ 61,085, Docket No. CP17-40-000 and CP17-40-001 LaFleur 2018.08.03, citations omitted.

the Project. Further, the entity here – Adelphia (part of NJR) – has a vested interest in getting *some* pipeline online, whether it’s the AGP, PennEast, or both, given that it is invested also in PennEast. Indeed, NJR stands to profit quite substantially if both AGP and PennEast come online, and it can easily (because the pipelines overlap) interconnect the two on its own. (That said, because both AGP and PennEast would connect to the TCO transmission system, they would already be connected without NJR making any additional effort.) In addition, TETCO’s Greater Philadelphia Expansion Project, which FERC included in the EA,⁵⁵ would impact areas of the AGP ROW⁵⁶ and service some of the same areas that AGP claims to be serving.

Yet, FERC ignores this, blinding itself to the clear trends, what it has approved already, and what it knows is on the horizon. FERC’s reasoning that the future is uncertain is illogical especially when, to find “need,” FERC is relying on contractual agreements *reached based on expectations about the future*. If FERC cannot make reasonable independent projections about need, how can the pipeline company, or even those who signed the contracts? Every pipeline company coming before FERC is relying on projections, as is every company who has signed a contract with the pipeline company. FERC expressly admits this.⁵⁷ Yet FERC has chosen to trust the pipeline company’s and the subscribers’ predictions about the market and economy more than any independent analysis it could have conducted, but did not. This is particularly a concern because this narrow view disregards the costs that captive customers of pipelines may bear when the shale gas boom ends and/or there is an excess of pipeline capacity.

⁵⁵ AGP EA, p.157.

⁵⁶ AGP EA, p. 177 (Figure 5).

⁵⁷ Certificate Order, ¶ 36.

FERC knows what it has approved. It has operated in the pipeline world long enough presumably to have expertise on how pipeline companies, natural gas prices, and other factors operate. Yet, FERC says it is merely going to evaluate each project *in isolation* based, effectively, on what the pipeline company seeking to profit from the operation says the need is (even when that need is amorphous and based on the very kinds of future projections FERC claims it cannot rely on to *prevent* overbuilding). If the world is so uncertain that FERC cannot rely on market conditions, trends, projections, and what it knows about the natural gas market as a regulator to prevent excess pipeline capacity that benefit no one but private companies, then it has no basis approving projects relying on those same market conditions, trends, and projections, as it does in the Certificate Order and has done repeatedly.

3. Adelpia Overbuilds Capacity in its Own Project, Contrary to The Commission’s Policy Statement, Demonstrating Likelihood of Future AGP Expansions And Questionable Present Need

FERC approved the AGP despite the evidence that Adelpia designed the AGP to be capable of capacity additions to its natural gas infrastructure beyond the amount disclosed in its application. In essence, the AGP is “overbuilt” because it is designed to provide excess capacity. FERC’s Policy Statement regarding the Certification of Natural Gas Pipeline Projects states that to “[o]verbuild” an energy project means to “build capacity for which there is not a demonstrated market need.”⁵⁸ Despite FERC’s own policy, and the requirements that there be a “demonstrated market need,” FERC approved the AGP anyway despite the excess capacity evidence.

Adelpia has designed the two new pipeline laterals and associated meter stations,

⁵⁸ 90 FERC ¶ 61,128, at 61,391 (Feb. 9, 2000).

and its compressor stations, to accommodate 1440 pounds per square inch gauge (psig). This is despite the fact that the existing mainline's maximum allowable operating pressure ("MAOP") is 1083 psig, and the Zone North B pipeline's MAOP is 1200 psig. It provided no adequate justification for the 1400 psig overbuild, despite DRN's requests to FERC that Adelphia provide such justification. If Adelphia wanted this project to function seamlessly at the existing system MAOP, as FERC maintains, it would have designed the additional facilities and laterals to accommodate the same MAOP. The fact that Adelphia designed it at a higher MAOP than necessary that does not match its existing system indicates that Adelphia clearly overbuilt its Project, which allows Adelphia to easily come back to FERC for expansions and upgrades.

In response, FERC simply maintains that Adelphia can only operate these existing facilities at their respective MAOP, despite the new facilities' design to accommodate 1400 psig.⁵⁹ It also says that Adelphia has not identified expansion plans at this time.⁶⁰ However, in taking this approach, FERC ignores key facts, market conditions, and other external factors that all point to future expansion by Adelphia being likely and reasonably foreseeable. Indeed, getting pipelines approved with excess capacity is part of industry's strategy to create an "energy hub" in the very areas that Adelphia is servicing,⁶¹ which also further increases the likelihood of exports.

By connecting previously-fragmented and idle systems and adding new laterals and compressor stations, Adelphia is essentially creating an entirely new interstate

⁵⁹ AGP EA, p.6; Certificate Order, ¶ 221.

⁶⁰ Certificate Order, ¶ 47. FERC's other primary response is that the facilities are all designed properly, Adelphia is not going to approach 1440 psig, and that Adelphia does not *have* to have MAOPs consistent across its system. Id. While safety is absolutely concern, because the existing mainline was built several decades ago, this misses the point on overbuilding, which was focused on the rationale for having facilities built to accommodate a higher operating pressure when, purportedly, no expansion plans are on the table.

⁶¹ Greater Philadelphia Energy Action Team, *A Pipeline for Growth*, March 30, 2016, at p.6.

pipeline that will foreseeably be used to support future Adelpia pipeline upgrades. The trend in the last approximately decade (and especially the last four years) amongst other major natural gas pipeline operators with existing pipelines, including Columbia, Tennessee Gas Pipeline, TETCO, Transco, and Millennium, has been to add looping segments and/or additional compressors to their existing pipelines in order to expand and compete in the market.

Looping is a common practice to expand the capacity of an existing pipeline by laying additional pipelines along the same right-of-way. Looped pipelines can be used to increase the distance between compressor stations or to provide additional storage capacity within the pipeline itself. Compression is another way to increase throughput capacity on an existing pipeline. Upgrading existing compressor stations with additional or higher powered compressors or adding new compressor stations can significantly increase pipeline capacity. DRN's comments included extensive information⁶² demonstrating 1) the various capacity expansions that have occurred shortly after new pipelines have commenced operations,⁶³ and 2) numerous recent capacity expansions using looping, compression, or both.⁶⁴

Adelpia intends to overbuild portions of the AGP, allowing for certain portions to handle more natural gas. In other pipelines where this has occurred, there has been a tendency to then also increase the rest of the project at a later date through replacement of the mainline or looping. Thus, FERC needed to account for the foreseeable expansion of

⁶² DRN Comments, February 28, 2019, pp.27-29.

⁶³ Typically, pipelines add additional compression first before resorting to looping, which can be a more costly alternative or supplement to additional compression.

⁶⁴ Properties of these projects are available in the respective FERC dockets, including, *inter alia*: Transco Leidy Southeast (CP13-551), Tennessee Susquehanna West (CP15-148), Tennessee Orion (CP16-4), and Millennium Eastern Upgrade (PF 16-3).

the AGP, including its right-of-way, to accommodate future upgrades. It also needed to consider the overbuilding of capacity as a negative reflection on Adelphia's claims of need, both under the NGA and NEPA. FERC failed to do so, either in the EA or in its final decision.

FERC's only response is to reject the industry trend and say that simply because the industry in which Adelphia operates (and must compete against) trends a certain way does not mean Adelphia will do so, and that Adelphia has no expansion plans right now (despite Adelphia overbuilding its new facilities).⁶⁵ This again shows FERC's willful ignorance of market conditions and trends, including the ongoing competition amongst pipeline operators to build the best and most well-connected network the fastest.⁶⁶

The reality is that once Adelphia has already put in new facilities with impacts across southeastern Pennsylvania, it need only come back to FERC for expansions and upgrades, at which point FERC will likely favor approval based on many of the reasons FERC has relied on to approve the AGP, *inter alia*, there are existing facilities, minimal impacts (once the expansions are segmented off from the AGP here), and so forth.

Thus, FERC's dismissal of the MAOP and foreseeable expansion issues is improper, particularly without justification from Adelphia for a non-expansion/upgrade reason for the 1440 psig in its newly-built facilities. This failure to consider the foreseeable expansion of the AGP also means that FERC failed to include, as part of its impacts assessment (as further discussed herein), the additive effects from such an expansion, further undermining its NEPA analysis and determinations under the NGA.

4. FERC's Failure To Adequately Assess Project Need Results In An

⁶⁵ Certificate Order, ¶ 233.

⁶⁶ Institute for Energy Economics and Financial Analysis, *Risks Associated with Natural Gas Pipeline Expansion in Appalachia*, April 2016.

Abuse Of Its Eminent Domain Power

Eminent domain originated as a way for governments to build necessary public infrastructure projects such as national highways and public buildings. It also enables governments to create parks and other public recreation areas. While eminent domain is considered an inherent government power, it is subject to constitutional limitations. Among those limitations is that the land acquisition must be for “public use”.⁶⁷ The power of eminent domain is abused when it is used to benefit powerful private interest groups at the expense of the less powerful; Supreme Court justices have recognized that the beneficiaries of this abuse “are likely to be those...with disproportionate influence and power in the political process, including large corporations and development firms.”⁶⁸ At its best, eminent domain allows for the acquisition of private property to create national parks for all to enjoy. At worst, it exploits less politically and economically powerful groups for the benefit of private actors. In the latter instance, the government acts as a henchman for private corporations. While this is not the intent of eminent domain, this is precisely what is happening at the behest of pipeline companies including Adelphia. As explained in DRN’s comments, this rehearing request, and in the record, there is no genuine need for this project; the true goals are not to serve the public, but to help Adelphia to meet its corporate goals and to generate profits. This amounts to a government subsidization of a private company’s profits, at the expense of the public.

FERC has stated that “[e]ven though the compensation received in [an eminent domain proceeding] . . . is deemed legally adequate, the dollar amount received as a result of eminent domain may not provide a satisfactory result to the landowner and this

⁶⁷ U.S. Const. Amend. V.

⁶⁸ Kelo v. City of New London, 545 U.S. 469 (2005) (J. O’Connor Dissent).

is a valid factor to consider in balancing the adverse effects of a project against the public benefits.”⁶⁹ FERC has made clear that “[u]nder the Certificate Policy Statement, FERC will not authorize the construction of a project, with the concomitant right to obtain the necessary rights-of-way through either negotiation or the eminent domain process, unless it first finds that the overall public (not private) benefits of the project will outweigh the potential adverse consequences.”⁷⁰ Here, landowners have refused Adelphia access to their property, which will require Adelphia to acquire property via eminent domain. Further, numerous comments on the docket suggest that many landowners do not want this project as it will degrade their environment, removing any likelihood of the public seeing it as a benefit. As such, there currently exists little proof that this project will be a benefit that should be brought about through the use of eminent domain. Rather, the current facts suggest that this will be a repeat situation of the government acting as a henchmen for the benefit of private entities at the expense of the public.

FERC’s only response to this is that it does not authorize the actual taking of private property; rather, Congress does (or more accurately, did when it drafted the Natural Gas Act).⁷¹ This is absurd, non-responsive, and misses the point, including in the very policies it clings to in the Certificate Order to approve Adelphia’s project. The D.C. Circuit Court of Appeals has also recently questioned such reasoning.⁷²

B. FERC Violated NEPA and the NGA by Excluding “Cumulative” and “Similar Actions” That, when Considered with the AGP, Would Have Shown Cumulatively Significant Impacts on the Environment and That the AGP Is Contrary to the Public Interest

⁶⁹ See Order Clarifying Statement of Policy, 90 FERC ¶ 61,128, at 61,398.

⁷⁰ See Order Clarifying Statement of Policy, 88 FERC ¶ 61,748, at 50.

⁷¹ Certificate Order, ¶ 45.

⁷² City of Oberlin, Ohio v. FERC, 937 F.3d 599, 607 (D.C. Cir. 2019).

Under NEPA, FERC must “include ‘connected actions,’ ‘cumulative actions,’ and ‘similar actions’ in a project EA.”⁷³ “Cumulative actions” are those actions that, “*when viewed with other proposed actions* have cumulatively significant impacts and should therefore be discussed in the same impact statement.”⁷⁴ In contrast, “similar actions” are those actions that, “*when viewed with other reasonably foreseeable* or proposed agency actions, *have similarities* that provide a basis for evaluating their environmental consequences together, *such as common timing or geography.*”⁷⁵ Further:

[r]easonable forecasting and speculation is ... implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry.’ . . . While the statute does not demand forecasting that is “not meaningfully possible,” an agency must fulfill its duties to “the fullest extent possible.”⁷⁶

A full consideration of the impacts associated with similar and cumulative actions is also relevant to FERC’s NGA inquiry. If several projects together have cumulatively significant impacts on landowners and communities, approving yet another project like the AGP weighs strongly against the public interest.

Here, the AGP is proposed by Adelphia, a subsidiary of NJR. NJR has a 20 percent stake in PennEast. FERC openly admitted that it was aware of the AGP and that it had received an application for the AGP before it issued a certificate to PennEast.⁷⁷

The only reason FERC did not evaluate the AGP together with PennEast before

⁷³ Delaware Riverkeeper v. FERC (“TGP NEUP”), 753 F.3d 1304, 1308 (D.C. Cir. 2014)(quoting 40 C.F.R. § 1508.25(a)).

⁷⁴ 40 C.F.R. § 1508.25(a)(2)(emph. added).

⁷⁵ 40 C.F.R. § 1508.25(a)(3)(emph. added).

⁷⁶ TGP NEUP, 753 F.3d at 1310 (quoting Scientists’ Inst. for Pub. Info., Inc. v. Atomic Energy Comm’n, 481 F.2d 1079, 1092 (D.C.Cir.1973)).

⁷⁷ Penneast Pipeline Company, 164 FERC ¶ 61,098, ¶¶ 94-96 (Order on Rehearing)

certificating PennEast was because it did not want to delay approval to PennEast.⁷⁸

Notably, PennEast is still seeking route changes while also attempting to pursue eminent domain thanks to FERC's certification. PennEast and the AGP overlap at various points throughout the AGP Zone North A, and are a few miles apart in other areas of the AGP Zone North A. The AGP crosses through some of the same HUC-12 watersheds as PennEast would. Although Adelphia disclaims that it has any *current* plans to directly interconnect the two systems, it is reasonably foreseeable that it would seek to do so if PennEast is built. It would not make sense for Adelphia to propose the interconnection now due to uncertainty over PennEast. However, given that any pipeline company stands to profit from having more interconnections, and NJR is involved in both pipelines, interconnection of PennEast and the AGP is reasonably foreseeable.

That said, even without a direct interconnection between the AGP and PennEast, FERC approved both the AGP and PennEast such that *both lines will be interconnected* within a few miles or less of each other in Northampton County via the TCO system, which FERC has ignored despite having approved PennEast to interconnect with the TCO system approximately *a few miles or less away* from the existing meter station in Northampton County that Adelphia is connected to.⁷⁹

In addition to PennEast, TETCO's Greater Philadelphia Expansion Project, which FERC included in the EA,⁸⁰ would impact areas of the AGP ROW,⁸¹ yet is merely listed in a table in the EA with no real consideration of significance. The Mariner East Project

⁷⁸ Penneast Pipeline Company, 164 FERC ¶ 61,098, ¶¶ 94-96 (Order on Rehearing)

⁷⁹ January 11, 2018 Adelphia Application, Exhibit F; PennEast DEIS, p.2-2; Appendix B, Drwg. No. 024-03-00-001.

⁸⁰ AGP EA, p.157.

⁸¹ AGP EA, p. 177 (Figure 5).

is still ongoing in areas to be impacted by the AGP, including areas impacted by inadvertent returns from Mariner East construction; yet again, FERC failed to address the impact to environmental resources of having *further* HDD and other impacts in the same areas as Mariner East. Instead, it simply concluded that the AGP, on its own, would not “*directly* affect waterbodies,”⁸² relying on compliance with FERC’s Plans and Procedures that DRN has shown fail to be adequately protective.

Throughout the Certificate Order, FERC provides unsubstantiated and conclusory statements for why it need not address cumulative and similar actions, such as the projects it has already approved in the same geographic area as the AGP. For instance, in responding to commenters’ evidence and arguments about a lack of need for the AGP, FERC completely missed the point that commenters raised as to PennEast. Specifically, in this matter, commenters noted that when FERC approved PennEast, it rejected expansion of existing pipelines (such as the AGP) as an alternative, calling it not feasible.⁸³ This is despite the fact that the AGP application arrived at FERC *prior* to FERC’s PennEast decision.⁸⁴ And now, the AGP is doing just what FERC said was not an alternative – expanding capacity on an existing pipeline.

FERC’s response here is not to address the interplay between PennEast and the AGP. Rather, FERC says that expansion of existing pipelines is not a feasible alternative to the *AGP*.⁸⁵ This is not an answer. PennEast is *not even yet built*; indeed, the route continues to undergo changes. FERC claims PennEast’s capacity is fully subscribed, yet

⁸² AGP EA, p.60.

⁸³ Certificate Order, ¶ 31.

⁸⁴ Penneast Pipeline Company, 164 FERC ¶ 61,098, ¶¶ 94-96 (Order on Rehearing)

⁸⁵ Certificate Order, ¶ 40.

the EA notes that the capacity is only 90% subscribed.⁸⁶ PennEast’s capacity is approximately 1,107,000 Dth/D.⁸⁷ Ten percent of that capacity is 110,700 Dth/D. That is within the range of the AGP’s capacity, which is only 76% subscribed, and there is a lack of clarity in the *public* record as to how much of that capacity is due to entities that would have been served by PennEast.⁸⁸ Thus, FERC improperly rejected PennEast as a viable alternative, just like it improperly rejected AGP in its PennEast decisions; indeed, even though FERC received the AGP application shortly before issuing a certificate to PennEast, it refused to revise its analysis.⁸⁹ Now, FERC is avoiding its responsibility again with no real rationale for doing so.

FERC also, inexplicably, determined that the PennEast Project is “entirely outside of the geographic scope of the proposed Project (including for air quality),” with the exception of a power plant that the AGP would continue supplying.⁹⁰ This is illogical, considering that the two projects *overlap* at various points in the AGP Zone North A, and are barely a few miles apart in other areas. Methane and other leaks of emissions can occur the entire length of the AGP, including where it is near to or overlaps with the present PennEast route. The AGP also clearly crosses through some of the same HUC-12 watersheds as PennEast. Even Adelphia, using the HUC-10 scale, analyzed PennEast and Adelphia for cumulative impacts.⁹¹

However, FERC, without admitting its error in the EA, states that it need not consider PennEast because AGP is an existing pipeline.⁹² Thus, even though FERC

⁸⁶ AGP EA, pp.176-178; Certificate Order, ¶ 40.

⁸⁷ Penneast Pipeline Company, 164 FERC ¶ 61,098, p.49-50 (Order on Rehearing)

⁸⁸ Certificate Order, ¶ 42.

⁸⁹ Penneast Pipeline Company, 164 FERC ¶ 61,098, ¶¶ 94-96 (Order on Rehearing)

⁹⁰ AGP EA, p.157

⁹¹ Adelphia CP18-46-000 Application – Resource Report No. 1, pp.33-37.

⁹² Certificate Order, ¶ 238.

failed to include in its PennEast analysis the AGP because it did not want to wait to issue a certificate,⁹³ FERC now says that any analysis of the two pipelines together does not matter because the AGP is already in the ground. Yet, even *this* does not make sense because FERC agrees that the Mariner East 2 project is within the geographic scope of the AGP.⁹⁴ Thus, FERC improperly dismisses the need to consider the PennEast and AGP projects together, similar to its dismissal of AGP as an alternative to PennEast when FERC granted a Certificate of Public Convenience and Necessity to PennEast.⁹⁵

C. FERC Violated NGA and NEPA by Ignoring or Improperly Discounting and Minimizing Impacts Required to be Addressed by NEPA and as Part of FERC’s NGA Balancing Inquiry, Thus Substantially Tilting Its Balancing Inquiry in Favor of Approval

In issuing the Certificate Order, FERC lacked an accurate baseline from which it could determine the significance of the impacts resulting from construction and operational activity of the AGP. This was due in part to FERC’s exclusion of similar and cumulative actions, as described above. The resulting harms from such exclusion of similar and cumulative actions is further described below. However, FERC also failed to properly fulfill its obligation to consider and address foreseeable impacts, including water resource and air quality impacts, community and public health impacts, and the ramifications of increased drilling and fracking operations, among other issues discussed herein. For instance, FERC continues to assume that its Plans and Procedures will be protective, despite record evidence to the contrary. Further, FERC “continues to treat greenhouse gas (GHG) emissions and climate change differently than all other

⁹³ Penneast Pipeline Company, 164 FERC ¶ 61,098, ¶¶ 94-96 (Order on Rehearing)

⁹⁴ Certificate Order, ¶ 238.

⁹⁵ Certificate Order, ¶ 40; Penneast Pipeline Company, 164 FERC ¶ 61,098, ¶¶ 94-96 (Order on Rehearing)

environmental impacts.”⁹⁶ In improperly discounting, minimizing, and in some cases, simply *assuming* that impacts (e.g. climate change) would be insignificant, FERC violated NEPA and substantially altered the calculus and balancing for the NGA public benefit analysis.

1. The NGA and NEPA Require FERC to Account for Environmental Impacts of the AGP, Including Reasonably Foreseeable Impacts, and the NGA Requires Addressing Economic Impacts, Including from Environmental Effects

FERC is required by NEPA to take environmental considerations into account in their decision-making “to the fullest extent possible”⁹⁷, and under the Natural Gas Act (NGA), FERC is obligated to protect the public interest.⁹⁸

NEPA is our “basic national charter for protection of the environment.”⁹⁹ It makes environmental protection a part of every federal agency’s mandate,¹⁰⁰ by requiring that federal agencies like FERC take environmental considerations into account in their decision-making “to the fullest extent possible.”¹⁰¹ This means that federal agencies must consider environmental harms and the means of preventing them in a “detailed statement” before approving any “major federal action significantly affecting the quality of the human environment.”¹⁰² This required analysis serves to ensure that “the agency will not act on incomplete information, only to regret its decision after it is too late to correct.”¹⁰³

⁹⁶ Certificate Order, ¶ 2 (Glick, Commissioner, dissenting in part).

⁹⁷ 42 U.S.C. § 4332; 40 C.F.R. § 1500.2; Fla. Audubon Soc. v. Bentsen, 94 F.3d 658,684 (D.C. Cir.)

⁹⁸ See, e.g., 88 FERC ¶ 61,227 (1999), clarified, 90 FERC ¶ 61,128 (2000), further clarified, 92 FERC ¶ 61,094 (2000); AES Ocean Express, LLC, 103 FERC ¶ 61,030 at ¶ 19.

⁹⁹ 40 C.F.R. § 1500.1(a).

¹⁰⁰ See 42 U.S.C. § 4332(1).

¹⁰¹ 42 U.S.C. § 4332.

¹⁰² Id. § 4332(2)(C).

¹⁰³ Marsh v. Oregon Natural Res. Council, 490 U.S. 360, 371 (1979).

NEPA¹⁰⁴ is an “environmental full disclosure law.”¹⁰⁵ It requires that FERC obtain and consider detailed information concerning environmental impacts, and it “ensures that an agency will not act on incomplete information, at least in part, by ensuring that the public will be able to analyze and comment on an action’s environmental implications.”¹⁰⁶ The information provided to the public “must be of high quality” because “[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.”¹⁰⁷ Lack of data is no basis for ignoring impacts; FERC must engage in “informed” and “reasoned decisionmaking” – it must obtain proper data, make reasonable forecasts or predictions where needed, and, accordingly, judge the significance of the impacts and in turn, explain its process and decisionmaking to the public.¹⁰⁸

A proper environmental assessment must fully assess and disclose the complete range of environmental consequences of the proposed action, including “ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, [and] cultural” impacts, “whether direct,

¹⁰⁴ NEPA also “guarantees that the relevant information [concerning environmental impacts] will be made available to the larger audience,” including the public, “that may also play a role in the decisionmaking process and the implementation of the decision.” Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). As NEPA’s implementing regulations explicitly provide, “public scrutiny [is] essential to implementing NEPA.” 40 C.F.R. § 1500.1(b). The opportunity for public participation guaranteed by NEPA ensures that agencies will not take final action until after their analysis of the environmental impacts of their proposed actions has been subject to public scrutiny. See N. Plains Res. Council v. Surface Transp. Bd., 668 F.3d 1067, 1085 (9th Cir. 2011) (noting that where “data is not available during the EIS process and is not available to the public for comment,” the process “cannot serve its larger informational role, and the public is deprived of their opportunity to play a role in the decision-making process”) (quoting Robertson, 490 U.S. at 349).

¹⁰⁵ Monroe Cnty. Conservation Council, Inc. v. Volpe, 472 F.2d 693, 697 (2d Cir. 1972).

¹⁰⁶ Ohio Valley Env’tl. Coal. v. U.S. Army Corps of Eng’rs, 674 F. Supp. 2d 783, 792 (S.D. W. Va. 2009) (internal quotation marks and citations omitted).

¹⁰⁷ 40 C.F.R. § 1500.1(b).

¹⁰⁸ Sabal Trail, 867 F.3d at 1368 (in part quoting TGP NEUP, 753 F.3d at 1313); see also Certificate Order, ¶ 2 (Glick, Commissioner, dissenting).

indirect, or cumulative.”¹⁰⁹

Direct effects¹¹⁰ are “caused by the action and occur at the same time and place.”¹¹¹ Indirect effects are those impacts that are caused by the action, but occur “later in time or farther removed in distance, but are still reasonably foreseeable,” and 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.”¹¹² Cumulative impacts are “impact[s] on the environment which result[] from the *incremental* impact of the action *when added to other past, present, and reasonably foreseeable future actions* regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”¹¹³

“Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”¹¹⁴ Thus, FERC must consider past, present and “reasonably foreseeable” cumulative impacts caused by its decisions and actions. An effect or action is “reasonably foreseeable if it is “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.””¹¹⁵

In addition, NEPA requires FERC to take a hard look at the ways to avoid or mitigate the AGP’s impacts. The potential adverse effects of the AGP cannot be adequately analyzed without complete data on all affected resources.

Likewise, FERC cannot conduct a proper inquiry into whether the AGP is in the

¹⁰⁹ 40 C.F.R. §§ 1502.16(a), (b); 1508.8.

¹¹⁰ “Effects and impacts as used in these regulations are synonymous.” 40 C.F.R. § 1508.8.

¹¹¹ 40 C.F.R. § 1508.8(a).

¹¹² 40 C.F.R. § 1508.8.

¹¹³ 40 C.F.R. § 1508.7 (emphasis added).

¹¹⁴ *Id.*

¹¹⁵ *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)).

public interest, as required by the NGA, without a comprehensive consideration of the environmental and economic effects of approving the AGP, including the economic impacts resulting from adverse environmental effects. However, as highlighted throughout this rehearing request, FERC's decision, including the EA, fall short on available data, analysis, and other reasoning to support FERC's AGP approval, in violation of the NGA and NEPA.

2. FERC Failed to Address the Cumulative Impacts Of Multiple Pipeline Projects In the Same Region, including PennEast

Consistent with its rejection of relevant similar and cumulative actions, discussed earlier, FERC ignored the cumulative impacts of those similar and cumulative actions, in addition to the multiple utility and other linear projects that are being proposed or constructed in the Delaware River watershed, in each sub-watershed, and in each unique ecological community and human community.

The ecological system and ecological services impacts from the disturbance, land alteration, and maintenance for these projects are only compounded by more and more disturbance from pipeline construction, expansion, and upgrading, including of appurtenant facilities. For example, there are significant concerns related to the cumulative impacts of the continuous water crossings and wetlands disturbances that pipeline construction activity has on the health and vitality of the Delaware River basin and its tributaries. This is particularly a concern with the AGP, and other similarly situated projects, as many of the same sub-watersheds subject to development as a result of the Project were recently, or are very likely to be in the future, impacted by construction activity from other pipelines. Among the pipeline projects that are, will, or have impacted the same sub-watersheds as the AGP include, but are not limited to, the

following: PennEast, TETCO's Greater Philadelphia Expansion Project, and the Mariner East Project.

[W]ith each of these projects comes some combination of stream impact, core forests destruction, wetland and riparian corridor disturbance, and clearing of steeply sloped lands. As such, each project has caused or will cause its own unique set of impacts and add another layer of acute and long-term assaults to the environment. Additionally, each new project magnifies the project specific impacts of each prior project. When dealing with environmental impact assessment, each project is evaluated independently; the cumulative impacts of multiple linear development projects are not assessed and the additive long-term impacts of past and future linear projects fail to be recognized.¹¹⁶

Despite the fact that FERC continues to evaluate pipeline projects in isolation, NEPA requires cumulative impacts assessment because, *inter alia*, numerous harms stem from the individual, incremental, and “cumulatively” and “collectively significant” impacts of these projects, including cumulative and similar actions, in the same area.¹¹⁷

Under NEPA guidance, the environmental review area must include all the sub-watersheds through which the pipeline crosses. A critical consideration in determining the cumulative environmental effects must be the interaction of runoff, lost recharge, deforestation, damaged habitat, compacted soils, air pollution, water pollution, methane emissions, and all other harms impacted by the proposed Adelpia pipeline along with the other past, present, and reasonably foreseeable future actions, whether federal, non-federal, or private that are connected to and/or would be the result of construction of the proposed AGP.¹¹⁸

¹¹⁶ Princeton Hydro, *Technical Review of Volume I FERC Draft Environmental Impact Statement Submitted for PennEast Pipeline Project*, September 2016

¹¹⁷ 40 C.F.R. §§ 1508.7, 1508.25(a)(2).

¹¹⁸ 40 C.F.R. §§ 1508.7-8, 1508.27 (2010).

An example of the types of impacts that can be expected when new pipeline ROW is installed, the Buckeye Oil Gas Transmission ROW in the Blue Mountains of Pennsylvania is illustrative. Here, DRN observed sensitive glacial soils, extreme compaction, continued and repeated ATV traffic and pipeline maintenance, lack of diverse growth, bare soils, and thermal heat and fragmentation impacts to the ROW and within the mature forest paralleling the Buckeye ROW.¹¹⁹ These impacts affect the area of the pipeline ROW in both short and long term and without this analysis FERC cannot claim that this environmental review was complete. In order to assure some review of these impacts, the stream crossings proposed by Adelphia through Marcus Creek and Stoney Creek need study and consideration on a sub-watershed scale.

These are among the impacts that must be assessed as part of a cumulative impact statement – acknowledging the accumulation of harm that will result to these ecological resources and recreational and cultural assets given that the AGP would be cutting through these same natural resources and inflicting similar harms. Indeed, TETCO's Greater Philadelphia Expansion Project, which FERC included in the EA,¹²⁰ would impact areas of the AGP ROW,¹²¹ yet is merely listed in a table in the EA with no real consideration of significance. None of the pipeline projects approved by FERC and others within the same geographic area occur in a vacuum. Each project individually depletes the natural and scenic resources of the region, and the combined impact becomes increasingly severe, unavoidable, un-mitigatable, and irreversible. FERC needed to examine these projects holistically in order to satisfy the requirements of NEPA, but

¹¹⁹ Delaware Riverkeeper Network. *Field-Truthing and Monitoring of the Proposed PennEast Pipeline*, FERC Draft EIS, Docket No. CP15-558, September 2016.

¹²⁰ AGP EA, p.157.

¹²¹ AGP EA, p. 177 (Figure 5).

failed to do so.

3. FERC Failed to Properly Assess and Address the Air Quality, Public Health, Public Safety, Noise, and Adverse Economic Impacts from the AGP's Compressor Stations, Blowdown Valves, and Other Emissions Sources

It has been well-settled for decades that NEPA's ultimate goal is the protection of human health and welfare and the physical environment.¹²² To ensure this, analysis of the air emissions from the various components of the AGP must be substantive, including evaluations of public health and public safety risks that result from the operation of compressor stations and blowdown assembly valves (BAVs). These stations, which are generally unmanned and poorly regulated, have proven to create a host of serious environmental, health, and safety hazards for surrounding communities. Public safety, noise (including health impacts from constant noise), and adverse economic impacts are also part of the burdens local landowners and communities bear from these new industrial operations. The GHG emissions and associated climate change impacts connected with these facilities is addressed in Section IV.C.6.

a. Compressor Stations and BAVs Involve Extensive Air Quality Impacts

Compressor stations are a necessary, but dangerous part of natural gas pipeline infrastructure, installed at regular intervals along the pipeline, usually 40 to 100 miles apart, and run continuously.¹²³ As natural gas loses pressure through friction in the

¹²² See Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 771 (1983) (“All the parties agree that effects on human health are cognizable under NEPA . . .”), 773 (“NEPA states its goals in sweeping terms of human health and welfare . . . [T]hese goals are ends that Congress has chosen to pursue by means of protecting the physical environment.”) (original emphasis omitted).

¹²³ Tobin, James. 2007. Natural Gas Compressor Stations on the Interstate Pipeline Network: Developments Since 1996. Energy Information Administration, Office of Oil and Gas. Available at: https://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngcompressor/ngcompressor.pdf; Folga, S.M. 2007. Natural Gas Pipeline Technology Overview. Argonne National Laboratory, Environmental Science Division. Available at: http://corridoreis.anl.gov/documents/docs/technical/APT_61034_EVS_TM_08_5.pdf.

pipeline, transmission compressors “pump,” or re-pressurize, and often filter, the gas in order to advance its flow. In addition to increasing the pressure in a pipeline, most compressor stations will filter out liquids and other contaminants that have accumulated in the natural gas stream.¹²⁴ This process creates highly toxic waste, which is stored on-site in tanks before being transported for treatment or disposal—leaving great opportunity for toxic and likely radioactive waste leaks, spills, or mishandling.¹²⁵

Further, and contrary to the claim in the EA,¹²⁶ Compressor stations are generally operational 24 hours per day, 365 days a year. These stations are unmanned and monitored by an off-site computerized system that manages and coordinates the operations of the several compressor stations within a natural gas pipeline system.¹²⁷ If an issue is detected at a compressor station, such as a drop in pressure or fire, an emergency shutdown system releases the natural gas in the pipeline into the atmosphere in what is called a blowdown.¹²⁸

Blowdowns are releases of unexpected, sudden bursts of air which occur at both BAVs and compressor stations. The event is the “largest single emission at a compressor

¹²⁴ Spectra Energy. 2013. Inside a Natural Gas Compressor Station. Available at:

http://www.spectraenergy.com/content/documents/media_resources_pdfs/insidenatgascompressstn.pdf

¹²⁵ United States Environmental Protection Agency. 2006. Installing Vapor Recovery Units on Storage Tanks. Lessons Learned from Natural Gas Star Partners. Available at:

https://www3.epa.gov/gasstar/documents/ll_final_vap.pdf

¹²⁶ The EA posits that “The Quakertown and Marcus Hook Compressor Stations would not likely operate at capacity (i.e. full load) every day” therefore the analysis provided portrays the “conservative, worst-case estimate of emissions.” FERC provides no basis for this assumption that it would not operate at full capacity. Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 127.

¹²⁷ Federal Energy Regulatory Commission. 2015. An Interstate Natural Gas Facility on my Land: What do I Need to Know?; Tobin, James. 2007. Natural Gas Compressor Stations on the Interstate Pipeline Network: Developments Since 1996. Energy Information Administration, Office of Oil and Gas.

¹²⁸ TransCanada. 2014. The Basics of a Compressor Station. Available at:

<https://www.princerupertgas.com/wp-content/uploads/2014/04/prince-rupert-natural-gas-transmission-compressor-station-basics-factsheet-transcanada.pdf>; Folga, S.M. 2007. Natural Gas Pipeline Technology Overview. Argonne National Laboratory, Environmental Science Division.

station” with gas plumes extending upward 30 to 60 meters. During the blowdown, the first 30 to 60 minutes are the most intense and contain the biggest release, but the entire blowdown could last up to three hours. Adding to the issues this burst of contaminants creates is the fact that the exact composition of emissions and the amount of each toxin released is not adequately measured, reported, or regulated. In fact, emission levels vary from station to station, depending on the size and power source, and throughout each day, depending on emission events such as blowdowns, fugitives, and accidents. While there is incomplete information on the content of compressor emissions, many harmful chemicals are known to be released.

The power source of the compressor stations themselves also greatly affects emissions. Compressor stations can be powered by either natural gas fired engines, turbines, or electric motors. Most are fueled by a portion of the natural gas flowing through the pipeline.¹²⁹ However, as discussed later in this rehearing request, FERC improperly rejected an alternative of electric compressors.

Finally, diesel emissions as a result of the AGP may lead to a higher level of ozone along the ROW and other construction areas as the cleared ROW provides more sunlight for nitrogen oxides and reactive organic cases to combine.

All of these additional emissions, which are not evaluated and considered in the EA, would affect residents of areas already burdened by elevated levels of pollution, since the areas are in nonattainment of the NAAQS under the 8-Hour Ozone (Northampton, Bucks, Montgomery, Chester, Delaware, and New Castle Counties) and

¹²⁹ Tobin, James. 2007. Natural Gas Compressor Stations on the Interstate Pipeline Network: Developments Since 1996. Energy Information Administration, Office of Oil and Gas.

PM-2.5 standards (Delaware County),¹³⁰ NOx and VOCs both being precursors to ozone.

b. The EA’s Public Health Analysis Failed to Account for the Health Risks and Other Issues That Occur as Result of Compressor Station and BAV Locations

When gas is emitted or leaked from compressor stations, a very large number of chemicals are released together. In fact, no other industry emits as many chemicals within as close a range to residences as natural gas pipelines.¹³¹ From the limited available research on compressor emissions, chemicals found at our near compressor stations include: benzene, carbon monoxide, nitrogen dioxide, carbon disulfide, toluene, ethyl benzene, acetone, fine particulate matter, and many other toxic VOCs and HAPs, many of which were found above potentially unsafe levels.¹³²

Below are just some known impacts of contaminants released during a blowdown:

VOCs (Volatile Organic Compounds):¹³³

- Benzene: Short-term exposure can cause drowsiness, dizziness, headaches, irritation of the eyes, skin, and respiratory tract, and unconsciousness. Long-term exposure is carcinogenic; linked to reproductive effects, leukemia and childhood leukemia, and various blood disorders.
- Methylene chloride: Short-term exposure can cause decrease nervous system function and long-term exposure can affect the central nervous system. It is potentially carcinogenic, with animal studies showing increased liver and lung cancer following inhalation.

¹³⁰ EPA, *Nonattainment Areas for Criteria Pollutants (Green Book)*, available at <https://www.epa.gov/green-book> (last visited May 31, 2018).

¹³¹ Madison County Department of Health. 2014. Comments to the Federal Energy Regulatory Committee Concerning Docket No. CP14-497-000, Dominion Transmission Inc. Madison County, New York.

¹³² “Emission Inventory.” Pennsylvania Department of Environmental Protection. [http://www.dep.state.pa.us/dep/deputate/airwaste/airwaste/emission_inventory.htm2010](http://www.dep.state.pa.us/dep/deputate/airwaste/airwaste/airwaste/emission_inventory.htm2010); Texas Commission on Environmental Quality Barnett Shale Formation Area Monitoring Projects. Doc number BS0912-FR http://www.tceq.state.tx.us/assets/public/implementation/barnett_shale/200.01.27-BarnettShaleMonitoringReport.pdf; Wolf Eagle Environmental. Town of DISH, Texas Ambient Air Monitoring Analysis Final Report. September 15, 2009; Steinzor N, Subra W, Sumi L. Investigating Links between Shale Gas Development and Health Impacts through a Community Survey Project in Pennsylvania New Solutions 2013; 23(1): 55-84.

¹³³ Madison County Department of Health. 2014. Comments to the Federal Energy Regulatory Committee Concerning Docket No. CP14-497-000, Dominion Transmission Inc. Madison County, New York.

- Formaldehyde: Carcinogenic. Short-term exposure can cause asthma-like symptoms, coughing, wheezing, and shortness of breath. It is linked to adverse pregnancy outcomes and reproductive and developmental toxicity. Considered a Hazardous Air Pollutant (HAP).
- Styrene: Carcinogenic.

Particulate matter: Particulate matter of 10 micrometers in diameter (PM10) or less is small enough to get into the lungs, causing serious health problems on their own and compounding the effects of other chemicals. The size of particles determines the depth of inhalation into the lung—with smaller particles more readily reaching the deep lung. PM2.5 and ultrafine particles (less than .1 micrometer in diameter) are of particular concern.¹³⁴

- PM2.5 and ultrafine particles: Cause harm respiratory and cardiovascular systems. For example, inhalation of PM2.5 can cause decreased lung function, aggravate asthma symptoms, cause heart attacks and high blood pressure, increase risk of cardiovascular disease and death, increase cardiopulmonary death, and increased risk of lung cancer. In children, exposure to PM2.5 has been linked to increased asthma and hospitalizations for respiratory diseases such as pneumonia. Particulate pollution is also linked to low birth weights and preterm births for pregnant women.¹³⁵

TENORM: Radon and the resulting polonium are known carcinogens, while all three materials, including lead, are highly toxic.¹³⁶

Additionally, one of the known chemical reactions associated with compressor stations is that between particulate matter and other water soluble chemicals. PM2.5 and smaller particulate matter absorb other airborne chemicals and carry them into a person's deep lung and blood stream. This causes airborne chemicals to be absorbed at much

¹³⁴ Id.

¹³⁵ Madison County Department of Health. 2014. Comments to the Federal Energy Regulatory Committee Concerning Docket No. CP14-497-000, Dominion Transmission Inc. Madison County, New York.

¹³⁶ Madison County Department of Health. 2014. Comments to the Federal Energy Regulatory Committee Concerning Docket No. CP14-497-000, Dominion Transmission Inc. Madison County, New York.

higher concentrations than they would in the absence of particulate matter—essentially *increasing* the dosage of any soluble chemical their midst.¹³⁷

Studies have shown the risks of these air pollutants manifest themselves in numerous health issues.¹³⁸ Individuals living within 2 miles of compressor stations and metering stations experience respiratory impacts (71% of residents), sinus problems (58%), throat irritation (55%), eye irritation (52%), nasal irritation (48%), breathing difficulties (42%), vision impairment (42%), sleep disturbances (39%), and severe headaches (39%). In addition, some 90% of individuals living within 2 miles of these facilities also reported experiencing odor events. Odors associated with compressor stations include sulfur smell, odorized natural gas, ozone, and burnt butter.¹³⁹ The health risks that emissions and noise pose to the general population are even greater for vulnerable populations such as children, pregnant women, the elderly, and sensitive individuals.¹⁴⁰

The EA failed to account for the potential health impacts of these various air contaminants, dismissing the emissions from compressor stations and blowdowns as fugitive air emissions that did not warrant further consideration. This ignorance of reliable and available data goes against the investigation that NEPA requires federal agencies to conduct to ensure there is a thorough and informed environmental assessment for a project. And, in the end, it allows for industries to benefit at the detriment of the

¹³⁷ Amdur MO. The response of guinea pigs to inhalation of formaldehyde and formic acid alone and with a sodium chloride aerosol. *International Journal of Air Pollution* 1960; 3:201-20.

¹³⁸ Understanding Natural Gas Compressor Stations, PennState Extension, available at: <https://extension.psu.edu/understanding-natural-gas-compressor-stations>

¹³⁹ Lockett, B., Buppert, G., & Margolis, J. M. (2015, April 28). SELC ACP Comment, FERC DOCKET NO.: PF15-6-000,20150428-5504(30537222). Southern Environmental Law Center; Appalachian Mountain Advocates; Center for Biological Diversity (citations omitted).

¹⁴⁰ Madison County Department of Health. 2014. Comments to the Federal Energy Regulatory Committee Concerning Docket No. CP14-497-000, Dominion Transmission Inc. Madison County, New York.

communities they are building in and ignores the actual consequences of a project.

Additionally, FERC should have also considered the effects of these toxins when emitted in short, sudden spurts rather than the average for the year. As DRN identified in its initial scoping comment, compressor stations and BAVs both usually emit short, sudden emissions of gases throughout the year and such events have been shown to have different effects on human health and the environment as compared to a steady continuous release. In fact, during such events, people living near compressor stations report strong odors as well as visible plumes during venting or blowdowns, as well as health issues such as burning eyes and throat, skin irritation, coughing, and headache.

Additionally, with the close proximity of the various BAVs to one another, not only should the likelihood of an incident be addressed, but the assessment should have also considered the compounding risks that would occur as a result. As mentioned above, it is normal for both compressor stations and BAVs to be sited 40-100 miles apart along the length of the pipeline. Yet, Adelphia has placed numerous BAVs in close proximity to one another. Of the 8 blowdowns, five are within 15 miles of one another in Chester County.¹⁴¹ The close proximity should have been addressed in the EA as it is an anomaly among pipeline projects. Additionally, FERC should have examined the compounding effects of these units in close proximity to one another addressing the increase in air emissions, increase in health effects, and increase in public safety risk.

FERC's reliance on the NAAQS as protective of human health is flawed.¹⁴² The NAAQS are a measure for *regional* air quality, *not* human health or public health on a

¹⁴¹ Understanding Natural Gas Compressor Stations, PennState Extension, available at: <https://extension.psu.edu/understanding-natural-gas-compressor-stations>

¹⁴² Certificate Order, ¶ 202.

community- or individual-level scale. The NAAQS are not a substitution for a human health risk assessment.

c. The EA Failed to Account for the Public Safety Risks Compressor Stations Pose to the Surrounding Communities

Not only did the EA fail to adequately account for the impacts on public health, but FERC's public safety analysis was also inadequate.

Compressor stations are built at strategic locations along a pipeline route—with sites ranging from densely populated residential areas, where they put communities at higher risk of toxic emissions, deadly explosions, noise pollution, and property value loss, to remote forested areas, which results in significant land disturbance, forest loss, habitat destruction, increased wildfire risk, and ensuing air and water quality loss.

The process of compressing natural gas to a highly pressurized state generates a huge amount of heat, which must be vented and dispersed through cooling facilities.¹⁴³ This is not only a waste of energy, but also a serious safety hazard in a facility that is unmanned and processing flammable gas around the clock. As a result, gas leaks, glitches in the computer monitoring system, and other events regularly lead to fires and/or explosions of various magnitudes at compressor stations throughout the country.

Yet the EA's public safety assessment was based on generalizations and assumptions instead of an examination of actual impacts. The EA assessed the risk of death from a pipeline incident by comparing it to the risk of death from an automobile accident as well as other "anthropogenic and natural hazards,"¹⁴⁴ a comparison with such

¹⁴³ Tobin, James. 2007. Natural Gas Compressor Stations on the Interstate Pipeline Network: Developments Since 1996. Energy Information Administration, Office of Oil and Gas

¹⁴⁴ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 151.

a drastic difference it creates a skewed perception of risk. FERC even admitted this in the EA.¹⁴⁵ Moreover, the public safety section had no assessment of risks from Compressor stations or BAVs, and lacked any recognition of the stress an emergency would place on the local community. Such an obvious oversight violates the mandates NEPA places on federal agencies when examining the impacts of projects.

Additionally, FERC received comments recommending a human health risk assessment for the project, yet, rather than conducting such an assessment, it relied on the risk assessment for the New Market EA.¹⁴⁶ FERC rationalized that the “compressor stations in New Market EA risk assessment were about twice as big as the proposed compressor stations in the Project and therefore emitted a greater volume of HAPs as compared to the proposed compressor stations” therefore the comparison can provide adequate information.¹⁴⁷ FERC then concluded that “based on the size of the proposed Adelphia compressor stations, the results of the New Market EA, we do not believe that conducting a risk assessment specific to Adelphia facilities is warranted.”¹⁴⁸

This claim is especially troubling not simply because it seems to brush aside the requirements of NEPA – reviewing the *AGP*’s specific impacts – but also because it seems to contradict the claims in the very next paragraph where the EA dismissed a study of the effects of compressor stations in New York on the basis that “it is not appropriate to compare the emissions of larger facilities that emit a significantly greater volume of

¹⁴⁵ “Direct comparisons between accident categories should be made cautiously because individual exposure to hazards are not uniform among all categories.” Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 151.

¹⁴⁶ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 130.

¹⁴⁷ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 130.

¹⁴⁸ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 130.

emissions as compared to a minor source.”¹⁴⁹ Further, the EA goes on to state that “[a]ir pollution modeling is typically evaluated on a county or regional scale that incorporates topography, terrain ground cover, and historic weather data...mak[ing] it site specific, considering local factors such as weather and wind patterns that contribute to pollutant dispersion.”¹⁵⁰ Such contradiction in the use of studies is irrational and a violation of the procedures required by NEPA. Therefore, FERC’s conclusion that the health risks associated with the project are not substantial is unreasonable as it is based off of arbitrary claims and irrational logic instead of actual facts.

d. The EA Failed to Account for Economic Impacts On The Community From Compressor Stations, Including Decrease in Property Values, Additional Emergency Response Costs, and Damage to Existing Agriculture and Infrastructure

The EA fails to account for the effects that compressor station and BAV facilities will have on the community such as decrease in property values, which have been shown to drop, by as much as 50%.¹⁵¹ In addition, the pollution from compressor stations can cause damage to agriculture and infrastructure. One study found that shale gas air pollution damages in Pennsylvania already amount to between \$7.2 and \$30 million, with compressor stations responsible for 60-75% of this total.¹⁵² Using the low estimate of 60%, that is between \$4.32 and \$18 million in damages associated with compressor stations.¹⁵³ Additionally, associated health impacts bring health care costs and even inability to work, putting additional strain on the community and local economy.

¹⁴⁹ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 130.

¹⁵⁰ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 130.

¹⁵¹ Catskill Citizens. 2015. Proximity of Compressor Station Devalues Homes by as Much as 50%. Available at: <http://catskillcitizens.org/learnmore/DEVALUE.pdf>

¹⁵² Walker & Koplinka-Loehr, 2014

¹⁵³ Id.

Also, fires and explosions that occur from regular operations at compressor stations have resulted in evacuated homes, closed roads, wildfires, toxic emissions, complete destruction of homes and compressor stations, millions of dollars in damages, injuries, and deaths. Fires can last for hours or even days, putting a huge strain on local firefighters, hospitals, and other emergency responders. During these types of events, the natural gas industry typically relies on local fire departments for assistance.¹⁵⁴ This is often a problem as localities are not always equipped with the resources to adequately contain a large natural gas fire or explosion or care for those injured. In addition to the damage to property and infrastructure, injuries to people who live in the vicinity can include respiratory damage and serious burns and can require evacuation by medical helicopter.¹⁵⁵

In fact, an explosion and fire at a natural gas compressor station just occurred recently. On January 30, 2019 during the polar vortex which brought the coldest days of this winter (and recent years) to the United States, an equipment malfunction at a Consumers Energy Compressor Station in Macomb County Michigan occurred causing a fire.¹⁵⁶ Consumer Energy had asked that its 1.8 million residential, commercial, and industrial customers to reduce their gas energy use (including home thermostats) until the issue can be remedied.

These risks and impacts need to be addressed in the EA in order to assure FERC is able to fully assess the burdens and costs compressor stations and BAVs pose to local

¹⁵⁴ Folga, S.M. 2007. Natural Gas Pipeline Technology Overview. Argonne National Laboratory, Environmental Science Division

¹⁵⁵ Madison County Department of Health. 2014. Comments to the Federal Energy Regulatory Committee Concerning Docket No. CP14-497-000, Dominion Transmission Inc. Madison County, New York.

¹⁵⁶ George Norkus, "Consumers Energy asks customers to reduce natural gas use following fire, January 30, 2018. Available at https://www.macombdaily.com/news/local/equipment-mishap-causes-fire-at-consumers-energy-facility-in-armada/article_618d73e8-24b9-11e9-bafa-0fa99dd80dcf.html.

communities in the event of an explosion or fire.

e. The EA Fails to Adequately Assess the True Effects of the Noise Pollution, Including Health Impacts from Noise, on the Communities Where the Compressor Stations and BAVs are Located

Compressor stations emit noise and vibrations continuously, day and night. The noise emitted is often above allowable standards, especially during construction, emergency venting, and blowdowns, which can last for hours. At these peak noise events, the noise emitted is likened to a jet engine or a freight train, depending on residents' proximity.¹⁵⁷ In addition, compressor stations emit constant low frequency noise during normal operation. In fact, residents living nearby have compared the noise of compressor stations to a truck running in their driveway at all hours.¹⁵⁸ This noise is not only a nuisance for the local communities but can lead to numerous health issues, including Vibroacoustic Disease, which causes a range of serious health impacts¹⁵⁹ with symptoms worsening over time, as well as other physical and mental health effects.¹⁶⁰

The health risks that emissions and noise pose to the general population are even greater

¹⁵⁷ Spectra Energy. 2013. Inside a Natural Gas Compressor Station. Available at:

http://www.spectraenergy.com/content/documents/media_resources_pdfs/insidenatgascompressstn.pdf

¹⁵⁸ Cusick, Marie. 2014. State regulators take a closer listen to gas compressor stations. State Impact.

Available at: <https://stateimpact.npr.org/pennsylvania/2014/08/25/state-regulators-take-a-closer-listen-to-gas-compressor-stations/>

¹⁵⁹ Symptoms can include hypertension, thickening of cardiovascular structures, heart disease, infections, cognitive impairment in children, sleep disturbance, tinnitus, hearing loss, reduced performance, and aggressive behavior among others.

¹⁶⁰ See: EPA's Integrated Risk Information System database.; Babisch W. Transportation noise and cardiovascular risk: Updated review and synthesis of epidemiological studies indicate that the evidence has increased. *Noise & Health* 2006; 8(30):1-29. World Health Organization. Burden of disease from environmental noise: Quantification of healthy life years lost in Europe. 2011.; and Moudon AV. Real noise from the urban environment: How ambient community noise affects health and what can be done about it. 2009. *American Journal of Preventive Medicine* 37(2):167-171; Branco, NAA Castelo, & Alves-Pereira. 2004. Vibroacoustic disease. *Noise and Health*, 6(23), 3-20). Available at: [http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2004;volume=6;issue=23;spage=3;epage=20;auiast=Castelo.;Lockett, B., Buppert, G., & Margolis, J. M. \(2015, April 28\). SELC ACP Comment, FERC DOCKET NO.: PF15-6-000,20150428-5504\(30537222\). Southern Environmental Law Center; Appalachian Mountain Advocates; Center for Biological Diversity](http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2004;volume=6;issue=23;spage=3;epage=20;auiast=Castelo.;Lockett, B., Buppert, G., & Margolis, J. M. (2015, April 28). SELC ACP Comment, FERC DOCKET NO.: PF15-6-000,20150428-5504(30537222). Southern Environmental Law Center; Appalachian Mountain Advocates; Center for Biological Diversity)

for vulnerable populations such as children, pregnant women, the elderly, and sensitive individuals.¹⁶¹

The EA states that the compressor stations will be required to average about 50db during operation.¹⁶² Yet the background noise for a quiet rural area is *30db*, described as 1/16 as loud as 70 db. Further, in the event of a blowdown, the noise will create loud, sporadic interruptions in the communities.¹⁶³ This is especially troubling for residential and agricultural areas that will now have to deal with the constant hum and sporadic bursts of loud air. For the EA, FERC only assessed noise levels as compared to regulations established by the agency and local ordinances.¹⁶⁴ The EA fails to address the public nuisance and health effects result from the noise as well. This gap in analysis miscalculates the actual repercussions of BAVs' and compressor stations' effects on the environment through both noise pollution and resulting health risks.

Further, FERC allowed Adelphia to site a compressor station abutting residential homes and in a location that actually runs contrary to FERC's published Policy Guidelines, *An Interstate Natural Gas Facility on My Land? What Do I need to Know?*. FERC does not provide an explanation for the exception, nor has Adelphia expressed any need for this specific location. Instead, FERC has placed the burden on the local community of fighting the location and seeking to have the station moved.

As identified here and explained in the sections above, the EA fails to identify significant impacts on landowners and the surrounding community near the compressor

¹⁶¹ Madison County Department of Health. 2014. Comments to the Federal Energy Regulatory Committee Concerning Docket No. CP14-497-000, Dominion Transmission Inc. Madison County, New York.

¹⁶² Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 133.

¹⁶³ Adelphia Gateway, LLC, Adelphia Gateway Project Appendix 9D, FERC Docket No. CP18-46.

¹⁶⁴ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 133.

stations and blowdowns. Impacts such as the AGP's public health effects, risks to local communities, safety risks, economic impacts, and noise pollution are not minor and create short and long term burdens on the communities where these facilities are sited. This is in addition to the burden these facilities place on local wildlife. Yet, even here, FERC fails to properly address the impacts, claiming, *inter alia*, that because there is existing natural gas infrastructure at the Quakertown site, wildlife will be fine because they are used to noise, and that construction noise is temporary.¹⁶⁵ That completely ignores the fact that the AGP is *adding* to and/or *expanding* whatever is currently present, and that noise levels will increase far beyond the end of construction.

Absent a comprehensive assessment of adverse impacts to landowners and surrounding communities that NEPA requires, FERC is not in a position, under the NGA, to draw a conclusion as to whether the AGP's potential public benefits outweigh its potential adverse effects.

4. FERC Failed to Properly Assess and Consider Impacts to Water Resources, Wetlands, and the Wildlife and Humans that Rely on Them

The entirety of the AGP falls within the Delaware River watershed with construction occurring in close proximity to streams, waterbodies, and wetlands, and involves stream crossings, including the open-cut crossing of Stoney Creek. It would be located in close proximity to the Quakertown Swamp, which is a unique and threatened resource. The AGP route crosses several contaminated sites including two RCRA Corrective Action sites and a Superfund site along the Tilghman Lateral, which will be crossed using Horizontal Directional Drilling (HDD) and could lead to release of

¹⁶⁵ Certificate Order, ¶ 216.

contaminants.¹⁶⁶

FERC's conclusions that these impacts will not be significant are based off of assumptions of compliance and not facts. FERC failed to evaluate its Plans and Procedures' effectiveness at preserving and protecting the environment in the EA, and any such analysis is not available for public review or, even, the Commission members themselves. DRN has demonstrated, from past projects, that these Plans and Procedures, even if complied with (which is a risky assumption, yet FERC still makes it), still fail to protect water resources, including wetlands. These impacts need to be properly evaluated and considered in order to understand the full implications of the AGP and, considering the substantial impact this project will have, should be assessed through an Environmental Impact Statement (EIS). Also, it appears that Adelpia still lacks a Section 401 water quality certification from Pennsylvania for the AGP. FERC's approval of the AGP despite the lack of a Section 401 certification is contrary to the plain language of 33 U.S.C. § 1341(a).

a. FERC Failed to Properly Assess and Account for the Potential For Contamination Of Water Resources

In its scoping comment, DRN emphasized:

The EIS needs to carefully and accurately consider not only the actual number and size of streams and wetlands crossed, but also the acreage, vegetation, and slope of forested and wild open space affected by the project and the associated damage to water quality in order to fully and fairly consider the project impact on water resources.

Yet, Adelpia has not done this and FERC had not demanded such considerations.

By way of example, the following is a list of items in the Waterbodies and

¹⁶⁶ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 45.

Wetlands portions of the EA that were incomplete and needed further information in order to be properly analyzed:

1. “Adelphia is proposing to access the Perkiomen Creek BAV via a portion of the existing mainlines right-of-way that is characterized as PEM wetlands.” Yet Adelphia “has not proposed or identified potential mitigation measures to mitigate impacts from operational use of the access road.” Nor have they “requested a site specific modification to section VI.B.1.d.”¹⁶⁷
2. “[W]etland delineation for a portion of the Tilghman Lateral has not been completed.”¹⁶⁸
3. Adelphia has proposed a diversion ditch to manage stormwater flow from the Transco Meter Station into a nearby wetland, which is not in compliance with section VI.B.3.b of FERC’s procedures.¹⁶⁹
4. Adelphia has not submitted an IRCP that addresses “mitigation measures in the event of an inadvertent release in an area of existing contamination” for the Horizontal Directional Drilling that will occur at the Tilghman Lateral.¹⁷⁰
5. Agency consultations regarding the construction in the Marcus Hook area are still ongoing and “sampling results from contaminated site investigations activities have not been provided.”¹⁷¹

Additionally, both DRN and Clean Air Council in their scoping comments highlighted the high likelihood of erosion and sedimentation from construction activities for blowdown assemblies within close, upstream proximities of Ridley Creek and Chester Creek. These impacts are particularly important in light of the damage that repeated inadvertent returns (from Mariner East 2 construction) caused to Chester Creek and the aesthetic and cultural value of Ridley Creek, “the centerpiece of Ridley Creek State Park, a gem of preserved parkland amid Philadelphia’s suburban sprawl.”¹⁷² The EA

¹⁶⁷ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 66. Section VI.B.1.d “restricts new access roads or use of existing access roads through wetlands if it would result in impacts on the wetland.”

¹⁶⁸ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 63.

¹⁶⁹ *Id.* at 61.

¹⁷⁰ *Id.* at 50.

¹⁷¹ *Id.* at 49-50.

¹⁷² Clean Air Council's Initial Comments on Comments on the Adelphia Gateway Pipeline Project, Clean Air Council, February 13, 2018, Docket No. CP18-46.

acknowledged these comments, yet did not conduct any additional or even preliminary assessment of potential harms that could occur, instead dismissing this public concern by concluding that “[c]onstruction of these facilities would not directly affect waterbodies.”¹⁷³

FERC must conduct a more in-depth analysis of the cumulative impacts of Chester Creek Gate Blowdown and nearby actions on the Chester Creek watershed; and must require Adelphia to evaluate the effect of the Paoli Pike Gate Blowdown construction on both the water quality of Ridley Creek and the aesthetics and recreational values of Ridley Creek State Park.¹⁷⁴

Additionally, Adelphia proposes to cross Marcus Hook Creek using HDD. HDD is the method currently in use in the construction of the controversial Sunoco Mariner East 2 pipelines. While HDD can be a better way to place a pipeline in environmentally

¹⁷³ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 60.

¹⁷⁴ See Pennsylvania Department of Environmental Protection (PADEP), *Sunoco Mariner East II – Pipeline Construction Inadvertent Returns – Waters of the Commonwealth*, rev’d January 26, available at <http://ehb.courtapps.com/efile/documentViewer.php?documentID=41078> (charting inadvertent returns from Mariner East 2); compilation of Mariner East 2 inadvertent return reports produced from PADEP, available at <http://ehb.courtapps.com/efile/documentViewer.php?documentID=41079> and <http://ehb.courtapps.com/efile/documentViewer.php?documentID=41080>; see, e.g., Affidavit of David A. Mano (detailing well water contamination), available at <http://ehb.courtapps.com/efile/documentViewer.php?documentID=41088>; Affidavit of David Anspach (same), available at <http://ehb.courtapps.com/efile/documentViewer.php?documentID=41101>.
²⁹ See Pennsylvania Department of Environmental Protection (PADEP), *Sunoco Mariner East II – Pipeline Construction Inadvertent Returns – Waters of the Commonwealth*, revised January 26, 2018, available at <http://ehb.courtapps.com/efile/documentViewer.php?documentID=41078> (charting inadvertent returns from Mariner East 2); PADEP Notice of Violation to Sunoco Pipeline L.P., November 3, 2017, attached as Exhibit C hereto (regarding HDD crossing Chester Creek, “DEP is concerned that the above-cited Inadvertent Return (‘IR’) is the sixth known IR from this Drill”).
³⁰ See Pennsylvania Department of Conservation and Natural Resources, *Ridley Creek State Park*, available at <http://www.dcnr.pa.gov/StateParks/FindAPark/RidleyCreekStatePark/Pages/default.aspx> (last visited Feb. 12, 2018); see also Visit Philadelphia, *Ridley Creek State Park: More than 2,600 acres of gently rolling woodlands and meadows*, available at <http://www.visitphilly.com/outdoor-activities/philadelphia/ridley-creekstate-park/> (last visited Feb. 12, 2018).

sensitive areas,¹⁷⁵ if done carelessly or in unsuitable geological locations, it can also result in damaging aquifers and drinking water resources. As Clean Air Council cautioned in their preliminary comments on the AGP:

As a cautionary example, the use of HDD by Sunoco Pipeline L.P. for the Mariner East pipeline project has not been done properly. Sunoco's HDD has resulted in contaminating dozens of water wells across Pennsylvania and spilling drilling fluids in over 160 locations.¹⁷⁶

DRN has observed, first-hand, HDD releases and violations along Mariner East 2 pipeline in Delaware County; the Tennessee Gas Pipeline 300 Line upgrade, Northeast Upgrade, and Orion Project (which crossed the Lackawaxen River); and Atlantic Sunrise Pipeline. These adverse impacts cause many immediate, cumulative, and cascading impacts to aquatic life and water quality health.

The viscosifier used almost exclusively in HDD drilling fluids is naturally occurring bentonite clay, which is principally sodium montmorillonite. Bentonite is non-toxic and is often touted as being safe for the environment, but it has the potential to impact aquatic habitats and wildlife if discharged to waterways in significant quantities.¹⁷⁷ The environment may be impacted if the drilling fluid inadvertently returns to the surface of the ground at a location on a waterway's banks, within a waterway or wetland, or in the vicinity of other potential receptors. When this occurs, it is called an inadvertent return or release. An inadvertent return is an unauthorized discharge of

¹⁷⁵ *Hydrologic and Environmental Rationale to Bury Gas Pipelines Using Horizontal Directional Drilling Technology at Stream and River Crossings*, HydroQuest, June 12, 2012.

¹⁷⁶ Clean Air Council's Initial Comments on Comments on the Adelphia Gateway Pipeline Project, Clean Air Council, February 13, 2018, Docket No. CP18-46.

¹⁷⁷ Tetra Tech, Inc. (2018). HDD Inadvertent Return Assessment, Preparedness, Prevention and Contingency Plan. Pennsylvania Pipeline Project. Retrieved from <http://files.dep.state.pa.us/ProgramIntegration/PA%20Pipeline%20Portal/MarinerEastII/Exhibit%201%20-%20HDD%20IR%20Assessment%204-10-2018.pdf>

drilling fluids to the ground surface or surface waters, including wetlands, associated with HDD or other trenchless construction methodologies.¹⁷⁸

The environmental impacts of the discharge of bentonite and drilling fluids into a waterbody include increases in suspended solids, sedimentation, and local turbidity.¹⁷⁹ Increased suspended solids in streams interferes with fish gill development and function, reduces quality of fish spawning and rearing areas, reduces fish refuge sites, reduces food availability to upper trophic levels, smothers and displaces macroinvertebrates, and fills interstitial spaces in substrates.¹⁸⁰

Some of these effects, such as the smothering of macroinvertebrates and the interference of fish gill function, occur almost immediately upon the drilling fluids reaching the stream. This means that ecological damage occurs even when inadvertent releases are caught early and cleaned up quickly. However, the effects are likely exacerbated over time. Furthermore, drilling mud deposition rates far exceed the rates of natural sediment deposition and erosion.¹⁸¹

Increased sedimentation in streams causes well-known negative impacts to fish such as trout, as does increased turbidity, which DRN detailed further in its comments and incorporates herein by reference.¹⁸² Rain events also help transport drilling fluids

¹⁷⁸ Tetra Tech, Inc. (2018). HDD Inadvertent Return Assessment, Preparedness, Prevention and Contingency Plan. Pennsylvania Pipeline Project. Retrieved from <http://files.dep.state.pa.us/ProgramIntegration/PA%20Pipeline%20Portal/MarinerEastII/Exhibit%201%20-%20HDD%20IR%20Assessment%204-10-2018.pdf>

¹⁷⁹ Crowell, H. (2014). Ecological Impacts of Inadvertent Returns from Horizontal Directional Drilling (HDD). HullRAC Science Summit, February 4, 2014. Retrieved from <http://docplayer.net/24197248-Hugh-crowell-hullrac-science-summit-february-4-ecological-impacts-of-inadvertent-returns-from-horizontal-directional-drilling-hdd.html>

¹⁸⁰ Crowell, H. (2014). Ecological Impacts of Inadvertent Returns from Horizontal Directional Drilling (HDD). HullRAC Science Summit, February 4, 2014. Retrieved from <http://docplayer.net/24197248-Hugh-crowell-hullrac-science-summit-february-4-ecological-impacts-of-inadvertent-returns-from-horizontal-directional-drilling-hdd.html>

¹⁸¹ *Id.*

¹⁸² DRN 2-28-19 Comments, pp.90-91.

into streams and other nearby waterbodies. Erosion and sediment control measures such as silt fences, compost socks, mulching, hay bales, sand bags, fiber rolls, and gravel berms frequently fail and cannot be relied upon as effective protection. DRN has documented countless occasions during pipeline construction projects where sediment control structures were damaged, insufficient, overwhelmed, not functioning correctly, or where sediment was directly discharging offsite into adjacent lands, nearby streams, or drains that connect to a body of water. When these measures fail, it opens a pathway for bentonite to reach streams in the event of an inadvertent release. Although non-toxic, bentonite is nevertheless a pollutant that is harmful to ecosystem function and the aquatic environment. Yet, these same measures FERC relies upon to say that there will be no significant impact to the environment, despite all the evidence to the contrary.

Thus, while HDD technology can be valuable to save mature forest, forested wetlands, and cause less disruption to the soils, mature forest and natural habitats, the outstanding, continued, and current HDD releases along Sunoco Mariner East 2 pipeline should give pause, particularly because these releases are in the region of the proposed Adelpia pipeline (Delaware County). Multiple stop work orders by the state, re-designs of the HDD engineering plans, and serious violations are continued issues and common violations on the Mariner East 2 project, and all needed to be taken into consideration here to prevent repeated harm. In addition, there are two new taskforces in Pennsylvania for HDD and 105 alternatives analyses. Allowing AGP to engage in further HDD or open cuts before these taskforces are completed is premature and leads to a lack of considered analysis under NEPA of the AGP's environmental impacts.

Beyond these issues, the EA fails to properly assess and address other threats to

the water table and local water supply. The AGP may involve drilling and digging into the bedrock. Further, if any construction activities result in interception of the water table, dewatering activities would result in the localized drawdowns of water table elevation and could impact local wells. Construction activities may also result in contamination of groundwater by creating a direct flow of contaminants, including herbicides, into local aquifers. FERC in the EA has identified that “Marcus Hook Compressor Station (which would also be used as a wareyard) and two lateral and associated interconnects would be within the Delaware River Streamflow Zone/New Jersey Coastal Plains Aquifer sole source aquifer zone.”¹⁸³ This means that if this aquifer were to become contaminated, there would be no reasonably available alternative drinking water source for the local community. Yet, FERC did not consider the likelihood that the water source could be impacted. Additionally, there was no account of costs that could be borne by municipalities if the AGP depleted the quality of the water supply or contaminated the groundwater to a point that water treatment facilities become necessary.

Rather than using scientific data and conclusions to presume that such incidents will not lead to any substantial environmental issues, the EA makes a blanket conclusion that the public should not worry about water contamination at all as “there is low probability that pipeline operations would contaminate groundwater because methane is lighter than air. The methane would generally dissipate rapidly through the air in the event of a pipeline leak, thereby causing no impact on groundwater. Therefore project

¹⁸³ Adelfia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 53.

operation is not anticipated to impact groundwater quality.”¹⁸⁴ Aside from being a blanket conclusion, this ignores the other threats to groundwater quality that the AGP poses, including waste liquids at the compressor stations.

Finally, the AGP, as demonstrated by the installation of other pipeline projects in our region and nation, will create new pathways for water flow, thereby altering the hydrologic pattern of the watershed and adversely impacting (in both quantity, quality and seasonal timing) streams, wetlands and drinking water sources. The EA failed to account for these changes and impacts and this must be remedied by creating an EIS and demanding Adelphia provide information needed to truly assure that the public and the environment will be safe during construction.

b. FERC Failed to Adequately Assess the Impacts of Hydrologic Alteration and Other Water Resources Impacts Due to Soil Compaction, Trenching, and Other AGP Activities

DRN’s comments extensively detailed the various benefits of wetlands, floodplains, and other water resources and vegetated buffers, which are incorporated by reference herein.¹⁸⁵ The comments also detailed the harms that can be expected from the AGP as evidenced by other FERC projects in the past several years, and by other types of alteration to water resources that currently impact watershed communities, which DRN again incorporates by reference as is fully set forth herein.¹⁸⁶

Previous FERC jurisdictional projects have resulted in significant soil compaction issues. In the scoping comment, DRN asked that FERC identify ways in which previous soil compaction problems can be avoided or properly remediated and emphasized that “A

¹⁸⁴ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 56.

¹⁸⁵ DRN 2-28-19 Comments on EA, pp. 80-81, 83-87.

¹⁸⁶ See, e.g., DRN 2-28-19 Comments on EA, pp.80, 84

restatement of previous practices would be unacceptable.” Yet, FERC relies on Adelpia’s adherence to FERC’s *Upland Erosion Control, Revegetation, and Maintenance Plan* and FERC’s *Wetland and Waterbody Construction and Mitigation Procedures*, which provide baseline guidance. These Plans and Procedures have failed in the past and there is little assurance that reliance on them will be successful in the future.

Additionally in the scoping comment, DRN asked that the NEPA assessment document include a survey of the established benthic community in potentially impacted streams. DRN further requested that this survey include the composition, quantity, and diversity of the community using standardized sampling protocols consistent with the state’s assessments. Potential water quality impacts also needed to be evaluated, including further discussion of construction-related impacts such as the possibility of fuel spills, compaction from parking and staging equipment and contamination of runoff and further erosion and sedimentation. While FERC has listed precautions Adelpia will take during construction and restoration, FERC conducted no evaluations to the extent that DRN suggested.¹⁸⁷ Additionally, FERC acknowledged that “dry-ditch crossing methods would reduce turbidity and downstream loss of habitat, and/or the alteration of water quality (including temperature) could increase the stress rates, injury, and or mortality experienced by fish.”¹⁸⁸ Yet there is nothing more than just an identification of these issues.

While the EA acknowledges the issues that construction activities can have on soil and in turn, water resources, there is not identification of what Adelpia will do to

¹⁸⁷ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 73.

¹⁸⁸ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 73.

minimize this. Rather the EA concludes that as long as Adelphia will adhere to established Plans and Procedures, there is no need to identify, quantify, and acknowledge the known environmental consequences. To make these assumptions without data or facts to back up such conclusory statements, particularly when such Plans and Procedures have failed in the past, is irrational and arbitrary decisionmaking by FERC. Also, it appears that Adelphia still lacks a Section 401 water quality certification from Pennsylvania that covers the AGP. FERC's approval of the AGP despite the lack of a Section 401 certification is contrary to Section 401(a)'s plain language.¹⁸⁹

Similarly, as to wetlands, FERC incorrectly presumes its Procedures and Plans will be adequate. In its scoping comment, DRN asked that FERC's analysis also include wetland delineations and an assessment of values and functions of wetlands impacted by the AGP, either directly or indirectly. That analysis and assessment needed to include an examination of hydrology, vegetation, and soils, in addition to an assessment of function and value considering all ecosystem services being provided, such as those discussed in DRN's comments and incorporated herein by reference, to ensure a proper assessment of impacted wetlands.¹⁹⁰

The assessment should have also included changes to wetlands directly including, but not limited to changes in water levels, flow characteristics, and circulation patterns, the impacts of temporary and permanent alteration of vegetation in and around wetlands, altered temperatures, changed light, altered humidity, altered groundwater or surface water flows, and/or altered flooding frequencies due to the AGP. This information is

¹⁸⁹ 33 U.S.C. § 1341(a) ("No license or permit shall be granted until the certification required by this section has been obtained")

¹⁹⁰ Schmid and Company Inc. *The effects of converting forest or scrub wetlands to herbaceous wetlands in Pennsylvania*. Prepared for the Delaware Riverkeeper Network, Bristol, Pennsylvania, 2014.

significant as changes in substrate conditions may affect the ability of the wetland to sustain vegetation and wildlife populations including sensitive amphibian populations. For example, repeated maintenance and lagging restoration practices that span over multiple seasons/years could impact important amphibian and fish migrations and critical reproduction periods if biological windows are not considered. Herbicide usage and other ROW and pipeline infrastructure maintenance practices harm wetlands and the aquatic life in them, in addition to causing harm to other nearby water resources.

However, FERC failed to do this also. Five wetlands would be affected by the AGP.¹⁹¹ The impacts would be greatest during and immediately following construction. The EA claims that “majority of these effects would be short-term in nature and would cease when, or shortly after, the wetlands are restored and revegetated” and that “[f]ollowing revegetation, the wetland would transition back into a community similar to that of the pre-construction state.”¹⁹² However, as demonstrated by the documentation DRN provided on the record, previous pipeline projects and science directly undermine such assumptions. As one example, DRN and Conservation District staff around prior pipeline projects that once the pipeline is moving gas, the final restoration phases by the operator are often not a priority, leading to unnecessary additional harm to sensitive species, due to improper timing or unnecessary delays. Increased runoff introduces contaminants or more sedimentation to the ecosystem. Increased nutrient loading could produce algal blooms and reduce available oxygen in the water. Any impacts to the physical characteristics of wetlands resulting from the construction and operation of the

¹⁹¹ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 63.

¹⁹² Id.

AGP and any associated appurtenances of land, water, air or light transformations must be included in any analysis.

One exceptional value wetland would be impacted by construction and operation of the Paoli Pike BAV resulting in the permanent loss of 0.01 acres, this wetland is also a recognized suitable habitat for the bog turtle.¹⁹³ FERC has failed to assess what the loss of this wetland will do to the surrounding ecosystems and what will result as a repercussion to this intrusion.¹⁹⁴

Adelphia also requested modifications to FERC's procedures to allow work within 50 feet of wetlands in Chester Creek, Paoli Pike, Schuylkill River, Perkiomen Creek, East Perkiomen Creek BAVs and at areas along the Tilghman Lateral and the Quakertown Compressor and Meter Stations. Adelphia claims that such modifications are needed due to the footprint of the existing pipeline and facilities. FERC allowed such intrusions subject to limited protective measures, yet FERC failed to adequately identify actual impacts and assess threats to endangered species whose habitat will be damaged as a result of the AGP.¹⁹⁵

Even taking FERC's Plans and Procedures as they are, some of the proposed AGP work is not in compliance with these Plans and Procedures. However, FERC still concluded that there would be no significant impact. For example, "Adelphia proposed a diversion ditch to manage storm water flow from the Transco Meter Station into a nearby wetland." Directing stormwater flow into a wetland is contrary to section VI.B.3.b of FERC's procedures.¹⁹⁶ FERC ultimately determined that Adelphia did not adequately

¹⁹³ Id. at 65.

¹⁹⁴ Id.

¹⁹⁵ Id. at 67.

¹⁹⁶ Id. at 61.

justify this proposal, yet pushes off till post-certification receiving documentation of alternative stormwater management methods that would not impact the wetlands. NEPA is supposed to allow the public access to the environmental information. FERC's decision postpones the receipt of an alternative to discharging stormwater into wetlands, contrary to one of the key purposes of NEPA.

In addition, portions of the Tilghman Lateral, the Paoli Pike and Schuylkill River BAVs and the permanent access roads to Cromby, Chester Creek, Paoli Pike and Schuylkill River BAVs will be within the Federal Emergency Management Agency 100-year floodplain.¹⁹⁷ Adelphia also plans to replace existing valves with BAVs, which would result in minor ground disturbance or burying the components; based on this, FERC concludes that "Project facilities would not discernibly alter the flood storage capacity of affected floodplains."¹⁹⁸ The information and analysis fails to account for the harm and impacts that could occur as a direct result of the project.

c. The EA Failed to Properly Assess the AGP's Potential Impacts to Endangered Species

Part of the NEPA process must include how the AGP would affect endangered species, including impacts on habitats, vegetation, reproduction, water quality, and other ecological impacts such as increased sedimentation of waterways, increased water temperatures, increased soil temperatures, multiple disturbances over time, mortality due to increased traffic, and impacts to groundwater recharge.

Species monitoring is an extensive process and the timeframe for conducting

¹⁹⁷ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 38.

¹⁹⁸ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 38.

these studies must not be cut short simply to satisfy Adelphia's desired in-service date. More time may be needed to study the true impacts to these threatened, rare, and endangered species, even now that FERC has approved the AGP.

FERC failed to carefully assess whether the AGP can proceed without disrupting protected species habitat or cause a "taking" of any federal or state protected species. It also failed to require mitigation for the loss of any habitat, including that any disturbed areas require compensation that will involve resources that have substantially the same values and functions as those impacted.

To illustrate, Phase 1 bog turtle surveys at wetlands within the project area were performed by NV5 Technical Engineering & Consulting Solutions. The EA states that suitable bog turtle habitat was identified at the Chester Creek BAV site and the Paoli Pike BAV site. The EA concludes that,

While we are assuming presence of bog turtles at these two BAV sites, and active construction could result in a take of bog turtles, we have determined that with the employment of a USFWS Recognized Qualified Bog Turtle Surveyor during construction and the limited amount of habitat that would be disturbed, construction and operation of the Project *is not likely to adversely affect* the bog turtle.¹⁹⁹

However, these recommendations are inconsistent with the bog turtle survey reports from NV5, Adelphia's bog turtle consultant. For the Chester Creek BAV, NV5 recommends that,

...if possible, work should be completed between November 1 and April 14 (weather dependent), which is outside of the bog turtle's active season.

FERC fails to include this seasonal timing restriction.

¹⁹⁹ AGP EA, p.82.

Further, the Chester Creek surveys *were incomplete* due to a lack of permission to access some of the wetlands. The bog turtle survey report states that,

NV5 did not have permission to survey the area adjacent to the access road and therefore conducted visual surveys only of this area from the access road itself...NV5 could not determine definitively if suitable bog turtle habitat exists in the area along the access road area due to lack of survey permission.

Access was also not granted to all wetlands at the Quakertown Metering Station Site. In addition, the Paoli Pike BAV site is classified as an Exceptional Value (“EV”) wetland because of its suitable bog turtle habitat. The majority of the Paoli Pike BAV workspace is located within the Action Area of potential bog turtle habitat. The Paoli Pike BAV and access road (AR-14.46-01) would temporarily affect 0.06 acre of suitable bog turtle habitat during construction, of which, 0.01 acre of emergent wetland habitat would be permanently lost within the footprint of the Paoli Pike BAV. While a 0.01 acre loss of habitat sounds small number, the existing suitable habitat itself is already very small, at only about an acre in size. In addition, the habitat is already fragmented by Paoli Pike to the south and a residential neighborhood to the west.

If a bog turtle population does exist at this site, it is likely to be small and highly stressed. Therefore, any additional loss of habitat, no matter how small, could be detrimental to its continued existence.

While assuming presence and utilizing exclusion fencing and a USFWS Recognized Qualified Bog Turtle Surveyor on site may assist with mitigating impacts to bog turtles *during* construction, it does nothing to address the permanent habitat loss that would exist *after* construction. Therefore, a Phase 2 presence/absence survey should be conducted to determine whether bog turtles are in fact present at this site. Without

knowing if bog turtles are present or if they are utilizing the habitat that would be permanently lost, it is impossible for FERC and Adelphia to know that the project is “*not likely to adversely affect the bog turtle.*”²⁰⁰

In addition, FERC failed to address the impacts to protected species of long-term impacts from the AGP, including post-construction increased forest edge and habitat degradation, and the adverse impacts of more noise, light, air, and heat impacts from the AGP, including the compressor stations.

Lastly, as to vegetation, FERC concluded that “[a]bout 60.6 percent (28.3 acres) of soils within the Project area . . . have a low revegetation potential.”²⁰¹ Further, “[r]evegetating areas affected by construction of the Project may be more difficult in areas with low revegetation potential.” It is unclear to what extent this affects protected species and their habitat. It is particularly a concern that areas around the Quakertown Compressor Station are designated as having low revegetation potential²⁰² when access to the Quakertown Metering Station was not granted for bog turtle surveys. This increases the risk that the bog turtle would be harmed, contrary to FERC’s conclusions and also the Endangered Species Act. This concern increases when the only solution if revegetation is not successful is, essentially, to keep trying.²⁰³

d. Construction at RCRA And Superfund Sites Poses An Unknown Threat to Groundwater and Local Water Bodies that FERC Failed to Adequately Identify, Consider, and Address

The EA first states that the AGP route crosses three known contaminated sites

²⁰⁰ Certificate Order, ¶ 179

²⁰¹ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 44.

²⁰² Certificate Order, ¶ 169.

²⁰³ Certificate Order, ¶ 169.

only along the Tilghman Lateral: two RCRA sites and one Superfund site, all which are still contaminated and undergoing clean up and remediation activities.²⁰⁴ However, the EA later identifies two more federal cleanup sites near the Mainline Valve 2 site, and seven sites under PADEP's Hazardous Sites Cleanup Activities, Storage Tank Cleanup Activities, and Land Recycling Cleanup programs that are all within 0.25 miles of the Tilghman Lateral.²⁰⁵ Below is a breakdown of the sites and issues in the current assessment.

The Congoleum Corporation Plant 3 is a 51 acre site approximately 10 feet from the Tilghman Lateral. In 2006, it completed the requirements for RCRA corrective action. Currently, institutional controls are in place restricting land and groundwater usage as heavy metals in the soil and groundwater exceed acceptable residential standards.²⁰⁶ Based on the site history and Adelphia's proposed plans at the site, "USEPA recommended that Adelphia develop a sampling plan" that includes the collection of numerous soil samples for analysis of heavy metals and volatile and semi-volatile organic compounds. Additionally, it was recommended that Adelphia research groundwater data from nearby Superfund sites to assess other analytes that should be tested. This data has not been collected. FERC cannot presume that such construction will not threaten the groundwater and environmental health in the area without the data having been collected to support such a conclusion.

The Metro Container Corporation Superfund site is a 10.4 acre site adjacent to the Tilghman Lateral at MP 2.6.²⁰⁷ It was added to the National Priorities List by the USEPA

²⁰⁴ Id. at 45.

²⁰⁵ Id. at 48.

²⁰⁶ Id. at 45.

²⁰⁷ Id. at 46.

in 2012. Soil and ground water at this site are contaminated with “polychlorinated biphenyls (PCB), inorganics, polycyclic aromatic hydrocarbons (PAH) and/or volatile organic compounds (VOCs).”²⁰⁸ The site has had multiple removal actions since 1988 to contain and remove contaminants, including a limited response action at the site from 2013-2014. The EA states that “**The Current extent of the contamination is unknown, as such there is potential for Project activities to expose contamination during construction.**”²⁰⁹ While there is consultation, nothing in the EA identified information that assures the public that contaminants can or will be contained. In fact, the only conclusions were that “there is low probability of workers encounters in site related hazardous substances at unsafe levels” and a list of “precautionary measures” recommended by the USEPA that Adelphia is yet to incorporate into the Sampling and Analysis Plan for the Tilghman Lateral (SAP). Again FERC and Adelphia are standing by claims of precaution and promises of no contamination without any true assessment of the property or facts to back up such claims.

The Monroe Energy sites is 350 acres and adjacent to MP 2.7 of the proposed Tilghman Lateral. USEPA initiated a RCRA Facility Assessment at the site in 1989 and investigation and remediation have been ongoing since 1991.²¹⁰ Human exposure and groundwater are listed as “controlled” and corrective actions remain ongoing at this sites. Yet the EA has no identification of how Adelphia is to assure that its construction activities will not result in any disturbance or exposure to contaminants at the site.

In addition, two contaminated sites were identified near Main Line Valve (MLV)

²⁰⁸ Id. at 46.

²⁰⁹ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 46. (emphasis added)

²¹⁰ Id. at 47.

2: The Foote Mineral Company Superfund Site and the Johnson Matthey-West Whiteland CIMC sites. Adelphia has concluded for both that it would not conduct soil or groundwater investigations; instead, it is relying on its Unanticipated Discovery of Contamination Plan. In other words, while Adelphia and FERC have evidence that dangerous substances could be released, rather than research and approach the situation with precaution, they have opted to take a wait and see approach. Where a result could be exposure to harmful contaminants for the workers on the AGP as well as the community and environment in the area, taking such a “we’ll deal with it if we find it approach” is reckless and fails to fulfill the requirements of NEPA, much less protect public health and worker safety.²¹¹

Finally, Adelphia is proposing to HDD by some of these sites, which presents the risks of inadvertent release of drilling fluids and mobilization of contaminants. FERC relies on the fact that Adelphia would simply implement its Inadvertent Return Contingency Plan (IRCP) in the advent of a release, which would assure that drilling returns are sampled, wastes are disposed of properly, and soil and groundwater sampling is conducted to assess the presence of contaminations at HDD entry and exit points. Yet, again, this takes a cleanup-after-the-fact approach, when contamination is harder to address, rather than a precautionary and calculated risk approach. Further, the current IRCP, the one used to evaluate the environmental impact of the AGP, “**does not address mitigation measure in the event of an inadvertent release in an area of existing contamination.**”²¹² This is a serious flaw, and undermines FERC’s reliance on the IRCP to address inadvertent returns after they happen, rather than preventing them. This lack

²¹¹ Id. at 47.

²¹² Id. at 50.

of informed assessment of the AGP's impacts and mitigation, as well as a conclusion of no significant impact, is based not on facts, but mere presumptions, which violates NEPA and fails to give FERC the information necessary to properly conduct its public interest balancing under the NGA.

5. Cumulative Impacts Assessment Must Consider Upstream Impacts of Reasonably Foreseeable Shale Gas Production and Downstream Impacts, including Reasonably Foreseeable Outcomes of the Transportation and End Use of Natural Gas, Including the Potential for International Exports

FERC also failed to address the full scope of impacts from the AGP itself, including its upstream and downstream impacts. While we focus below on the AGP, these types of impacts would also need to be addressed for each of the cumulative and similar actions that FERC failed to address, in addition to the projects discussed in the prior section. FERC did not address such impacts either together with the AGP.

For ease of organization, this Section IV.C.5 will focus on environmental impacts other than GHG emissions and climate change impacts, which will be discussed separately in Section IV.C.6. However, the effects discussed in Section IV.C.6 are part of the impacts discussed here that FERC failed to address – e.g. it failed to adequately assess and address the GHG emissions and climate change impacts of the AGP, including from upstream and downstream development, in addition to the impacts identified directly below.

a. FERC Ignored AGP-Induced Upstream Development

The AGP will result in new production of shale gas. Construction of the Project will cause industry to undertake and pursue new shale gas production – both by drilling new wells for production of shale gas and by pursuing production from wells that have

been drilled but for which production was not pursued due to lacking pipeline capacity. Determining the shale gas production that will be induced and supported by the AGP for delivery into interstate commerce is achievable using readily available data, methodologies, modeling, knowledge, resources and tools. Assessing the direct and indirect impacts from shale gas production and drilling that will result from construction of the AGP is required by NEPA.

FERC failed to properly consider the effects this Project will have on natural gas production. Upstream natural gas production, and its subsequent impacts, are among the “effects” that NEPA requires FERC to consider to determining whether its action will have a significant impact. NEPA’s implementing regulations defines “[i]ndirect effects,” as those “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”²¹³ The AGP’s takeaway capacity will necessarily lead to additional use of natural gas, with the consequences for its price, production, and use highly foreseeable. Courts have recently held that such “generally applicable economic principles,” as the relationship between the price of a good and its production and consumption, are “sufficiently ‘self-evident’” to “require ‘no evidence outside the administrative record.’”²¹⁴ The results of “generally applicable” economics are all the *more* foreseeable here because the administrative record does contain “evidence” specifically discussing them.²¹⁵

Upstream impacts on gas production due to FERC pipeline approvals, such as the

²¹³ 40 C.F.R. § 1508.8(b).

²¹⁴ Airlines for Am. v. Transp. Sec. Admin., 780 F.3d 409, 410-11 (D.C. Cir. 2015) (finding standing based on “basic proposition that ‘increasing the price of an activity ... will decrease the quantity of that activity demanded in the market’” (omission in original and citation omitted))

²¹⁵ See, e.g., DRN 2-28-19 Comments and Attachments.

AGP decision here, fit the model of the indirect effects that NEPA's implementing regulations describe, i.e. “growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate.”²¹⁶ Like impacts on gas production and use, “growth inducing effects” and “induced changes in the pattern of land use” reflect responses – generally, market-based – to changes in the supply and demand for various resources. Further reflecting the need to consider such impacts, NEPA regulations include “economic” as well as environmental impacts among those that FERC must consider.²¹⁷

For that reason, courts have consistently required that agencies extend the ambit of their analyses to include effects akin to those that FERC ignored here. The Eighth Circuit has addressed circumstances that closely parallel those here, holding that when an agency approves a rail-line extension that would result in “an increase in availability and a decrease in price” of coal, NEPA demands that the agency examine the environmental “effects that may occur as a result of the reasonably foreseeable increase in coal consumption.”²¹⁸ In Mid-States, the agency’s decision enabled an increase in the supply of coal to the domestic market; here, as described below, FERC’s AGP approval will enable an increase in demand for natural gas. In Mid-States, the agency’s decision had foreseeable effects on the price of coal, its production, and its use. There is no reason why that same requirement would not apply here also, given the market and other economic forces at work, as further described in DRN’s comments and in this rehearing request.

²¹⁶ 40 C.F.R. § 1508.8(b).

²¹⁷ 40 C.F.R. § 1508.8.

²¹⁸ Mid-States Coal. for Progress v. Surface Transp. Bd., 345 F.3d 520, 549-50 (8th Cir. 2003) (requiring that agency address air pollution resulting from increased coal use).

FERC’s AGP approval has foreseeable impacts on the price, production, and use of natural gas. In Mid-States, the Eighth Circuit held that the agency could not responsibly or lawfully ignore those effects under NEPA.²¹⁹ Likewise, neither can FERC do so here. Other Circuits have reached similar results. When authorizing a runway that would expand capacity and “spur demand,” the Ninth Circuit has held that the Department of Transportation must examine the increased usage that will result from that demand.²²⁰ The First Circuit has refused to let an agency construct a causeway and port, without examining the “industrial development” that would be enabled by that construction.²²¹ Those cases establish that when an agency like FERC approves infrastructure that will increase demand for a resource, it cannot ignore the effects of that increased demand.

Further, NEPA does not require agencies to consider only those effects whose specifics are known and certain. As the Eighth Circuit held, “when the *nature* of the effect is reasonably foreseeable but its *extent* is not ... [an] agency may not simply ignore the effect.”²²² Indeed, where an action's effects are not precisely known, the Council on Environmental Quality's regulations suggest that the action is more – not less – likely to warrant an environmental impact statement, which FERC refused to prepare.²²³ And,

²¹⁹ Id.

²²⁰ Barnes v. U.S. Dep't of Transp., 655 F.3d 1124, 1138-9 (9th Cir. 2011).

²²¹ Sierra Club v. Marsh, 769 F.2d 868, 877-79 (1st Cir. 1985). See also Friends of the Earth v. U.S. Army Corps of Eng'rs, 109 F. Supp. 2d 30, 39-40 (D.D.C. 2000) (invalidating agency decision approving casino, without considering economic development that would result).

²²² Mid-States Coal. for Progress, 345 F.3d at 549-50 (when agency permits rail extension that will increase “availability of coal,” it may not ignore “the construction of additional [coal-fired] power plants” that may result merely because agency does not “know where those plants will be built, and how much coal these new unnamed power plants would use”).

²²³ See 40 C.F.R. § 1502.22, 40 C.F.R. § 1508.27(b)(5) (intensity depends upon “[t]he degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks”); Found. on Econ. Trends, 756 F.2d at 154-55 (It is not “sufficient for the agency merely to state that the environmental effects are currently unknown,” because uncertainty is “one of the specific criteria for deciding whether an [environmental impact statement] is necessary”).

NEPA's implementing regulations provide detailed instructions as to how such uncertainty is to be addressed in an environmental impact statement.²²⁴

That the precise location of natural gas production is unknown, therefore, does not render such production unforeseeable, or allow FERC to dismiss its effects as insignificant. Yet, that is precisely what FERC has done.²²⁵

“It is well recognized that a lack of certainty concerning prospective environmental impacts cannot relieve an agency of responsibility for considering reasonably foreseeable contingencies.”²²⁶ Rather, “[a]t the threshold stage of the NEPA inquiry ... an agency must determine, to the extent feasible, whether the sum of all reasonably foreseeable effects, discounted by the probability of their occurrence, represent a ‘significant’ effect on the environment.”²²⁷ If so, the “agency must issue an [environmental impact statement] analyzing the probabilistic facets of the prospective environmental impact.”²²⁸

Here, widely accepted tools and methods are available to the Commission to demonstrate that additional drilling will be necessary to support the Project over the lifespan of its contracts, and to calculate the number of wells that will be needed to support the Project and where the new wells are likely to be located.

Pursuant to NEPA, FERC was required to include existing and reasonably foreseeable shale development/production that will be advanced, induced, and supported due to FERC’s approval of the AGP. Among the reasonably foreseeable actions whose

²²⁴ 40 C.F.R. § 1502.22(b) (specifying how agency should proceed when “the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known.”).

²²⁵ Certificate Order, ¶ 243.

²²⁶ Potomac Alliance v. U.S. Nuclear Reg. Comm'n, 682 F.2d 1030, 1036-37 (D.C. Cir. 1982).

²²⁷ Id.

²²⁸ Id.

environmental and community impacts must be considered include the construction, operation, and maintenance of shale gas wells that will be the source of the gas carried by the AGP, which will be carrying that gas in interstate commerce – both the new wells that will be constructed and the production that will be induced at pre-existing wells by the proposed AGP. The analysis of impact for these gas wells which will be producing gas for the purposes of delivering it through the AGP system in interstate commerce must include the associated gathering pipelines, access roads, gathering lines, compressor stations, and other supporting infrastructure which is necessary for the construction and development of these wells.

Shale gas production activities for delivery of gas into interstate commerce through the AGP are “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.”²²⁹ Therefore, FERC’s approval of this project is a legally relevant cause that will result in the induced new, expanded, extended, and ongoing production of shale gas through construction of new gas wells and increased production at pre-existing wells.²³⁰ FERC is obligated to consider these impacts in its NEPA analysis, which it refused to do.²³¹

FERC claims, *inter alia*, that the gas would be brought to market anyway because there is nothing in the record to say that it won’t be.²³² This is an absurd argument considering that FERC also claims,²³³ without citing any supporting authority besides its

²²⁹ 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)).

²³⁰ Sabal Trail, 867 F.3d at 1373.

²³¹ Certificate Order, ¶ 243.

²³² Certificate Order, ¶ 243

²³³ This contradictory framing is consistent throughout the entirety of FERC’s decision. On one hand, FERC claims the AGP is needed based almost exclusively on the existence of precedent agreements; that FERC has no obligation to examine the broader economic and market context in which AGP is being proposed (including pipeline overbuilding); and that the gas to be transported via the AGP will serve at

own statements, that the AGP is needed because “existing pipeline systems are fully subscribed and cannot provide additional capacity to the area that Adelphia is proposing to serve.”²³⁴ If the gas would flow regardless of the AGP, this undercuts the need for the AGP. The AGP itself is feeding gas into existing pipeline systems, so these lines are either fully subscribed, or they aren’t. FERC’s decision rests on both of these contradictory premises, and cannot stand. FERC’s reasoning also mirrors the reasoning that was invalidated in Mid-States, and likewise cannot stand.²³⁵ Further, assuming for a moment the existing systems are fully subscribed, which DRN disputes, for FERC to say the gas is going to come to market anyway means that FERC needs to address as part of its analysis the other recently-approved, pending, and proposed pipeline projects that intend to do just that. Yet, FERC dodges this too, as explained herein.

FERC likewise rejects the economic-based analysis and other information, set forth again below, that DRN illustrated to demonstrate how the AGP would induce more shale gas production.²³⁶ FERC’s response is that the information does not help it determine *where* more production would occur, and *how many* additional wells would result.²³⁷ Yet this is precisely what Mid-States refuted. Indeed, FERC is choosing to

least in part the greater Philadelphia area and Delaware via PECO and Delmarva’s systems. Yet then, when it comes to environmental decisionmaking, FERC claims that it does not have enough information about end users to even address downstream GHG emissions for almost the entire amount of gas to be transported in the AGP; and that it cannot address the significance of GHG emissions and climate change impacts because of the general lack of broader context and external standards. With this kind of repeated contradictory unpinning to its decision with the end goal of approving the AGP, FERC barely attempts reasoned decisionmaking and its decision is arbitrary and capricious as it simply ignores whatever it wants – case law, its own Certificate Policy, and even the information it relies on in other parts of its decisions – in order to reach a given result. “[A] game where the [agency] not only writes the rules but is permitted to constantly change them is the definition of arbitrariness.” Fla. Gas Transmission Co. v. FERC, 604 F.3d 636, 653 (D.C. Cir. 2010)(Brown, J., concurring in part, dissenting in part).

²³⁴ Certificate Order, ¶ 40; see also EA at p.178 (providing no references for its statement).

²³⁵ Mid States Coal. for Progress, 345 F.3d at 549.

²³⁶ Certificate Order, ¶ 243.

²³⁷ Certificate Order, ¶ 243.

remain willfully ignorant of basic economics, market principles and trends, and simple reality as to the proximity of pipelines and production regions (Northeast Pennsylvania being the closest) here to avoid accounting for upstream shale gas development induced by new pipeline capacity, and here, specifically the AGP. Indeed, even *Adelphia* casts itself as part of the pipeline building trend to transport Northeastern Pennsylvania gas,²³⁸ yet FERC chooses to ignore this too.

Through ignoring this obligation, FERC arbitrarily limited the scope of its review by failing to consider the readily-available and reasonably-attainable analyses, projections, and assumptions that would inform FERC of the extent of the induced natural gas production that will result from the project. This lack of analysis allows the agency to ignore the broad range of environmental and community harms (e.g. air, water, wetlands, habitat, forest, floodplain, water quality, drinking water supplies, health, safety, climate change) that are known effects of shale gas production, and in turn, to determine that the AGP will not have a significant impact on the environment. Yet, FERC's self-inflicted ignorance does not alleviate the agency of its obligation to undertake these assessments, or erase the fact that such impacts are reasonably foreseeable and likely to occur.

Analysts, experts, and modelers use the location of interstate transmission gas lines as a predictor of where gas production will take place. The reality of the industry is that gas is produced for transmission through interstate commerce, and that there is a direct relationship between the siting and construction of well pads and the location of existing or proposed interstate pipelines. FERC cannot be allowed to ignore and, as a

²³⁸ *Adelphia* January 11, 2018 Application, Concentric Report.

result, minimize these known impacts.

i. Pipelines Can Result in New Shale Gas Production and Drilling in Several Ways

Regardless of whether there is an actual need for the gas that would be transported in interstate commerce to the areas identified by Adelphia in its application, once the AGP is completed, there will be shale gas production that will feed the pipeline which could then redirect it to other markets such as to LNG export facilities that can take the gas overseas for sale to foreign nations and users.

While FERC continues to try and ignore the connection between natural gas infrastructure investments and increased production, for producers, industry experts, and other government agencies, the effect is clear.²³⁹ With limitations on the ability to deliver gas to high-value markets, the economics do not favor increased drilling. In recent years, due to low gas prices and constrained delivery systems, many drillers have cut back on drilling; total production in the Marcellus actually declined for the first time since the shale boom began in 2008.²⁴⁰

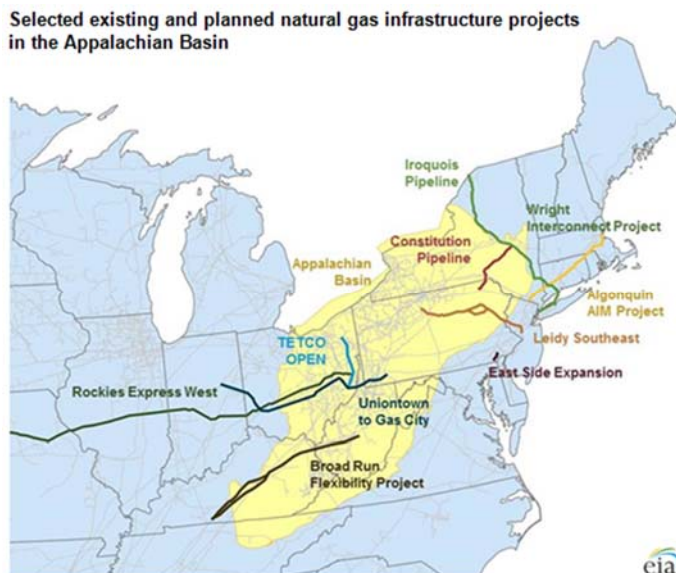
Currently, there are about 12 projects proposed or under construction that would either expand existing pipeline capacity or add new pipelines for the purpose of delivering shale gas from the Marcellus region into markets in the Northeast, South, and beyond.²⁴¹ The map below shows some of the recent proposals to expand take-away

²³⁹ Indeed, when it is convenient, FERC relies on upstream facilities to come to conclusions that favor approval. For instance, as further explained later in this rehearing request, FERC rejected electric compressors in part due to FERC's inability to determine the impacts of using electric compressors on power generation facility emissions, and in turn, what feedstock would be used.

²⁴⁰ Bloomberg. "America's Biggest Shale Gas Field Is Choking on Its Own Supply." October 14, 2015. Available at: <http://www.bloomberg.com/news/articles/2015-10-14/america-s-biggest-shale-gas-field-is-choking-on-its-own-supply>; EIA Drilling Productivity Report. August 2016. Available at: <https://www.eia.gov/petroleum/drilling/pdf/dpr-full.pdf>.

²⁴¹ Northeast Gas Association. "Planned Enhancements, Northeast Natural Gas Pipeline Systems". August 2016. Available at: http://www.northeastgas.org/pdf/system_enhance0816.pdf

capacity from the Marcellus (notably, this map does not include the AGP, PennEast or the Atlantic Sunrise pipeline projects).



*Reproduced from EIA, January 2016. Available at:
<http://www.eia.gov/todayinenergy/detail.cfm?id=24732>*

These new pipelines, including Adelphia, will unlock additional production potential in the Marcellus region, both directly by providing additional takeaway capacity from the region and indirectly by resulting in higher regional prices. Natural gas prices in the Marcellus region have been trading at a significant discount to national benchmark prices for several years, as discussed elsewhere in this comment. Growth in gas production slowed in Pennsylvania in 2015, and local prices dropped significantly.

As a result of the recent slowdown in production, there are numerous well sites that are permitted, but that have not yet been drilled. For example, a subsidiary of the Natural Fuel Gas Company, Seneca Resources, stated in a presentation to its investors earlier in 2016 that it had “[l]imited development drilling [in its Eastern Development Area in northeastern Pennsylvania] until firm transportation on [the proposed] Atlantic Sunrise (190 MDth/d) is available in late 2017” and that it had “50-60 remaining

Marcellus [drilling] locations” and “100-120 [Geneseo shale] locations” that could not be developed until that pipeline project was underway.²⁴²

Other producers in the region have similarly stated that they *require additional pipeline capacity to develop new production capacity*. Argus Media, a leading provider of data on prices and fundamentals for the natural gas industry, reported that “Antero Resources is waiting on the 3.25 Bcf/d Energy Transfer Rover pipeline to come online in the second half of 2017 before it increases drilling activity,” while “Northern Fuel Gas [in July 2016] said it was waiting on its own 475mn cf/d Northern Access to come online in the second half of 2017 before it raises its production levels.”²⁴³ Argus also reported that “Range Resources plan[ned] to drill a seven-well pad in the Appalachian shale region [in 2016], and could quickly drill up to 42 more laterals. The producer is expecting the 628mn cf/d (18mn m³/d) Spectra Gulf Markets project to facilitate some of its increased output when it begins flowing in the fourth quarter [of 2016].”²⁴⁴ In their 2015 Annual Report, Cabot Oil & Gas noted that drilling activity in the Marcellus region had been reduced to a single rig, in response to “the market environment.” Cabot further noted that the company plans to “exit 2016 with between 45 and 50 drilled uncompleted wells, which will allow for operational flexibility into 2017.”²⁴⁵ New pipeline capacity such as the AGP would enable producers like Cabot and other operators to complete additional wells and begin to further accelerate their production in the state.

²⁴² National Fuel. Investor Presentation: Q2 Fiscal 2016 Update April 2016. Slide 10. Available at: http://s2.q4cdn.com/766046337/files/doc_presentations/2016/April/20160428_NFG-IR-Presentation.pdf

²⁴³ Argus Media. August 29, 2016. “US gas producers boost output ahead of expansions.” Available at: <http://www.argusmedia.com/news/article/?id=1302610>

²⁴⁴ Id.

²⁴⁵ Cabot Oil & Gas 2015 Annual Report. Page 3. Available at: <http://www.cabotog.com/wp-content/uploads/2016/04/COG-2015-AR.pdf>

A report²⁴⁶ issued by the Greater Philadelphia Energy Action Team advocates for more pipelines in order to induce and support more and new shale gas production:

“In creating an Energy Hub, the goal, first and foremost, is to expand the market for the Marcellus/Utica natural gas and NGLs to increase the economic benefits that will come to the Commonwealth and the Greater Philadelphia region from more vigorous production... To achieve this goal, however, we need to expand the existing interstate and intrastate natural gas pipeline infrastructure.”

“Encouraging the industry to invest in new pipelines and in new distribution system infrastructure ... provides additional capacity for increased volumes of gas.”

Industry is advocating for pipeline capacity exiting Northeast Pennsylvania to grow by over 60 percent in the coming years in order to allow for drilling activity to resume. Adelpia will be a major component and facilitator of this expansion.

ii. Historical Drilling Activity Is an Accurate and Strong Indicator For New Wells.

As of August 2016, the state of Pennsylvania had 9,480 “active” unconventional natural gas wells.²⁴⁷ Active gas wells have been issued a permit, but may or may not have been drilled or be currently producing natural gas. Those wells are found largely in the counties located in the Northeast and Southwest regions of the state, which contain 83 percent of active wells.

Given the large number of wells that have been permitted but not drilled, one can reasonably expect that new natural gas wells will be drilled as a result of the AGP, and can reasonably predict their approximate location (e.g. region, geographic area).

²⁴⁶ Greater Philadelphia Energy Action Team, *A Pipeline for Growth*, March 30, 2016.

²⁴⁷ Pennsylvania Department of Environmental Protection. PA Oil and Gas Mapping. Accessed August 26, 2016. Available online at: <http://www.depgis.state.pa.us/PaOilAndGasMapping/OilGasWellsStrayGasMap.html>

DRN's comments on the PennEast Pipeline project DEIS provides more of an overview of the methods and an example of how historic drilling activity can be used to estimate the number and location of new wells.

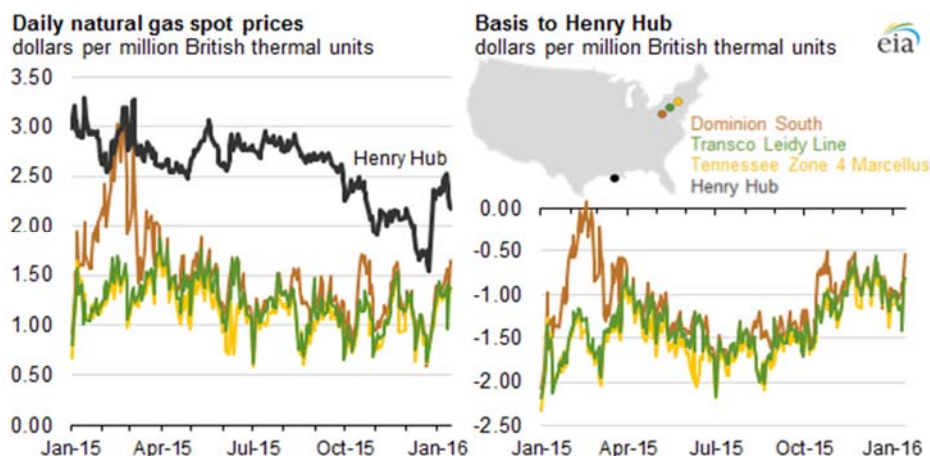
iii. The Upstream Analysis Must Analyze Natural Gas Pricing Impacts Due to the Construction of Additional Pipelines

As noted earlier, natural gas prices are lowest in the regions in which gas is produced. For many years, the lowest natural gas prices in the East were found at Henry Hub, located near the Gulf of Mexico where much of the natural gas in the United States was produced. With the increase in shale gas production in recent years, however, the lowest natural gas prices in the country are now found at trading points in and around the Marcellus and Utica shale plays in Pennsylvania, West Virginia, and Ohio. Availability of pipeline infrastructure to send natural gas to other regions has a direct impact on the price of natural gas in those regions—greater gas take-away capacity allows more natural gas to be produced. The improved access to higher priced markets via additional pipeline infrastructure will raise the price of natural gas in the producing region, which also will increase production.

Information on natural gas spot prices published in January 2016 by the U.S. Energy Information Administration (“EIA”) shows these market forces in action. While trading points in and around the Marcellus and Utica shale regions have been below the Henry Hub price in recent years, the EIA points out that, as of January 2016, the difference between these price points has narrowed due to the recent pipeline projects that have come online. That narrowing is shown in Figure 3 below.

Figure 3. Spread in Natural Gas Prices at Henry Hub and Marcellus Trading

Points



Source: US Energy Information Administration, based on Natural Gas Intelligence. Available online at: <http://www.eia.gov/todayinenergy/detail.cfm?id=24712>

Despite the eroding of the Marcellus basis differential in late 2015, towards close to \$1 per million BTU, that differential has persisted throughout 2016 and further increased. On August 29, 2016, natural gas in Northeast Pennsylvania was trading at \$1.30 per million BTU, while Henry Hub gas was at \$2.87—a \$1.57 differential.²⁴⁸

The narrowing of prices between the Henry Hub and Marcellus/Utica trading points in late 2015 may be due in part to the fact that producers in the Marcellus curtailed production of natural gas by approximately 1.2 Bcf/d as of November 2015 in response to weak prices resulting from the rapid growth of production in the face of pipeline constraints. Of the gas production that was curtailed, about 750 MMcf/d was in Bradford and Susquehanna Counties in Pennsylvania.²⁴⁹

Economics²⁵⁰ dictates that natural gas production is likely to increase as additional pipeline capacity is added to the region. Producers in the Marcellus Shale such

²⁴⁸ NGI Shale Daily, August 29th, 2016.

²⁴⁹ NGI's Shale Daily. Information on the Marcellus Shale. Available online at: <http://www.naturalgasintel.com/marcellusinfo>. Accessed on August 28, 2016.

²⁵⁰ NEPA decisions that are contrary to basic supply and demand principles are irrational. WildEarth Guardians v. U.S. Bureau of Land Mgmt., 870 F.2d 1222, 1236 (10th Cir. 2017).

as Seneca Resources and Cabot Oil & Gas have indicated that additional pipeline infrastructure is a cornerstone of plans to increase production in Northeast Pennsylvania.²⁵¹ In January 2016, Bentek Energy and the EIA noted a large backlog of natural gas wells that have been drilled but will not begin production until infrastructure (in the form of pipelines) becomes available to transport additional supply or until the price of natural gas increases. Bentek and EIA suggested that this backlog will allow production of natural gas in the Marcellus to increase quickly when new infrastructure projects are completed.²⁵² And so, in addition to advancing new drilling, additional pipeline infrastructure will advance gas production in wells that may have been drilled but from which the industry did not yet extract gas due to a lack of available pipeline infrastructure.

iv. The AGP Would Induce Significant and Predictable New Drilling Activity

The AGP boasts interconnections with Transco, TCO, and TETCO. Within the last several years, each of these systems have either built new pipelines (e.g. Transco's Atlantic Sunrise, TCO's East Side Expansion), expanded or upgraded existing systems (e.g. Transo Leidy expansions, TETCO Team 2014), and/or announced new projects (e.g. TETCO Greater Philadelphia Expansion)²⁵³ to move gas out of the Northeastern Pennsylvania shalefields to other states, the Philadelphia region, and abroad. Atlantic Sunrise is a prime example.²⁵⁴ With interconnections to all of these systems, there is

²⁵¹ Comments of Allegheny Defense Project before the Federal Energy Regulatory Commission on the Draft Environmental Impact Statement for Transcontinental Pipeline Company proposed Atlantic Sunrise Project. Docket No. CP14-138-000. June 2016. Page 22.

²⁵² US Energy Information Administration. 2016. *Spread between Henry Hub, Marcellus natural gas prices narrows as pipeline capacity grows*, Available online at: <http://www.eia.gov/todayinenergy/detail.cfm?id=24712>

²⁵³ AGP EA, p.157.

²⁵⁴ It is noteworthy that Adelphia's August 31, 2018 Amendment to flow an additional 75,000 Dth/d from

little question that the AGP will represent a significant fraction of the total new pipeline capacity moving gas out of the Northeastern Pennsylvania shalefields. A significant amount of existing gas production that has been curtailed will now come online for asserted customers as a result of the new pipeline. Permitted wells that were not previously completed would start producing gas for transport to Pennsylvania and Delaware markets through the AGP.

The total number of wells induced by any given pipeline depends on the lifetime production, or estimated ultimate recovery (EUR), from a given well. Wells in Northeast Pennsylvania provide up to 20 BcF of total lifetime production, according to a Range Resources presentation.²⁵⁵ There is significant variability across wells, and well decline rates—the decline in daily production over time after a well starts producing gas—have proven to be much more significant than initially estimated. However, there is a way for such information to be reasonably identified and included in the EA analysis and FERC’s decisionmaking, despite the fact that FERC continues not to do so, including in this matter. DRN provided an example of the methods used to calculate a project’s potential inducement of upstream impacts as part of its comments on the AGP (and in the PennEast matter), yet FERC has failed to address or attempt to use this method, writing off all upstream impacts instead.²⁵⁶

New shale gas development activity in the shalefields as a result of increased pipeline takeaway capacity and higher prices means added land, water, air, and

Zone North A (which connects to Transco’s system at its northern end) into Zone South came *after* Williams/Transco announced its prospective in-service dates for the Central Penn Line system. FERC Letter Order dated October 4, 2018, Docket Nos. CP15-138-000 and CP17-212-000.

²⁵⁵ Range Resources. EnerCom Oil & Gas Conference 21. August 15, 2016.

<http://ir.rangeresources.com/phoenix.zhtml?c=101196&p=irol-presentations>

²⁵⁶ DRN February 28, 2019 Comments on AGP Draft EA (Attachment #54 – DRN Comments on PennEast DEIS).

ecosystem impacts in those communities from new wellpads and wells, refracking of previously-drilled wells, and other new infrastructure to get the extracted gas to interstate natural gas pipelines. Fracking operations are known to have severe impacts on water quality including drinking water, air quality, property values, human health, public parks, farming and land use patterns. These impacts are known, quantifiable, and scientifically demonstrated through peer reviewed articles. For example, the *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking*²⁵⁷ is a fully updated and referenced scientific resource that can be used to assess the many direct and indirect effects of pipeline-induced-fracking.

It also means additional GHG emissions and associated climate change impacts that are attributable to the AGP. The GHG emissions and climate change impacts are discussed in Section IV.C.6.

b. FERC Significantly Downplayed and Ignored Downstream Impacts Relative to the AGP

As noted earlier in Section IV.A., and the fact that natural gas can sell at a significantly higher price overseas as compared to domestically, it is reasonably foreseeable that gas being shipped via the AGP may be exported. This is even despite the incomplete record in this matter resulting from FERC's failure to seek updated and more specific information about exports, as discussed in Section IV.A and IV.C.6.c. However, FERC failed to analyze the impacts associated with such exports. Given the lack of information in the record to fill out the picture on direct, indirect, and cumulative impacts from downstream uses, FERC's NEPA analysis is deficient and fails to provide FERC

²⁵⁷ *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking*, Physicians for Social Responsibility, March 2018, available at: https://concernedhealthny.org/wp-content/uploads/2018/03/Fracking_Science_Compndium_5FINAL.pdf

with information key to its public interest balancing under the NGA. Further, as discussed more in-depth in Section IV.C.6., FERC similarly abdicated its obligations as to downstream GHG emissions and associated climate change impacts.

6. FERC Failed to Properly and Fully Carry Out its Obligations under NEPA and the NGA Relative to Greenhouse Gas Emissions and Climate Change Impacts

Under the NGA, “Congress broadly instructed [FERC] to consider ‘the public convenience and necessity’ when evaluating applications to construct and operate interstate pipelines.”²⁵⁸ Part of this analysis also involves determining whether the AGP is “in the public interest.”²⁵⁹ Thus, to comply with the NGA, FERC must consider and weigh the climate-changing ramifications of the AGP and, prior to issuing a certificate, find that the AGP’s benefits outweigh its harms. Given that:

- science conclusively demonstrates that human release of greenhouse gas emissions including methane are a direct cause of climate change,
- that natural gas pipelines and compressors are directly and indirectly a source of climate changing emissions,
- that climate change has serious and significant environmental, economic and safety impacts, and
- that as a result of its harmful impacts on our communities and environment, climate change poses one of the most extreme existential threats facing humanity,

a fully-informed and comprehensive GHG emissions and climate change impacts analysis is crucial to determining whether further pipeline and infrastructure projects like the AGP are in the public interest.

Similarly, as with the above-referenced environmental impacts, NEPA requires FERC to fully consider direct, indirect, and cumulative effects of the AGP as to GHG emissions and climate change, including reasonably foreseeable effects and actions.

²⁵⁸ Sabal Trail, 867 F.3d at 1373.

²⁵⁹ Certificate Policy Statement.

“[T]he Commission’s Assessment will pass muster only if it undertook a ‘well-considered’ and ‘fully informed’ analysis of the relevant issues and opposing viewpoints.”²⁶⁰

“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.”²⁶¹ Under NEPA, FERC is legally obligated to quantify and to determine the impact of upstream and downstream GHG emissions, including to determine the *significance* of those emissions and their impact on climate change.²⁶² In order to determine whether an impact is significant, NEPA requires that FERC address both context *and* intensity.²⁶³ Intensity requires analyzing “the severity of impact.”²⁶⁴ Among other items that FERC is to analyze are the following:

The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

...

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action

²⁶⁰ Am. Rivers v. Fed. Energy Regulatory Comm’n, 895 F.3d 32, 49 (D.C. Cir. 2018); see also WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 58 (D.D.C. 2019)(quoting Sabal Trail, 867 F.3d at 1368).

²⁶¹ Sabal Trail, 867 F.3d at 1373.

²⁶² Sabal Trail, 867 F.3d at 1374; Mid-States Coal. for Progress v. Surface Transp. Bd., 345 F.3d 520 (8th Cir. 2003); see also San Juan Citizens All. v. U.S. Bureau of Land Mgmt., 326 F. Supp. 3d 1227, 1242-1244 (D.N.M. 2018)(citing cases); In re Enbridge Energy, Ltd. P’ship, 930 N.W.2d 12, 29 (Minn. Ct. App. 2019)(citing cases). If quantification is not possible, FERC must at least explain why, or make other reasoned assumptions or estimates. Sabal Trail, 867 F.3d at 1373-75

²⁶³ 40 C.F.R. § 1508.27

²⁶⁴ 40 C.F.R. § 1508.27(b).

temporary or by breaking it down into small component parts.²⁶⁵

On August 1, 2016, The Council on Environmental Quality (CEQ) issued final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. The final guidance directs federal agencies on how to consider a proposed action’s impacts on climate change—both in terms of the potential effects of *a proposed action on climate change* (by assessing the GHG emissions that would result *directly and indirectly* from the action) and in terms of the effects of *climate change on a proposed action and its environmental impacts*.

The guidance, building off of recent scientific assessments and conclusions, including the 2009 EPA finding that climate change impacts are “reasonably anticipated to endanger the public health and public welfare of present and future generations”, states that “Climate change is a fundamental environmental issue, and its effects fall squarely within NEPA’s purview.” While this guidance has been rolled back by the Trump administration,²⁶⁶ FERC still must, under NEPA, review the climate changing impacts of its decisionmaking, including its approval of the AGP.²⁶⁷ The rollback of the guidance does not change FERC’s NEPA obligation to consider the AGP’s GHG emissions and its upstream and downstream GHG emissions, the resulting climate change impacts of its pipeline infrastructure approval and potential mitigation and alternatives, and the impacts of climate change *on the AGP and its associated environmental impacts*. The U.S.

²⁶⁵ 40 C.F.R. § 1508.27(b)(4),(5), (7).

²⁶⁶ See Trump Executive Order.

²⁶⁷ *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*, Christina Goldfuss, Council on Environmental Quality, August 1, 2016.

Environmental Protection Agency has explicitly commented that FERC should consider impacts from the development and production of natural gas being transported through a proposed pipeline, as well as considering impacts associated with the end use of the gas, particularly with regards to GHG emissions and climate change effects.²⁶⁸

Generally, FERC has advanced only so far as addressing (sometimes) the downstream GHG emissions from the projects it approves, and providing at least some context to those emissions. However, it repeatedly refuses to address intensity, and refuses to address significance, under either context or intensity. FERC does so again here, while also violating the NGA and NEPA by entirely ignoring upstream GHG emissions and refusing to address nearly *all* downstream GHG emissions. It also inappropriately minimizes the GHG emissions and associated impacts from the AGP itself. In turn, by failing to address the significance of the AGP's GHG emissions and climate change, it fails to address mitigation and fails to properly consider alternatives, as discussed herein.

FERC's assessments relative to the AGP's GHG emissions and climate change impacts are overwhelmingly deficient. If FERC had conducted the legally appropriate, necessary and data driven assessment, it would have shown that that approval, construction, and operation of the AGP will have significant climate changing ramifications. FERC has still failed to fully, fairly, and accurately consider:²⁶⁹ 1) the GHG emissions of the proposed AGP itself; 2) *upstream* shale gas extraction and related

²⁶⁸ Detailed Comments on the DEIS for the Leach Xpress Pipeline and Rayne Xpress Expansion Project, United States Environmental Protection Agency, June 13, 2016.

²⁶⁹ For clarity, FERC did not conduct a full-burn estimate in this matter. Adelphia did, but, FERC did not even rely on it. Even if FERC had done a full-burn estimate or relied on Adelphia's, such an analysis would still underestimate the Project's GHG emissions due to reasons discussed below, including but not limited to leaks, and failing to address upstream induced drilling GHG emissions.

GHG emissions that will directly and indirectly be induced by FERC's AGP approval; 3) the *downstream* GHG emissions from its AGP approval; 4) the resulting climate change impacts associated with the AGP's GHG emissions, when considered properly as discussed herein, and, as appropriate, needed mitigation measures; 5) the potential for climate change to worsen environmental impacts associated with the AGP; and 6) the impacts of climate change on the AGP itself.

FERC's failure to fulfill its NGA and NEPA obligations are not minor either. "Natural gas systems are the single largest source of anthropogenic methane emissions in the United States", contributing approximately 40% of the anthropogenic emissions of methane.²⁷⁰ When emissions from production, transmission, and distribution alone (before adding combustion emissions) are considered along with the increase in shale gas wells over the next two decades, the methane emissions from the natural gas industry will increase, by as much as 40 to 60%.²⁷¹ Each project, like the AGP, that FERC approves, it adds to the incremental increase in GHG emissions – right at a time when world experts say we have very little time left to drastically *decrease* GHG emissions to avoid grave, irreversible impacts to our climate and in turn, to the communities around the AGP and the world. The United Nations IPCC Reports and the US 4th National Climate Assessment all make clear the grave consequences of climate change and reaching a 1.5 degree tipping point – the ramifications are to health, safety, our environment, and our economy.²⁷² NASA has determined, through its data gathering and research, that

²⁷⁰ R. Howarth, D Shindell, R. Santoro, A. Ingraffea, N. Phillips, A Townsend-Small, *Methane Emissions from Natural Gas Systems*, Background Paper Prepared for the National Climate Assessment, Reference number 2011-0003, Feb. 25, 2012, p.2.

²⁷¹ R. Howarth, D Shindell, R. Santoro, A. Ingraffea, N. Phillips, A Townsend-Small, *Methane Emissions from Natural Gas Systems*, Background Paper Prepared for the National Climate Assessment, Reference number 2011-0003, Feb. 25, 2012, pp.6,7

²⁷² *Special Report: Global Warming of 1.5 degrees C*, Intergovernmental Panel on Climate Change,

methane is responsible for about a quarter of the human induced climate effects and that the fossil fuel industry is responsible for most of the dramatic rise in methane emissions in the past 10 years.²⁷³ Pipelines and fracking are a big part of this equation.

Climate change poses an existential threat to our security, economy, environment, and, ultimately, the health of individual citizens. Unlike many of the challenges that our society faces, we know with certainty what causes climate change: It is the result of GHG emissions, including carbon dioxide and methane, which can be released in large quantities through the production and consumption of natural gas. Congress determined under the NGA that no entity may transport natural gas interstate, or construct or expand interstate natural gas facilities, without the Commission first determining the activity is in the public interest. This requires the Commission to find, on balance, that a project's benefits outweigh the harms, including the environmental impacts from climate change that result from authorizing additional transportation. Accordingly, it is critical that, as an agency of the federal government, the Commission comply with its statutory responsibility to document and consider how its authorization of a natural gas pipeline facility will lead to the emission of GHGs, contributing to the existential threat of climate change."²⁷⁴

The climate change impacts from FERC-approved projects' GHG emissions increases do not only contribute to climate change, but also serve as a catalyst for the release additional methane gas that compound the detrimental effects of these projects on our atmosphere. Scientists believe that, if the earth warms to 1.8°C above what it was between 1890 and 1910, such warming trigger a set of chain reactions that will result in increasing releases of methane to the atmosphere – largely released from the Arctic as a

Summary for Policymakers, 2018.

²⁷³ *NASA-led Study Solves a Methane Puzzle*, January 2, 2018, available at: <https://www.nasa.gov/feature/jpl/nasa-led-study-solves-a-methane-puzzle>

²⁷⁴ Statement of Commissioner Richard Glick on Texas Eastern Transmission, LP, FERC Docket No. CP18-10, July 19, 2018; see also Statement of Commissioner Cheryl A. LaFleur on Dominion Transmission, Inc., FERC Docket No. CP14-497-001, May 18, 2018.

result of melting permafrost – which, will in turn, cause increased warming and its associated impacts.²⁷⁵ Scientists posit that without immediate reductions in methane emissions and black carbon, our planet will warm to 1.5°C by 2030 and 2.0°C by 2045/2050, regardless of whether carbon dioxide emissions are reduced.

Another cascading and irreversible impact of climate change involves irreversible changes in ocean currents. The Atlantic serves as the engine for our planet’s conveyor belt of ocean currents. The Atlantic Meridional Overturning Circulation or AMOC is a massive amount of cooler water that sinks in the North Atlantic and stirs up that entire ocean and drives global circulation. When the Atlantic turns sluggish or stops, it has worldwide impacts and likely irreversible effects: the entire Northern Hemisphere cools, Indian and Asian monsoon areas dry up, North Atlantic storms get amplified, and less ocean mixing results in less plankton and other life in the sea.²⁷⁶ Paleoclimatologists have spotted times in the deep past when the current slowed quickly and dramatically, cooling Europe by 5 to 10 degrees C (10 to 20 degrees F) and causing far-reaching impacts on climate.

FERC-approved projects like the AGP, aside from contributing to climate change, are in turn affected *by* climate change. Climate change also affects and worsens the AGP’s economic and environmental impacts on landowners and communities.

However, in failing to progress to addressing the significance of the AGP’s GHG

²⁷⁵ R. Howarth, D Shindell, R. Santoro, A. Ingraffea, N. Phillips, A Townsend-Small, *Methane Emissions from Natural Gas Systems*, Background Paper Prepared for the National Climate Assessment, Reference number 2011-0003, Feb. 25, 2012, pp.1-2.

²⁷⁶ Hansen, J., M. Sato, P. Hearty, R. Ruedy, M. Kelley, V. Masson-Delmotte, G. Russell, G. Tselioudis, J. Cao, E. Rignot, I. Velicogna, E. Kandiano, K. von Schuckmann, P. Kharecha, A.N. LeGrande, M. Bauer, and K.-W. Lo, 2016: Ice melt, sea level rise and superstorms: Evidence for paleoclimate dat, climate modeling, and modern observations that 2°C global warming could be dangerous. *Atmos. Chem. Phys.*, <http://csas.ei.columbia.edu/2016/03/22/ice-melt-sea-level-rise-and-superstorms-the-threat-of-irreparable-harm/>

emissions climate change impacts, including from upstream and downstream GHG emissions, likewise failed to address the impacts of climate change on the AGP, and on the AGP's economic and environmental impacts.

a. FERC Improperly Minimized or Ignored GHG Emissions from the AGP Itself, Underestimating Climate Change Impacts Solely from the AGP

To appropriately address the GHG emissions and associated climate change impacts of the AGP itself, FERC needed to, at a minimum, address:

- the methane emissions along the approximately 93.3 miles of pipeline system, and
- the methane and other GHG emissions from the two proposed compressor stations, 7 blowdown assembly valves, 5 meter and regulator stations for interconnects, 2 mainline valve sites, and 4 pig launcher/receiver sites.

FERC also needed to use up-to-date data and science to conduct this analysis. FERC failed at these efforts.

i. FERC Used An Improper Time Frame And Global Warming Potential For Methane

FERC used a Global Warming Potential (GWP) of 25 for methane (CH₄) in its analysis. However, according to the USEPA, “Methane (CH₄) is estimated to have a GWP of 28–36 over 100 years.”²⁷⁷ As a result of FERC using the outdated GWP of 25, it seriously understated its GHG emissions calculations for the proposed AGP. It also would have underestimated any other GHG emissions it did calculate as part of its decision, such as the downstream GHG emissions associated with the combustion of natural gas at the Kimberly-Clark facility.

The current, EPA-accepted GWP range of 28-36 should be the figure used for all

²⁷⁷ Understanding Global Warming Potentials, US Environmental Protection Agency, available at: <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>

calculations associated with methane emissions for the AGP. FERC's failure to use the updated figures understates the associated GWP by at least 12% to **44%**. And that is *before* accounting for recent scientific developments that make the impacts of methane significantly more dire.

As for time frames, while previous estimates held that our planet may reach a temperature tipping point in anywhere from 18 to 38 years,²⁷⁸ the most recent 2018 United Nations Intergovernmental Panel on Climate Change Report – based on more than 6,000 scientific references from 91 authors across 40 countries – found that avoiding irreversible climate change disaster will only be achieved if global CO2 emissions decline “45% from 2010 levels by 2030.”²⁷⁹ “[R]apid, far-reaching and unprecedented changes in all aspects of society”²⁸⁰ is needed to achieve this. Given this 11-year timeframe for drastic needed action, a 20-year time frame is the most meaningful for current decisionmaking and thus needs to be the basis of such analyses.

If a 20-year time frame is used, the GWP of methane identified by the USEPA is between **84 and 87**. For purposes of assessing the climate changing impacts of approving the AGP, FERC needed to engage in a robust analysis that included the 20-year time frame and associated GWP for methane of 84 to 87.

If FERC had insisted on using the scientifically-inaccurate 100-year time frame, then it should have at least used EPA's GWP range of 28 to 36. At a minimum, FERC should have done an analysis that included both the 100-year and the 20-year time frame

²⁷⁸ R. Howarth, D Shindell, R. Santoro, A. Ingraffea, N. Phillips, A Townsend-Small, *Methane Emissions from Natural Gas Systems*, Background Paper Prepared for the National Climate Assessment, Reference number 2011-0003, Feb. 25, 2012.

²⁷⁹ *Special Report: Global Warming of 1.5 degrees C*, Intergovernmental Panel on Climate Change, Summary for Policymakers, 2018.

²⁸⁰ *Special Report: Global Warming of 1.5 degrees C*, Intergovernmental Panel on Climate Change, Summary for Policymakers, 2018.

with the GWP range of 28 to 36.²⁸¹ But in no instance was use of the GWP of 25 appropriate.

However, FERC rejected all this, stating that while “EPA acknowledged the [IPCC] Fifth Assessment Report could lead to more accurate assessments of climate impacts in the future,” EPA had not yet adopted that report as part of its regulatory framework, and EPA still relies on the IPCC’s Fourth Assessment Report.²⁸² FERC ultimately relied on regulatory consistency as the basis for using outdated science.²⁸³

Of the problems with this approach, two stand paramount. First, the data that DRN presented to FERC was part of the IPCC’s process toward a *Sixth* Assessment Report. In other words, the Fifth Assessment is likely to be outdated by the time EPA adopts it, if it ever does. Regulatory processes take *years*, not months. The IPCC, the global experts on climate change, say that we have approximately a decade to take drastic mitigation action to prevent *irreversible* damage to the only planet we know of that we can live on. Waiting for EPA to adopt science that is already outdated in order to more accurately assess the impacts of the actions that FERC is approving *now* is illogical. Second and relatedly, FERC cites regulatory consistency as the basis for continuing to use outdated science. While in some contexts, regulatory consistency arguments might hold more weight, they pale compared to the significant, scientifically-validated threat of irreversible changes to the world we live in within a span of (at this point) ten years. Indeed, if parts of Marcus Hook end up entirely underwater or repeatedly inundated by flooding, what use is a pipeline at that point? Indeed, the very purpose of NEPA is at

²⁸¹ See Sabal Trail, 867 F.3d at 1374-75 (discussing disclosure of “educated assumptions” underlying analyses as part of public process); WildEarth Guardians, 870 F.3d at 1235-38.

²⁸² Certificate Order, ¶ 256.

²⁸³ Id.

stake:

it is the continuing policy of the Federal Government . . . *to use all practicable means and measures* . . . in a manner calculated to foster and promote the general welfare, to create *and maintain conditions* under which man and nature *can exist* in productive harmony, and fulfill the social, economic, and other requirements of present *and future generations* of Americans.²⁸⁴

FERC's decision fails to comply with NEPA.

ii. FERC's GHG Emissions Estimates are Otherwise Flawed

The analyses that FERC did conduct as to the AGP itself still fail to properly account for the leaking and venting of methane throughout the pipeline system. Further, even if FERC based its GHG estimates on the Project's actual gas capacity, the figures "based on manufacturers' data and assumptions that the compressor station engines operate at full load for an entire year"²⁸⁵ would understate what should be the anticipated emissions as compared to what is being documented by current science for other pipeline infrastructure.

Natural gas leaks or other releases expels one of the most destructive climate change gases, methane, into our surrounding environment. "Natural gas systems are the single largest source of anthropogenic methane emissions in the United States", contributing approximately 40% of the anthropogenic emissions of methane.²⁸⁶ Methane emissions to the atmosphere during distribution of shale gas contributes to the fossil fuel climate-changing impacts of methane.

²⁸⁴ 42 U.S.C. § 4331(a)(emph. added); see also id. at 4331(b)(1).

²⁸⁵ AGP EA, p.127

²⁸⁶ R. Howarth, D Shindell, R. Santoro, A. Ingraffea, N. Phillips, A Townsend-Small, *Methane Emissions from Natural Gas Systems*, Background Paper Prepared for the National Climate Assessment, Reference number 2011-0003, Feb. 25, 2012, p.2

Large amounts of methane leak into the atmosphere during the “transport, storage, and distribution” phases of the natural gas delivery process especially during transmission through interstate pipelines like AGP.²⁸⁷ Even conservative estimates of leakage during gas transmission, storage and distribution have given a range of up to 3.6%.²⁸⁸ To combat these known effects, researchers “have found that methane leaks would need to be held to 2% or less in order for natural gas to have less of a climate changing impact than coal due to the life cycle of methane.”²⁸⁹ At leakage above 3.2%²⁹⁰ natural gas ceases to have any climate advantage over other fossil fuels. As discussed in this rehearing request, science is finding that the existing leakage rate during the production and/or transmission of shale produced gas is significantly higher than either of these numbers.

FERC’s decision fails to address this issue, despite noting that DRN commented with regard to it.²⁹¹

b. NEPA Requires FERC Consider The *Upstream* GHG Emissions of the AGP, Including Its Potential Contribution to Climate Change, Which it Failed to Do

As already discussed extensively above in Section IV.C.3. as to other environmental impacts, NEPA requires that FERC’s environmental review include

²⁸⁷ R. Howarth, R. Santoro, A. Ingraffea, (2011) *Methane and the greenhouse-gas footprint of natural gas from shale formations – a letter*, p.5, 6; see also U.S. EPA 1997. *Methane Emissions from the Natural Gas Industry*. USEPA National Risk Management Research Laboratory, June 1997, EPA-600-SR-96-080; R. Howarth, D Shindell, R. Santoro, A. Ingraffea, N. Phillips, A Townsend-Small, *Methane Emissions from Natural Gas Systems*, Background Paper Prepared for the National Climate Assessment, Reference number 2011-0003, Feb. 25, 2012., pp.3-4.

²⁸⁸ Howarth, R. W. (2014). A bridge to nowhere: methane emissions and the greenhouse gas footprint of natural gas. *Energy Science & Engineering*.; see also R. Howarth, R. Santoro, A. Ingraffea, (2011) *Methane and the greenhouse-gas footprint of natural gas from shale formations – a letter*.

²⁸⁹ *Switching from Coal to Natural Gas Would Do Little for Global Climate, Study Indicates*, UCAR/NCAR Atmos News, Sept 8, 2011.

²⁹⁰ According to the Environmental Defense Fund

²⁹¹ Certificate Order, ¶ 244.

consideration of the GHG emissions and associated climate change impacts that result from induced gas drilling. FERC has completely neglected this responsibility in its review of the AGP. However, FERC said:

“The extraction of natural gas in shale formations by hydraulic fracturing is not the subject of this EA, nor is the issue directly related to the Project”²⁹²

Even in response to scoping comments on the AGP “that upstream and downstream GHG impacts of the Project should be considered in the analysis,” FERC stated that:

“Downstream GHG emissions are addressed below; the development of natural gas and associated emissions are outside the scope of this EA.”²⁹³

FERC’s assertion that hydraulic fracturing and shale gas extraction/production is not “directly related to the Project,” does not excuse it from duty under NEPA to consider the “direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who has taken the actions.”²⁹⁴ The production of shale gas is, in fact, reasonably foreseeable and indirectly related to the AGP, and so too is the scope and extent of that production’s GHG emissions and associated climate change impacts.

FERC’s failure to address upstream GHG emissions and their climate impacts carries through to its approval of the AGP.²⁹⁵ It likewise, by ignoring upstream GHG emissions, also fails to address methane emissions during production. Methane is released to the atmosphere on multiple occasions during the shale gas extraction process. It has been estimated that “during the life cycle of an average shale-gas well, 3.6 to 7.9%

²⁹² Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 28.

²⁹³ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 132.

²⁹⁴ Council on Environmental Quality, *Considering Cumulative Effects Under the National Environmental Policy Act*, available at http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-ConsidCumulEffects.pdf.

²⁹⁵ See also Section IV.C.5.a. *supra*.

of the total production of the well is emitted to the atmosphere as methane.”²⁹⁶ Among most scientific findings it is believed that as much as 9% of the methane produced while drilling for gas is lost to the atmosphere.²⁹⁷ While a previous estimation that 4% was lost from the well fields had already raised alarm bells for many,²⁹⁸ the new figure of 9% should highlight the need for accountability.

FERC’s failure to consider the impacts of induced shale gas production is particularly troubling given that FERC has explicitly recognized in the context of *other* pipeline projects that “upstream development and production of natural gas may be a ‘reasonably foreseeable’ effect of a proposed action,” and that a new pipeline would “alleviate some of the constraints on...natural gas production.”²⁹⁹

The direct and indirect connection between FERC’s approval of shale gas infrastructure, GHG emissions, and climate change impacts resulting from *upstream* production of shale gas has also been recognized by at least two FERC commissioners.

Commissioner Glick recently stated:

It is particularly important for the Commission to use its “best efforts” to identify and quantify the full scope of the environmental impacts of its pipeline certification decisions given that these pipelines are expanding the nation’s capacity to carry natural gas from the wellhead to end-use consumers. Adding capacity has the potential to “spur demand” and, for that reason, an agency conducting a NEPA

²⁹⁶ R. Howarth, R. Santoro, A. Ingraffea, (2011) *Methane and the greenhouse-gas footprint of natural gas from shale formations – a letter*, p.7.

²⁹⁷ *Methane Leaks Erode Green Credentials of Natural Gas*, Nature International Weekly Journal of Science, Jan. 2, 2013. See also R. Howarth, R. Santoro, A. Ingraffea, (2011) *Methane and the greenhouse-gas footprint of natural gas from shale formations – a letter*; R. Howarth, D Shindell, R. Santoro, A. Ingraffea, N. Phillips, A Townsend-Small, *Methane Emissions from Natural Gas Systems*, Background Paper Prepared for the National Climate Assessment, Reference number 2011-0003, Feb. 25, 2012.

²⁹⁸ Id.

²⁹⁹ Draft Environmental Impact Statement for the PennEast Pipeline Project, FERC Docket No. CP15-558, July 2016, available at: <http://www.delawariverkeeper.org/sites/default/files/Climate%20Change%20%26%20Drilling%20Impacts%20Ignored%20Attachment%203%2C%20PennEast%20Pipeline%20DEIS%20at%204-285%2C%20FERC%20Docket%20No.%20CP15-558%2C%20July%202016.pdf>

review must, at the very least, examine the effects that an expansion of pipeline capacity might have on production and consumption. Indeed, if a proposed pipeline neither increases the supply of natural gas available to consumers nor decreases the price that those consumers would pay, it is hard to imagine why that pipeline would be “needed” in the first place.³⁰⁰

The only reason why FERC deems such impacts unforeseeable and “outside the scope” of their review is because the agency itself chooses to remain purposefully blind. This kind of doublespeak – that shale gas production is reasonably foreseeable but at the same time it is not reasonably foreseeable – is used by FERC to arbitrarily limit its review of impacts. In a recent order, FERC attempted to cement this contradictory policy in order to evade its legal review obligations by falsely asserting:

Even if a causal relationship between the proposed action here and upstream production was presumed, the scope of the impacts from any such production is too speculative and thus not reasonably foreseeable.³⁰¹

However, as Commissioner Glick clarified in his dissent:

The fact that the pipeline’s exact effect on the demand for natural gas may be unknown is no reason not to consider the type of effect it is likely to have. As the United States Court of Appeals for the Eighth Circuit explained in *Mid States*— a case that also involved the downstream emissions from new infrastructure to transport fossil fuels—“if the *nature* of the effect” (i.e., increased emissions) is clear, the fact that “the *extent* of the effect is speculative” does not excuse an agency from considering that effect in its NEPA analysis.³⁰²

³⁰⁰ Commissioner Glick’s dissent re Order Denying Rehearing for the Dominion Transmission, Inc. New Market Project, FERC Docket No. CP14-497-001, May 18, 2018, available at: <https://www.ferc.gov/media/statements-speeches/glick/2018/05-18-18-glick.asp#.XFis-KB7mM8>. (citations omitted)

³⁰¹ FERC Order Denying Rehearing for the Dominion Transmission, Inc. New Market Project, FERC Docket No. CP14-497-0001, May 18, 2018, available at: <https://www.ferc.gov/CalendarFiles/20180518111142-CP14-497-0011.pdf>

³⁰² Commissioner Glick’s dissent re Order Denying Rehearing for the Dominion Transmission, Inc. New Market Project, FERC Docket No. CP14-497-001, May 18, 2018, available at: <https://www.ferc.gov/media/statements-speeches/glick/2018/05-18-18-glick.asp#.XFis-KB7mM8>

Commissioner Glick has also noted that

In the case of new natural gas pipelines, it is reasonable to assume that building incremental transportation capacity will spur additional production and result in some level of combustion of natural gas, even if the exact details of the method or location are not definite. As the United States Court of Appeals for the Eighth Circuit explained in *Mid States*—a case that also involved the downstream emissions from new infrastructure for transporting fossil fuels—when the “nature of the effect” (end-use emissions) is reasonably foreseeable, but “its extent is not” (specific consumption activity producing emissions), an agency may not simply ignore the effect. [...] It is entirely foreseeable that natural gas transported through the Project will be combusted, emitting GHGs that contribute to climate change. [...] Under these circumstances, the Commission must consider the impact from climate change resulting from this likely end use.³⁰³ (citations omitted)

In fact, the relationship between FERC approved pipeline projects and upstream production is foreseeable, direct and demonstrable, as DRN has demonstrated throughout this proceeding and on the PennEast pipeline docket.³⁰⁴ In both the AGP EA and the PennEast Pipeline DEIS, FERC failed to consider the emissions and other harms that will result from the shale gas production necessary to fulfill the claimed “need” for the project and to carry the volumes of gas proposed. FERC continues that failure in its ultimate decision here.

As an example of the magnitude of these upstream impacts, the PennEast pipeline will likely induce the drilling of 3,000 new wells in Northeast Pennsylvania, Bradford, Susquehanna, Lycoming, and Tioga counties.³⁰⁵ Given recent estimates that “during the

³⁰³ Columbia Gas Transmission, LLC, 164 FERC ¶ 61,036, at pp.3,4 (Glick, Comm’r, dissenting in part; see also Northwest Pipeline LLC, 164 FERC ¶ 61,038, at pp.2-3 (LaFleur, Comm’r, dissenting in part)(stating that upstream impacts should have been addressed); see also id. (Glick, Comm’r, dissenting in part).

³⁰⁴ Comments on the DEIS for the PennEast Pipeline (FERC Docket No. CP15-558), Delaware Riverkeeper Network, September 16, 2016.

³⁰⁵ Comments on the DEIS for the PennEast Pipeline (FERC Docket No. CP15-558), Delaware Riverkeeper

life cycle of an average shale-gas well, 3.6 to 7.9% of the total production of the well is emitted to the atmosphere as methane”,³⁰⁶ FERC’s failure to consider the GHG emissions and climate changing impacts of the induced drilling operations and end uses of the gas that the AGP would deliver is significant.

FERC’s self-inflicted ignorance on the subject does not absolve FERC of its obligation to assess GHG emissions resulting from induced shale gas production associated with the AGP. Yet, FERC has again arbitrarily limited its review by failing to require the current, available, reasonable and attainable analyses, projections and methodologies that will inform FERC of the scope and extent of the reasonably foreseeable induced natural gas production and, from there, allow assessment of the anticipated resulting GHG emissions. Once the scope and extent of induced drilling is determined, FERC can, as it does with certain end uses, determine resulting levels of GHG emissions. Yet, it failed to do so as required by NEPA.

As Commissioner Glick explains in his dissent of the Dominion New Market Project certificate:

I believe that the NGA’s public interest standard requires the Commission to consider greenhouse gas emissions associated with the incremental production and consumption of natural gas caused by a new pipeline.

As an initial matter, the principal reason that the Commission does not have this “meaningful information” [about production and consumption of gas] is that the Commission does not ask for it. But NEPA does not permit agencies to so easily shirk their responsibilities to consider environmental consequences. Rather, NEPA requires that an agency “must use its best efforts to find out all that it reasonably can.” The Commission has several

Network, September 16, 2016.

³⁰⁶ Comments on the DEIS for the PennEast Pipeline (FERC Docket No. CP15-558), Delaware Riverkeeper Network, September 16, 2016.

opportunities throughout the pre-filing and formal application processes to issue a data request to the pipeline developer seeking information about the source of the gas to be transported as well as its ultimate end use. A simple data request would seem to fall easily within what constitutes the Commission's "best efforts." In the absence of any such efforts, the Commission should not be able to rely on the lack of "meaningful information" to satisfy its obligations under NEPA and the NGA to identify the reasonably foreseeable consequences of its actions.³⁰⁷

c. FERC Must Fully Consider The *Downstream* GHG Emissions of the AGP Including the AGP's Potential Contribution to Climate Change, which FERC Failed to Do

The D.C. Circuit Court of Appeals in Sabal Trail made clear that an analysis of the downstream impacts of GHG emissions is reasonably foreseeable and required pursuant to NEPA.³⁰⁸ It held that:

... greenhouse-gas emissions are an indirect effect of authorizing this [pipeline] project, which FERC could reasonably foresee, and which the agency has legal authority to mitigate. *See* 15 U.S.C. § 717f(e). The EIS accordingly needed to include a discussion of the "significance" of this indirect effect, *see* 40 C.F.R. § 1502.16(b), as well as "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." *See WildEarth Guardians*, 738 F.3d at 309 (quoting 40 C.F.R. § 1508.7).³⁰⁹

FERC has circumvented this obligation, as made clear by the plain language of NEPA and Sabal Trail, to consider the impacts of the downstream use of gas when approving

³⁰⁷ Commissioner Glick's dissent re Order Denying Rehearing for the Dominion Transmission, Inc. New Market Project, FERC Docket No. CP14-497-001, May 18, 2018, available at: <https://www.ferc.gov/media/statements-speeches/glick/2018/05-18-18-glick.asp#.XFis-KB7mM8>

³⁰⁸ Sierra Club v. FERC, 867, F.3d 1357, 1373 (D.C. Cir. 2017) ("... greenhouse-gas emissions are an indirect effect of authorizing this [pipeline] project, which FERC could reasonably foresee, and which the agency has legal authority to mitigate. *See* 15 U.S.C. § 717f(e). The EIS accordingly needed to include a discussion of the "significance" of this indirect effect, *see* 40 C.F.R. § 1502.16(b), as well as "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions," *see WildEarth Guardians*, 738 F.3d at 309 (quoting 40 C.F.R. § 1508.7))

³⁰⁹ Sierra Club v. FERC, 867, F.3d 1357, 1373 (D.C. Cir. 2017).

prior pipeline projects. In a blatant refutation of Sabal Trail, the FERC has previously issued the blanket determination that:

... 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) [...] 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.³¹⁰

However, this refusal to follow the law has come with regular dissenting opinions from both Commissioner Glick and Commissioner LaFleur, stating that:

pipelines are driving the throughput of natural gas, connecting increased upstream resources to downstream consumption. With respect to downstream impacts, I believe it is reasonably foreseeable, in the vast majority of cases, that the gas being transported by pipelines we authorize will be burned for electric generation or residential, commercial, or industrial end uses. In those circumstances, there is a reasonably close causal relationship between the Commission's action to authorize a pipeline project that will transport gas and the downstream GHG emissions that result from burning the transported gas. We simply cannot ignore the environmental impacts associated with those downstream emissions.³¹¹

As for the AGP, the downstream emissions that FERC *did* consider are too low, for the reasons already stated in Section IV.C.6.a. FERC also failed to fully address the downstream GHG emissions associated with methane leaks from the AGP.

However, the more significant problem with FERC's AGP analysis is that FERC avoided addressing almost *all* of the AGP's downstream GHG emissions (direct, indirect,

³¹⁰ Order Denying Rehearing for Dominion Transmission, Inc., FERC Docket No. CP14-497-001, May 18, 2018.

³¹¹ Statement of Commissioner Cheryl A. LaFleur on Dominion Transmission, Inc., FERC Docket No. CP14-497-001, May 18, 2018; See Footnote Number 6 in Statement of Commissioner Cheryl LaFleur on Millennium Pipeline, FERC Docket No. CP16-486, July 24, 2018

or cumulative) by claiming most downstream uses were not reasonably foreseeable. FERC's position is substantially problematic for several reasons, one being that it evaded its legal obligations as further described herein. However, FERC's position directly contradicts its position as to end uses when it was analyzing the "need" for the AGP. While FERC claimed that the AGP's end-users were uncertain and Adelphia's end user information was too "generalized" to rely on for purposes of GHG emissions and climate change analyses, FERC *relied on that same information to claim that there was "need" for the AGP, and could have sought more specific information from Adelphia.* In order to get around the D.C. Circuit's directive in Birckhead v. FERC,³¹² that NEPA requires that FERC "at least *attempt* to obtain the information necessary to fulfill its statutory responsibilities,"³¹³ FERC essentially said that whatever information it did obtain was too "generalized."³¹⁴ Aside from the fact that this is wrong based on the record, FERC should have asked for more specifics if the information was too general. Commenters in the record prompted FERC to obtain updated and more specific information on Adelphia's end uses of gas, which FERC did not do, including in regard to exports.³¹⁵ Thus, FERC failed to address GHG emissions and climate change impacts associated

³¹² 925 F.3d 510 (D.C. Cir. 2019).

³¹³ 925 F.3d at 520. Notably, FERC took the same approach here as it did in Birckhead. The only reason the D.C. Circuit did not reach the merits was that it found that the challengers failed to preserve the record development issue. That is not the case here. See, e.g. DRN's Comments in CP18-46-000 and CP18-46-001.

³¹⁴ Certificate Order, ¶ 249.

³¹⁵ Pipeline Safety Coalition, Sept. 11, 2019 Letter requesting that FERC obtain and make public "[t]he proposed Adelphia Project sites (ports, facilities, geographic locations) of delivery of fuels specific to domestic and export use." FERC claimed that the public had to request such agreements, (Certificate Order, ¶ 36 n.66), despite the fact that denial of access to such agreements is strongly likely. See City Of Oberlin, Ohio Request For Rehearing Of Issuance Of Certificate For The Nexus Pipeline And Request For Stay, pp.11, 12-14.

Further, FERC failed to update itself as to the status of Adelphia's agreements and information that originally, Adelphia claimed it didn't have (including whether gas would be exported). FERC cannot remain purposefully ignorant in order to avoid addressing issues.

with exports also.

In essence, FERC continues to seek any way it possibly can to avoid accounting for the direct, indirect, and cumulative impacts its pipeline approvals have on climate change, and in turn, our very survival as a human species.

In the words of Commissioner Glick:

The Commission once again refuses to consider the consequences its actions have for climate change. Although neither the NGA nor NEPA permit the Commission to assume away the climate change implications of constructing and operating this project, ***that is precisely what the Commission is doing here.***

In . . . authorizing [the AGP] . . . , the Commission continues to treat greenhouse gas (GHG) emissions and climate change differently than all other environmental impacts. The Commission again refuses to consider whether the Project's contribution to climate change from GHG emissions would be significant, even though it quantifies the direct GHG emissions from the Project's construction and operation as well as a fraction of its downstream GHG emissions. ***That failure forms an integral part of the Commission's decisionmaking:*** The refusal to assess the significance of the Project's contribution to the harm caused by climate change is what allows the Commission to state that approval of the Project "would not constitute a major federal action significantly affecting the quality of the human environment" and, as a result, conclude that the Project is in the public interest and required by the public convenience and necessity. ***Claiming that a project has no significant environmental impacts while at the same time refusing to assess the significance of the project's impact on the most important environmental issue of our time is not reasoned decisionmaking.***³¹⁶

As Commissioner Glick recognized, FERC acknowledged that the "Project would result in direct and downstream GHG emissions and would contribute to global increases in GHG levels."³¹⁷ Yet, then FERC almost entirely shirked its responsibility to calculate the

³¹⁶ Certificate Order, ¶¶ 1, 2 (Glick, Commissioner, dissenting in part)(emph. added)(footnotes omitted).

³¹⁷ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001,

downstream GHG emissions of the Project, while asserting demonstrably false justifications for this decision and claiming it did not have enough specifics about the end-users.

First, FERC absolutely had enough information on more end-uses of the gas to make “reasonable forecast[s],” and . . . educated assumptions about an uncertain future.”³¹⁸ Indeed, it did not even have to make much of a leap at all. In its own words, in order to find that there was need for the project (a key threshold consideration), FERC stated: “Here, Adelphia’s shippers will provide gas to a variety of end users, including local distribution customers, electric generators, and marketers,”³¹⁹ “A number of the project shippers are end users, which will locally distribute gas or use it to generate electricity.”³²⁰ In this context, FERC clearly felt that it had more than merely “generalized statements” to support project need and to reject assertions, although improperly, that AGP may transport gas for export.³²¹ Either FERC has enough information to find need, and in turn, to address the direct, indirect, and cumulative (including reasonably foreseeable) impacts of approving the AGP, or it has insufficient information to find need, in which case, we do not even get to the climate change issue. FERC cannot have it both ways, yet that is what it has sought to do here.

Taking FERC at its word for a moment that there is need for this project, which DRN disputes, the record is replete with specific information on end-users (in addition to the above-quoted statements) that FERC claimed it could not address GHG emissions for.

Accession No. 2019104-3005 at 132; see also, Certificate Order, ¶ 2 (Glick, Commissioner, dissenting in part).

³¹⁸ Sabal Trail, 867 F.3d at 1374 (referencing Delaware Riverkeeper v. FERC (“TGP NEUP”), 753 F.3d 1304, 1310 (D.C. Circ. 2014)).

³¹⁹ Certificate Order, ¶ 40; see also, e.g., id. at ¶¶ 49-50

³²⁰ Certificate Order, ¶ 39.

³²¹ Certificate Order, ¶ 249.

FERC's statements in the EA and the Certificate Order demonstrate FERC's willful ignorance and obstinacy when it comes to end-user emissions. Specifically, in addition to Kimberly-Clark, which FERC ultimately included in its analysis, FERC needed to address GHG and climate change impacts relative to the following known end users: PECO's system, Delmarva's system, Calpine Corporation's power plants, and the Monroe Refinery. FERC failed to address these at all. Even if no signed agreement were truly in hand at the time of the EA (or even when the FERC issued its Certificate Order), FERC had more than enough information to evaluate the resulting downstream GHG emissions and associated climate change impacts. It failed to do so.

For instance, in the EA, FERC claimed, that, of the additional increase in gas capacity that would be transported by AGP,

22.5 million cubic feet per day is subscribed by the Philadelphia Electric Company for an unspecified end use. Because the downstream emissions from the remainder of the southern portion of the Project are not designated to a specific user, and the end use of the natural gas is not identified by Adelphia, the downstream GHG emissions of the southern portion of the Project are not calculated."³²²

To say that there is an "unspecified end use" for the gas being delivered to PECO is absurd. It is reasonably foreseeable that gas shipped to PECO is going to be combusted in some fashion, whether it be residential, industrial, commercial, or some other use because, as FERC states, "PECO is a public utility owned by Exelon Corporation providing natural gas and electricity to customers in Pennsylvania."³²³ Thus, it is arbitrary and unreasoned to say that FERC cannot figure out the GHG emissions and

³²² Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 132; Certificate Order, ¶ 7.

³²³ Certificate Order, ¶ 6 n.11; see also id. at ¶ 39.

climate change impacts from the gas sent to PECO. Again, FERC could have estimated emissions, yet failed to do.

FERC continued with its faulty reasoning, stating:

The Parkway Lateral and Delmarva Meter Station, which are proposed to provide natural gas service to TETCO and Columbia, may serve Calpine Corporation's power plants; however, as of the time of the EA's publication no contract or precedent agreement exists to ascribe any particular capacity to this potential end user.³²⁴

Information on the record from Adelphia and end users, *some in direct response to FERC's information requests*, clearly demonstrates that these claims are misleading at best and outright false at worst.

First, as Clean Air Council noted in their comment on the EA, FERC's assertion regarding the Calpine power plants is disingenuous:

The Commission's description of the delivery of gas to the Calpine power plants also omits an important fact: the *purpose* of the Parkway Lateral is to serve the power plants. In Adelphia's July 27, 2018 Response to Staff Data Request Dated July 12, 2018, accession no. 20180727-5070, NJR writes, "The proposed interconnection on the Parkway Lateral will serve to directly connect the Adelphia system with two existing Calpine Corporation ('Calpine') power plants to provide such Calpine power plants with an alternative source of gas."³²⁵

Further, in Adelphia's December 3, 2018 response to a FERC information request, Adelphia stated, "The Parkway Lateral is *necessary* for Adelphia to make deliveries to *Calpine*, Texas Eastern, and Columbia."³²⁶ That same response made clear that Adelphia

³²⁴ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 132.

³²⁵ Comments on the Adelphia Gateway Project, Clean Air Council, February 1, 2019, available at: https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20190201-5223

³²⁶ December 3, 2018 Adelphia Response to Staff Data Request Dated November 20, 2018, p.2 (emph. added).

and Calpine were in the process of *finalizing* interconnection and service agreements.³²⁷ Adelphia's July 27, 2018 Response likewise made clear that the Parkway Lateral would serve Delmarva Power and Light Company ("Delmarva"), an electric distribution company like PECO.³²⁸ Its December 2018 response further demonstrated that negotiations were in their final stages. Thus, FERC should have included the Calpine power plants in its analysis, but did not.

As for the Tilghman Lateral, that new pipeline is specifically being built to interconnect with *PECO's system and the Monroe Refinery*.³²⁹ As already noted, it is reasonable to assume that the gas supplied to PECO's system will be combusted either by PECO itself to generate electricity, or by consumers. FERC also could have determined the emissions associated with the Monroe Refinery's use of the AGP-transported gas it was receiving. FERC failed here too.

FERC's implication that it would be speculative to assume that, at least some, of the gas delivered by Adelphia would be burned is clearly disingenuous based on these clear statements on the docket. Even Adelphia estimated in its Application materials that the Project would contribute an equivalent of 4,861,766 CO₂ metric tons of greenhouse gases per year, based off of the reasonable assumption that "all of the incremental increase in volumes of natural gas transported by the Project would be combusted for use as a fuel source."³³⁰

³²⁷ *Id.*

³²⁸ July 27, 2018 Adelphia Response to Staff Data Request Dated July 12, 2018, p.2; *see also* Certificate Order, ¶ 6 n.9 ("Delmarva is a public utility owned by Exelon Corporation (Exelon) providing natural gas and electricity to customers in Delaware and Maryland.").

³²⁹ Certificate Order, ¶ 6 & n.12.

³³⁰ Adelphia Gateway, LLC, Adelphia Gateway Project Resource Report 1 at 43. FERC Docket No. CP18-46, January 2018; at 24-43. As was the case for many project impacts estimated by Adelphia, this calculation was based on the Project's additional natural gas capacity prior to their Amended Application which increased the additional capacity of the project from 250,000 dekatherms per day of natural gas

As for the remaining gas that the AGP is moving through Zone South, specific end users are not required for the Commission to consider the reasonably foreseeable impacts of burning the gas being transported by FERC jurisdictional pipelines. As Commissioner LaFleur explains in her partial dissent of Dominion Transmission, Inc's New Market Project:

[P]ipelines are driving the throughput of natural gas, connecting increased upstream resources to downstream consumption. With respect to downstream impacts, I believe it is reasonably foreseeable, in the vast majority of cases, that the gas being transported by pipelines we authorize will be burned for electric generation or residential, commercial, or industrial end uses. In those circumstances, there is a reasonably close causal relationship between the Commission's action to authorize a pipeline project that will transport gas and the downstream GHG emissions that result from burning the transported gas. We simply cannot ignore the environmental impacts associated with those downstream emissions.

I agree that an identified end-use would enable the Commission to more accurately assess downstream GHG emissions by calculating gross and net GHG emissions as we did in Sabal Trail. *However, I reject the view that if a specified end-use is not discernible, we should simply ignore such environmental impacts.* In that case, we should disclose what we can, such as a full-burn calculation of GHG emissions.³³¹

However, ignore and assume away such impacts is precisely what FERC did here. In his dissent, Commissioner Glick states:

Once again the Commission takes the position that if it does not know the specific end-use of the natural gas, any associated GHG emissions are categorically not reasonably foreseeable. . . .

Here there are plenty of steps that the Commission could take to consider the GHGs associated with the Project's

along the pipeline system to 325,000 dekatherms per day

³³¹ Dominion Transmission, Inc. (New Market-- Upstate, NY): LaFleur 2018.5.18 (emph. added).

incremental capacity were actually inclined to take a ‘hard look’ at climate change. For example, we know that the vast majority, 97 percent, of all natural gas consumed in the United States is combusted. That fact on its own might be sufficient to make downstream emissions reasonably foreseeable, at least absent contrary evidence. After all, the D.C. Circuit has recognized that NEPA does not require absolute certainty and that “some educated assumptions are inevitable in the NEPA process.”³³²

In its review and approval of the AGP, FERC not only clearly misled the public in its characterization of the end use of the gas being transported by the project, it also failed to fulfill its NEPA duty to fully consider the impacts of the GHG emissions that would reasonably and foreseeably result from the project.

d. FERC Failed to Address the Significance of the AGP’s GHG Emissions as to Impacts on Climate Change, and In Turn, to Address Mitigation and Properly Address Alternatives

As stated by Commissioner Glick in his partial dissent to the AGP Certificate

Order:

The Commission once again refuses to consider the consequences its actions have for climate change. Although neither the NGA nor NEPA permit the Commission to assume away the climate change implications of constructing and operating this project, that is precisely what the Commission is doing here.

...

The Commission again refuses to consider whether the Project’s contribution to climate change from GHG emissions would be significant That failure forms an integral part of the Commission’s decisionmaking: The refusal to assess the significance of the Project’s contribution to the harm caused by climate change is what allows the Commission to state that approval of the Project “would not constitute a major federal action significantly affecting the quality of the human environment” and, as a result, conclude that the Project is in the public interest and required by the

³³² Certificate Order, ¶¶ 6-7 (Glick, Commissioner, dissenting)(footnotes omitted)(quoting Sabal Trail, 867 F.3d at 1374).

public convenience and necessity. *Claiming that a project has no significant environmental impacts while at the same time refusing to assess the significance of the project's impact on the most important environmental issue of our time is not reasoned decisionmaking.*

...

The Commission, however, insists that it need not consider whether the Project's contribution to climate change is significant because it lacks a method for ascribing discrete physical impacts to any particular level of GHG emissions. . . . *Based on this alleged inability to assess significance, the Commission concludes that the Project will have no significant environmental impact.* Think about that. The Commission is saying out of one side of its mouth that it need not assess the significance of the Project's impact on climate change while, out of the other side of its mouth, assuring us that all environmental impacts are insignificant. That is ludicrous, unreasoned, and an abdication of our responsibility to give climate change the "hard look" that the law demands.

...

[T]he Commission insists that it need not assess the significance of the Project's GHG emissions because it cannot tie a specific level of GHG emissions to a specific environmental impact. But the Commission does not explain why that excuses its failure to evaluate the significance of these emissions' contribution to climate change. . . .

...

The Supreme Court has held that, when a project may cause potentially significant environmental impacts, the relevant environmental impact statement must "contain a detailed discussion of possible mitigation measures" to address adverse environmental impacts. The Court explained that, "[w]ithout such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects" of a project, making an examination of possible mitigation measures necessary to ensure that the agency has taken a "hard look" at the environmental consequences of the action at issue. The Commission not only has the obligation to discuss mitigation of adverse environmental impacts under NEPA, but also the authority to condition certificates under section 7 of the NGA, which could encompass measures to mitigate a

project's GHG emissions.³³³

FERC failed to reach an informed decision about the climate ramifications of the AGP. Instead of conducting the assessment required by law, much less including the climate impacts of cumulative and similar actions discussed earlier, as is required to have an informed public process under NEPA, FERC merely generally discussed the types of climate change impacts that will burden the AGP's geographic area and the regulatory structure under the Clean Air Act.³³⁴ As noted by Commissioner Glick, FERC *assumes* that GHG emissions and associated climate change impacts from approval of the AGP would be cumulatively insignificant, yet does so without any rationale other than, illogically, that FERC cannot assess the significance of the very thing it said is insignificant. This is fully contrary to Sabal Trail and FERC's NGA and NEPA obligations. "In order for the agency's conclusions to be upheld, "an agency must 'examine[] the relevant data and articulate[] a rational connection between the facts found and the decision made.'" ³³⁵ FERC has not done this.

FERC's limited discussion of mitigation focuses on methane leak prevention and repair, which are necessary measures, but because of its flawed analysis, FERC failed to address or analyze mitigation for the inevitable combustion and other GHG emissions associated with the AGP and similar and cumulative actions. Such cursory analysis runs contrary to NEPA. As the D.C. Circuit held:

The effects an EIS is required to cover "include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes

³³³ Certificate Order (Commissioner Glick, dissenting in part)(internal citations, footnotes, and paragraph numbers omitted)(emph. added).

³³⁴ Certificate Order, ¶ 254. However, state and local regulatory requirements do not absolve FERC of its obligations to determine the significance of its actions. Sabal Trail, 867 F.3d at 1375.

³³⁵ See also WildEarth Guardians, 870 F.3d at 1237 (internal citations omitted).

that the effect will be beneficial.” 40 C.F.R. § 1508.8. In other words, when an agency thinks the good consequences of a project will outweigh the bad, the agency still needs to discuss both the good and the bad. . . .³³⁶

FERC continues to go out of its way to avoid seriously addressing climate change impacts from GHG emissions connected with the projects it approves, not just by disregarding their upstream and downstream GHG emissions, among other GHG emissions, but also by making no effort to identify a method it *will* use to measure a project’s climate change impacts.³³⁷ Under NEPA, meaningfully disclosing the AGP’s GHG emissions impacts as to climate requires the use or implementation of a tool beyond merely identifying physical changes in the environment attributable to an individual project’s emissions.

Yet, FERC repeatedly disregards one of the key tools presented to it³³⁸ – the Social Cost of Carbon (“SCC”) – claiming that it is not useful for NEPA purposes.³³⁹ Here, FERC asserted that the SCC “is not appropriate for use in our project-specific analyses” because it “cannot meaningfully inform the Commission’s decision whether and how to authorize a proposed project under the NGA”; because “the Commission does not use monetized cost-benefit analyses as part of the review under NEPA or the decision under the NGA”; and because “the SCC tool has methodological limitations.”³⁴⁰ It again

³³⁶ Sabal Trail, 867 F.3d at 1375; see also WildEarth Guardians, 870 F.3d at 1237 (“NEPA has two purposes: prevent uninformed agency decisions and provide adequate disclosure to allow public participation in those decisions.”).

³³⁷ Statement of Commissioner Richard Glick on Texas Eastern Transmission, LP, FERC Docket No. CP18-10, July 19, 2018.

³³⁸ See, in addition to DRN’s comments in this matter, e.g. DRN’s comments on dockets CP15-558 for the PennEast Pipeline and CP16-486 for the Millennium Eastern System Upgrade Project.

³³⁹ EarthReports, 828 F.3d at 956, retrieved from: <https://www.leagle.com/decision/infco20160715229>; Statement of Commissioner Cheryl A. LaFleur, dissenting in part, on Southeast Market Pipelines Project, FERC Docket Nos. CP14-554-002, CP15-16-003, CP15-17-002, March 14, 2018.

³⁴⁰ AGP EA, p.172.

adheres to that reasoning here.³⁴¹

In so doing, FERC ignored the analysis DRN specifically presented in this proceeding that debunked FERC's bases for rejecting the SCC, and that calculated the SCC of the AGP for FERC. While it remains DRN's position that it is not required to offer an alternative method to an agency with an obligation to figure out *some* way to address climate change impact significance, DRN also offered a specific other tool – ecosystem services modeling and evaluation/analysis – as another means of determining significance. FERC completely ignored this as well. Instead, it adhered to an arbitrary insignificance determination, violating the NGA and NEPA. FERC's refusal to use *any* tool or method to assess the significance of the AGP's climate change impacts makes its decision arbitrary and capricious, and not supported by reason. Likewise, by failing to assess significance, FERC failed to fully address mitigation as appropriate and necessary under NEPA and the NGA,³⁴² and could not properly address alternatives in the complete manner required by NEPA.

i. Social Cost of Carbon

The SCC is “a measure, in dollars, of the long-term damage done by a ton of carbon dioxide (CO₂) emissions in a given year.”³⁴³ The SCC is important for decision-making because it helps agencies more accurately weigh the costs and benefits of a proposed action. Importantly, it is a tool that would allow FERC to measure, in monetary terms, the climate change impacts from a proposed pipeline project's incremental addition of GHG emissions. This would allow FERC to more accurately fulfill its NEPA

³⁴¹ Certificate Order, ¶ 263.

³⁴² Certificate Order, ¶¶ 13-14 (Glick, Commissioner, dissenting in part).

³⁴³ EPA Fact Sheet, Social Cost of Carbon, December 2016, retrieved from: https://www.epa.gov/sites/production/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf

and NGA mandates, and to perform its NGA “economic test” of balancing the adverse impacts of a project against its benefits in order to determine whether the project is in the public interest.

a. FERC’s Claims Regarding The Social Cost Of Carbon Are Not Scientifically Or Economically Sound, Nor Legally Defensible

FERC’s AGP decision adopted the same reasoning that it has subscribed to repeatedly,³⁴⁴ yet was fully nonresponsive to DRN’s comments, which provided DRN’s expert report by Spencer Phillips, Ph.D., Economist & Principal of Key-Log Economics and Sonia Wang, Economist of *Key-Log Economics*. This report refuted FERC’s claims and also calculated conservative SCC estimates for FERC to use.

As context, in the AGP EA, FERC acknowledged that the SCC as a method for calculating the incremental impact of GHG emissions exists, stating that:

We recognize that the SCC methodology does constitute a tool that can be used to estimate incremental physical climate change impacts, either on the national or global scale. The integrated assessment models underlying the SCC tool were developed to estimate certain global and regional physical climate change impacts due to incremental GHG emissions under specific socioeconomic scenarios.³⁴⁵

Yet, FERC then went on to assert that the SCC “is not appropriate for use in our project-specific analyses” because it 1) “cannot meaningfully inform the Commission’s decision whether and how to authorize a proposed project under the NGA”; because 2) “the Commission does not use monetized cost-benefit analyses as part of the review under NEPA or the decision under the NGA”; and because 3) “the SCC tool has

³⁴⁴ Certificate Order, ¶ 263.

³⁴⁵ AGP EA, p.172

methodological limitations.”³⁴⁶

As the Key-Log Economics report explained:³⁴⁷

The first of these excuses is an admission that the writers do not have the capacity to make meaning out of SCC results. The second directly contradict the Commission’s policy on pipeline certification found at 88 FERC 61,227. And the first and third are absurd from an economic and scientific perspective. Facts about the residual adverse impacts of the Project are exactly what is meaningful to the Commission’s decision. If the FERC staff cannot present those facts in a meaningful way, they should add capacity, either on staff or via contractors, to do the Commission and the public the necessary service.

If the standard is to ignore economic information developed using any tools that have methodological limitations, then one would expect to not see the Commission employ estimates of the economic impact of natural gas transmission projects in its decision-making. (See Appendix A for details on the limitations of economic impact models.) While this EA does not explicitly state how it arrives at the conclusion (i.e., what data and models were used or what the methodological limitations of their methods might be), the EA does present information about direct employment changes during Project construction and operation, and it states that both construction and operation would have “negligible” impacts on employment/unemployment rates in the area.

In regards to the SCC’s “limitations,” Key-Log Economics further explained:

It is worth noting that many believe that the SCC *understates* the full economic cost of GHG emissions, a point that the [2009 Interagency Working Group on the Social Cost of Greenhouse Gases] concedes

At the time, some researchers and environmentalists criticized the Obama

³⁴⁶ AGP EA, p.172

The irony is that FERC’s Certificate Policy purports to rely on economic harms-benefits balancing, but yet FERC claims it cannot address economic/monetized harms because it does not engage in monetized cost-benefit analyses.

³⁴⁷ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February 2019 at 1-2.

number for being incomplete. It did not, for example, fully account for many plausible climate impacts like damage from increased wildfires or the loss of diverse ecosystems. In one survey of climate economists from 2015, 51 percent of respondents said the number was probably too low. Only 9 percent said it was probably too high.

—Brad Plumer, New York Times, 23 August, 2018

This criticism, FERC should note, does not suggest that the SCC has no value for decision making. Rather, it simply reinforces the notion that SCC produces *conservative* estimates.³⁴⁸

The 2009 Interagency Working Group on the Social Cost of Greenhouse Gases, who developed the assembled to develop the SCC estimates, explained the “limitations” similarly – the estimates are conservative, *not* that the estimates should be disregarded:

The models used to develop SC-CO2 estimates, known as integrated assessment models, do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research. *Nonetheless, the current estimates of the SC-CO2 are a useful measure to assess the climate impacts of CO2 emission changes.*³⁴⁹

FERC’s claim that it lacks the means to account, at least conservatively/partially, for climate change impacts is absurd. Commissioners Glick and LaFleur have repeatedly pointed this out – i.e. that FERC is incorrect in its claims that there is “no widely

³⁴⁸ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February 2019; at 5 (emph. added).

³⁴⁹ Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, 2016, emphasis added (as cited by New Key-Log report page 3, citations omitted); see also EPA Fact Sheet, Social Cost of Carbon, December 2016, retrieved from: https://www.epa.gov/sites/production/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf.

accepted standard to ascribe significance to a given rate or volume of GHG emissions”³⁵⁰ and that “it cannot ‘determine how a project’s contribution to GHG emissions would translate into physical effects on the environment.’”³⁵¹

The SCC does just that, which Commissioners LaFleur and Glick have recognized repeatedly.³⁵² The SCC can at a minimum provide FERC with a starting point. As EPA has stated, the SCC:

is meant to be a comprehensive estimate of climate change damages and includes, among other things, changes in net agricultural productivity, human health, property damages from increased flood risk and changes in energy system costs, such as reduced costs for heating and increased costs for air conditioning. However, it does not currently include all important damages.

....

The models used to develop [SCC] estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research. Nonetheless, current estimates of the [SCC] are a useful measure to assess the climate impacts of CO2 emission changes.³⁵³

As the Key-Log Economic report reiterates:

It is fundamentally important that those purporting to make

³⁵⁰ *Florida Southeast Connection, LLC*, 162 FERC ¶ 61,233, at p.3 (2018) (LaFleur, Comm’r, dissenting) (referencing ¶ 27 in certificate order); see also id. at p.5-8 (Glick, Comm’r, dissenting).

³⁵¹ Statement of Commissioner Cheryl A. LaFleur on Texas Eastern’s Texas Industrial Market Expansion Project, FERC Docket No. CP18-10, July 19, 2018, at p.2, referencing Texas Eastern Certificate Order at P 33; see also id. at p.4 (Glick, Commissioner, dissenting).

³⁵² Statement of Commissioner Richard Glick on Northwest Pipeline, LLC, FERC Docket Nos. CP17-441-000, CP17-441-001, July 19, 2018. See also Texas Eastern Transmission, LP, July 19, 2018, Docket No.: CP18-10-000; partial dissent on Columbia Gas Transmission, L.L.C., July 19, 2018, Docket No.: CP17-80-000; July 19, 2018, Docket No.: CP17-80-000; partial dissent of the Northwest Pipeline certificate order; Statement of Commissioner Richard Glick on Mountain Valley Pipeline, LLC, FERC Docket Nos. CP16-10-000 and CP16-13-000, June 15, 2018; Statement of Commissioner Cheryl A. LaFleur on Southeast Market Pipelines Project, FERC Docket Nos. CP14-554-002, CP15-16-003, CP15-17-002, March 14, 2018.

³⁵³ EPA Fact Sheet, Social Cost of Carbon, December 2016, retrieved from: https://www.epa.gov/sites/production/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf.

decisions about what is good and bad for society do so with a full set of facts. In this case, that means actually estimating and weighing the societal costs of the AGP. Completion of such an analysis would begin to make it possible that the Commission's later decisions on whether or not certify the project would be informed by relevant facts.

...

That information should include estimates of the full external costs of transmission projects, including the cost of GHG emissions associated with the projects, including both upstream and downstream emissions.³⁵⁴

“The fact that consideration of climate change is difficult does not alleviate our responsibilities under the Natural Gas Act (NGA) and NEPA to determine the significance of GHG emissions.”³⁵⁵ “The Commission cannot point to the mere presence of uncertainty over upstream and downstream GHG emissions to excuse it from considering the harm from the Project's contribution to climate change.”³⁵⁶

FERC has an obligation to use the available science and economic data, including the SCC's conservative estimates and, “in the face of indefinite variables, ‘. . . make educated assumptions about an uncertain future.’”³⁵⁷ FERC does none of this. This is despite DRN and other public stakeholders having demonstrated to FERC the ability to determine the magnitude of adverse impacts and their significance using the SCC's conservative estimates for three recently approved pipeline projects (Millennium's Eastern System Upgrade: **\$51.8 - 434.5 million**; the PennEast Pipeline: **\$301.8 - 2,339.0 million**; Atlantic Sunrise Pipeline: **\$466.5 - 3,615.1 million**).³⁵⁸

³⁵⁴ See Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February 2019 at pages 1 and 2, respectively. Citations omitted.

³⁵⁵ Statement of Commissioner Cheryl A. LaFleur on Texas Eastern's Texas Industrial Market Expansion Project, FERC Docket No. CP18-10, July 19, 2018.

³⁵⁶ Statement of Commissioner Richard Glick on Columbia Gas Transmission, L.L.C., FERC Docket Nos. CP17-441 and CP17-441-001No. CP17-80, July 19, 2018.

³⁵⁷ Statement of Commissioner Richard Glick on Texas Eastern Transmission, LP, FERC Docket No. CP18-10, July 19, 2018. See *Sierra Club v. FERC*, 867 F.3d 1357 (D.C. Cir. 2017) (No. 16-1329).

³⁵⁸ *The Social Cost of Carbon and the Adelpia Gateway Project*, February 2019.

b. Social Cost of Carbon of the AGP

Again here, while FERC has failed to use the SCC, DRN's experts have calculated a conservative range of SCC estimates to demonstrate to FERC the scale and significance of the costs at stake.

The SCC is a “scientifically-derived metric” to translate tonnage of carbon dioxide or other greenhouse gases to the cost of long-term climate harm,³⁵⁹ and remains generally accepted in the scientific community.³⁶⁰ Cost monetization, which the SCC provides, is appropriate and required where available “alternative mode[s] of [NEPA] evaluation [are] insufficiently detailed to aid the decision-makers in deciding whether to proceed, or to provide the information the public needs to evaluate the project effectively.”³⁶¹ Additionally, several courts and two of the five Commissioners have provided consistent support for using the SCC as a tool in the analysis of similar pipeline projects.³⁶² Even the U.S. Environmental Protection Agency has also recommended the use of the SCC in project review.³⁶³

Here, Adelphia estimated that the Project would contribute an equivalent of 4,861,766 CO₂e metric tons of GHG emissions per year, based on a “full-burn” estimate – i.e. the assumption that “all of the incremental increase in volumes of natural gas

³⁵⁹ PennEast Pipeline Rehearing Order (LaFleur, Comm'r, dissenting) at 4-5.

³⁶⁰ 40 C.F.R. § 1502.22(b)(4) (2018).

³⁶¹ Columbia Basin Land Prot. Ass'n v. Schlesinger, 643 F.2d 585, 594 (9th Cir. 1981).

³⁶² See, e.g., Mont. Env'tl. Info. Ctr. v. U.S. Office of Surface Mining, 274 F. Supp. 3d 1074, 1097-98 (D. Mont. 2017); High Country Conservation Advocates v. U.S. Forest Serv., 52 F. Supp. 3d 1174, 1190-91 (D. Colo. 2014); NEXUS Gas Transmission, LLC; Texas Eastern Transmission, LP; DTE Gas Company; Vector Pipeline L.P., 164 FERC ¶ 61,054 at P 61,340 (2018); PennEast Pipeline Rehearing Order (LaFleur, Comm'r, dissenting) at 6. (“[T]he Social Cost of Carbon provides a meaningful approach for considering the effects that the Commission’s certificate decisions have on climate change.”); Commissioner LaFleur, (“[T]he Social Cost of Carbon can meaningfully inform the Commission’s decision-making to reflect the climate change impacts of an individual project.”).

³⁶³ United States Environmental Protection Agency, Comments on FERC Docket No. PL18-1-000, Accession Number 20180621-5095 at 4–5, June 21, 2018.

transported by the Project would be combusted for use as a fuel source.”³⁶⁴ As was the case for nearly all project impacts estimated by Adelphia, this calculation was based on the Project’s natural gas capacity prior to Adelphia’s amended application, which increased the AGP’s capacity by 75,000 Dth/day.³⁶⁵

Adelphia casts this full-burn estimate as “a worst-case potential impact of this Project from a GHG emissions quantity perspective,” however, as Clean Air Council explains in their in their comment on the EA:

[Adelphia] calls this a worst-case scenario in terms of climate impact, but that is not the case. As noted above, methane is a much more potent greenhouse gas than carbon dioxide, which is what results when gas is burned. The worst-case scenario is that the gas leaks or is vented, rather than being burned. The most likely scenario is that most of the gas is burned and some of it leaks.³⁶⁶

Further, as explained throughout this rehearing request and DRN’s comment, a full-burn estimate would underestimate the AGP’s GHG emissions and associated climate change impacts by failing to account for: 1) leaking and venting of methane throughout the pipeline system; and 2) upstream GHG emissions. The full-burn estimate also does not account for cumulative or similar actions. Even so, FERC even rejected Adelphia’s full-burn estimate for the faulty reasoning discussed in Section IV.C.3. regarding downstream emissions, failing to address that full-burn estimate as part of the EA.³⁶⁷

DRN’s expert used information from the record to calculate an updated estimate

³⁶⁴ Adelphia Gateway, LLC, Adelphia Gateway Project Resource Report 1 at 43. FERC Docket No. CP18-46, January 2018

³⁶⁵ See Abbreviated Application for Adelphia Gateway, LLC, FERC Docket No. CP18-46, January 11, 2018; and Adelphia Gateway Project Amendment to Application, Docket No. CP18-46-001, Accession No. 20180831-5215

³⁶⁶ Adelphia Gateway, LLC, Adelphia Gateway Project Resource Report 1 at 43. FERC Docket No. CP18-46, January 2018

³⁶⁷ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 132.

of the additional natural gas capacity of the Project and the resulting incremental GHG emissions downstream³⁶⁸, and, as further explained in the report and summarized below, determined the AGP’s cost using the SCC to be over *\$91.4 million annually*. As DRN’s expert report explained:

For each year of AGP operation, this calculation yields an estimate of the cost to society of GHG emissions in that year, but in dollars that, due to the discounting (and to a lesser degree the adjustment for inflation) can make sense to decisionmakers today. If we sum those estimates across all years of operation (i.e., 2020 through 2050), we obtain an estimate of the total SCC for the AGP.³⁶⁹

Key-Log Economics further calculated the SCC of the incremental capacity added by the AGP over the 30-year operation period using “the 5% average, 2.5% average, and the 3% 95th percentile discount rate estimates provided by the 2016 interagency Working Group estimates, as well as the new estimates developed under the new interim guidance from the Trump Administration³⁷⁰,” in order to provide “a sense of the possible range of

²²⁴ See Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February at 5-6:

“If completed, the AGP will have result in the transport of a total of 850 million cubic feet (MCF) of natural gas per day. Some of this is existing capacity being acquired, and some is new capacity developed through the construction of pipelines, compressor stations, and other infrastructure (Federal Energy Regulatory Commission, 2019). Of this total, 325 MCF/day is new or incremental capacity created by the project. That includes an additional 250 MCF/day along the southern end of the existing mainline and an increase of 75 MCF/day along the northern segment.”

³⁶⁹ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February.

³⁷⁰ See Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February 5-6:

“In 2017, President Trump disbanded the interagency work group and tasked the EPA with producing new interim SCC numbers based only on damages occurring within domestic borders, and using 3% and 7% discount rates (Table 1) (Plumer, 2018 & U.S. Environmental Protection Agency, 2017). Clearly this directive results in radically lower estimates of the cost of each tonne of GHG emitted.

By focusing only on potential climate change related costs in the United States, the Trump Administration is ignoring the fact that climate change is a global issue and that emissions created in the U.S. have the ability to affect other global states and vice versa. If the U.S. disregards emissions impacts on other countries, the U.S. is setting the precedent for other countries to do the same (Plumer, 2018). Furthermore, the reality is that future climate change impacts will have an effect on the United States. According to the National Academy of Sciences, “Climate change in other regions of the world could affect the United States through such pathways as global migration, economic destabilization, and political destabilization” (National Academies of Sciences, 2017).

SCC effects due to the AGP”, finding that:

the SCC of the incremental capacity added by the project over the 30-year operation period ranges from **\$4.4 to \$40.0 billion** (2018\$). Under the Trump Administration’s new guidance, these estimates drop to a range of **\$0.3 to \$1.7 billion**.³⁷¹

But, as Key-Log Economics explains, “It is important to note that these are low estimates of what would be the actual social cost of carbon associated with the AGP, and why”:³⁷²

First, the methods here assume that each MCF makes it through the pipeline and is combusted for heating, power generation, or some other useful purpose. The reality is that some of the methane will leak from the pipes, valves, and other facilities, and some will be deliberately released during blowdowns at the compressor stations. Because methane is a GHG 86 times more potent than carbon dioxide in the coming decades run and 34 times more potent over the next century (Intergovernmental Panel on Climate Change, via Vaidyanathan, 2015), the leaks, blowdowns, and other fugitive emissions will have a much greater impact on climate change than will the CO₂ released as a product of methane combustion by its end users.

In addition, and to the extent that excess natural gas transmission capacity would induce the development, extraction, and delivery of more natural gas than would otherwise be the case. Thus the AGP would be responsible for some additional “upstream” GHG emissions. The upstream GHG/SCC effects of certifying the AGP, therefore, would include not only the GHG emissions

In the new interim SCC estimates, the EPA also uses different discount rates to estimate the future impacts of climate change. A discount rate is used to value costs and benefits across time, or in other words, what is the opportunity cost of spending money today to fight climate change impacts in the future. A higher discount rate, like the 7% discount rate used in the new interim SCC estimate, results in a lower social cost for carbon. Economists, however, argue that higher discount rates are not appropriate for addressing long-range problems like climate change because issues like ocean acidification or melting ice caps can have effects lasting centuries (Plumer, 2018).”

³⁷¹ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February; at 7, emphasis added

³⁷² Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February; at 7-8, citations omitted

associated with the use of the gas transported, but also those emissions associated with the extraction of the gas in the first instance.

Despite being low estimates, these calculations provide indispensable data with regard to FERC's environmental and public interest determination analyses. Indeed, FERC's Section 7 duty to consider the public interest is "broader than promoting a plentiful supply of cheap gas."³⁷³ Specifically, this economic test must "balance 'the public benefits against the adverse effects of the project.'" ³⁷⁴

Here, FERC has failed to use the SCC. The current record is inadequate for FERC to justify its decision under, and to comply with, the NGA and NEPA.

ii. FERC Rejected, Without Any Explanation or Use of Another Tool, An Ecosystem Services Analysis to Address the AGP's Climate Change Impacts from GHG Emissions

"Ecosystem services" is a term describing a phenomenon of "benefits that flow from nature to people."³⁷⁵ These benefits include tangible physical quantities, such as food, timber, clean drinking water; life support functions like assimilating waste that ends up in air and water or on the land; as well as aesthetics, recreational opportunities, and other benefits of a more cultural, social, or spiritual nature. By applying per-acre ecosystem service productivity estimates (denominated in dollars per acre per year) to various ecosystem service types, FERC could estimate ecosystem service value produced (or lost) per year in the periods before, during, and after construction of the AGP.

Yet, FERC has failed to use any of the existing resources, such as the

³⁷³ *Fla. Gas Transmission Co. v. FERC*, 604 F.3d 636, 650 (D.C. Cir. 2010); *see also* 15 U.S.C. § 717f(e) (2012).

³⁷⁴ *Sierra Club v. FERC*, 867 F.3d 1357, 1373 (D.C. Cir. 2017).

³⁷⁵ Delaware Riverkeeper PennEast Rehearing Request (quoting Key-Log Report); Comment on FERC Docket No. PL18-1 by Key-Log Economics, LLC, July 23, 2018.

methodologies outlined in *Federal Resource Management and Ecosystem Services* or *Best Practices for Integrating Ecosystem Services into Federal Decision Making*, to estimate the loss of ecosystem services related to AGP construction and operation for its NEPA or NGA review. Indeed, FERC openly failed to explain why, as part of its decision or the EA, why it failed to use these readily available tools.³⁷⁶ It simply ignored the fact that DRN offered it another tool, and failed to explain why FERC simply cannot find *any* tool or other mechanism to determine the significant of a project's GHG emissions and their climate change impacts. The only answer thus far appears to be that FERC simply does not want to take that step, which Commissioners LaFleur and Glick have repeatedly pointed out. However, that step is required under NEPA,³⁷⁷ and it is necessary to fulfilling FERC's NGA duties. Simply FERC disagrees with D.C. Circuit's decisions to the contrary is no excuse for failing to fulfill its obligations.³⁷⁸

Failing to consider ecosystem service losses means many of the economic consequences of environmental impacts, both climate change and GHG emissions impacts (as discussed in this Section) and otherwise (as discussed in Section IV.C.3. and more extensively in DRN's comments) have not been accounted for. FERC's willful ignorance of readily available analytical tools to inform a qualitative or quantitative assessment of the AGP's impacts violates its responsibilities under NEPA and the NGA and distorts the true impacts of the AGP.

e. FERC Failed to Address Climate Change Impacts on the AGP Itself, and on the AGP's Environmental and Economic Effects

³⁷⁶ Certificate Order, ¶¶ 262-263. *See Sierra Club v. FERC*, 867 F.3d at 1375.

³⁷⁷ *Fla. SE. Connection, LLC, et. al*, 162 FERC ¶ 61,233, pp.2-3 (LaFleur, Commissioner, dissenting in part).

³⁷⁸ *See, e.g., Fla. SE. Connection, LLC, et. al*, 162 FERC ¶ 61,233, ¶ 29; *id.* at pp.4-5 (Glick, Commissioner, dissenting); Certificate Order, Concurrence of Commissioner McNamee.

CEQ's 2016 GHG emissions and climate change guidance states that agencies should, among other issues, address "[t]he effects of climate change on a proposed action and its environmental impacts."³⁷⁹ Consistent with its treatment of GHG emissions and climate change impacts, as discussed above, FERC gave no consideration to how climate change would impact the AGP itself (including the goals and purposes the AGP seeks to serve), or how climate change would exacerbate the AGP's environmental and economic impacts. Thus, FERC violated NEPA and failed to conduct a proper public interest inquiry under the NGA.

For instance, AGP construction and operations are not immune to the effects of the changing climate in our region. However, nowhere does FERC address how climate change impacts the AGP itself.

As for climate change and its worsening of the AGP's impacts, again, FERC fails to address this. For instance, FERC continues to rely on its Plans and Procedures, including its upland erosion control plan, to downplay the AGP's impacts. Aside from the fact that DRN has already demonstrated how flawed these Plans and Procedures are, FERC has given no thought or analysis here to how climate change significantly disrupts or alters the effectiveness of the very Plans and Procedures FERC relies upon to find that there is no significant environmental impact. Climate change is making much of what FERC has relied upon irrelevant or significantly outdated, yet FERC still finds that there will be no significant impacts relative to the AGP.

7. Impacts Assessment for the AGP Incomplete and Cannot Support NEPA or NGA Compliance, or Approval of the AGP

Due to the above-listed failures, data gaps, conclusory statements, and other flaws

³⁷⁹ 2016 CEQ Guidance, p.4; see also, e.g., id. at pp.2, 20-22, 23, 24; DRN 2-28-19 Comments (pp. 41-42).

in FERC’s analysis, FERC’s EA and associated reasoning just for the AGP (before considering it together with cumulative and similar actions, or considering the impacts of the AGP’s foreseeable expansion, which FERC also failed to address) is highly deficient and cannot support the determinations that FERC has reached in support of its decision to approve the AGP, including determinations that it has complied with NEPA or that it has properly carried out its obligations under the NGA.

D. FERC’s Alternatives Analysis is Fundamentally Flawed

The various data gaps, analytical failures, and assumptions on which FERC’s decision is based, including as to climate change impacts, as detailed above, all substantially hindered a proper alternatives analysis under NEPA. Thus, FERC’s decision violates NEPA. Other problems with FERC’s alternatives analysis are detailed below and further demonstrate that FERC failed to take the requisite “hard look” at alternatives.

1. General Overview of Alternatives Analysis Requirements

“The CEQ regulations require agencies, in preparing an EIS or EA, to ‘[r]igorously explore and objectively evaluate all reasonable alternatives.’”³⁸⁰ An evaluation of alternatives is the “‘heart of the [EIS]’ or EA.”³⁸¹ The determination – by both agencies and courts – of whether an alternative is “reasonable,” is guided by the same “rule of reason”³⁸², which “necessarily governs both which alternatives the agency must discuss, and the extent to which it must discuss them.”³⁸³

³⁸⁰ National Parks Conservation Association v. United States, 177 F.Supp.3d 1, 17–18 (D.D.C. 2016) (quoting 40 C.F.R. § 1502.14(a)).

³⁸¹ Id.

³⁸² See Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 195-96 (D.C. Cir. 1991) (“CAB”); Theo. Roosevelt Conserv. P’ship v. Salazar, 616 F.3d 66, 73 (D.C. Cir. 2011) (“TRCP”).

³⁸³ Alaska v. Andrus, 580 F.2d 465, 475 (D.C. Cir. 1978) (emphasis added) vacated in part sub nom. W. Oil & Gas Ass’n v. Alaska, 439 U.S. 922 (1978); see also Hodel, 865 F.2d at 294 (“NEPA’s requirement of a

To start its alternative analysis, FERC identified the considerations that factor into their decision making. The first consideration is “whether or not [the alternative] could satisfy the [Project’s] stated purpose.”³⁸⁴ The second consideration is “feasibility and practicality” of the alternative (looking at economic and construction impacts).³⁸⁵ The final consideration evaluates whether the alternative “provides a significant environmental advantage” which “requires a comparison of the impacts on each resource as well as an analysis of impacts on resources that are not common to the alternatives being considered.”³⁸⁶ However, FERC failed to use these considerations to evaluate a wide variety of alternatives, and in turn, violated NEPA.

Further, the alternatives analysis “mandated by NEPA is to be an evaluation of alternative means to accomplish the general goal of an action; it is not an evaluation of the alternative means by which a particular applicant can reach his goals.”³⁸⁷ However, as discussed below, FERC did precisely that – in fact, it improperly narrowed the AGP’s purpose substantially even from *Adelphia’s* own characterization of the AGP’s purpose.

2. FERC Defined the AGP’s Purpose Too Narrowly, Effectively Eliminating Evaluation of Other Reasonable Alternatives

FERC cannot interpret the Project’s purpose and need so narrowly that every conceivable alternative is ruled out by definition.³⁸⁸ “[A]n agency may not define the

discussion of alternatives . . . should be superintended according to a ‘rule of reason’”).

³⁸⁴ *Adelphia Gateway Project Environmental Assessment*, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 175

³⁸⁵ *Adelphia Gateway Project Environmental Assessment*, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 175

³⁸⁶ *Adelphia Gateway Project Environmental Assessment*, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 175

³⁸⁷ *Van Abbema v. Fornell*, 807 F.2d 633, 638 (7th Cir. 1986); see also *Nat’l Parks & Conservation Ass’n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1070 (9th Cir. 2010) (“private interests” cannot “define the scope of the proposed project”).

³⁸⁸ See *Simmons v. U.S. Army Corps of Eng’rs*, 120 F.3d 664 (7th Cir. 1997) (cautioning agencies not to put forward a purpose and need statement that is so narrow as to “define competing ‘reasonable alternatives’ out of consideration (and even out of existence)”; *Nat’l Parks & Cons. Ass’n v. Bureau of*

objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality."³⁸⁹

However, FERC did just that in the EA's alternatives analysis section. FERC redefined and consequently narrowed Adelphia's stated purpose, ensuring that only natural gas projects could be considered in the alternatives analysis. It failed to "look hard at the factors relevant to the definition of purpose."³⁹⁰ According to the EA, the Project's stated purpose in the alternatives analysis is:

providing about 250 and 350 million cubic feet per day of natural gas per day on the northern segment of the existing mainline and the 20-in-diameter pipeline, respectively, as well as adding 250 million cubic feet per day of natural gas capacity on the southern segment of the existing mainline and including two new laterals. As proposed the Project would increase service to industrial facilities in the Philadelphia area, serve additional markets in the northeast US, and maintain service to existing power plants.³⁹¹

This definition of the Project's purpose is substantially stricter than the one articulated in the Purpose and Scope section in the beginning of the EA *and which factored into FERC's determination of project need.*³⁹² FERC disputes this, claiming that there was no substantial difference and that "[t]he applicant's statement of purpose and need informs the choice of alternatives," but Adelphia's statement describing the AGP's

Land Mgmt., 606 F.3d 1058, 1072 (9th Cir. 2009) (finding a purpose and need statement that included the agency's goal to address long-term landfill demand, and the applicant's three private goals was too narrowly drawn and constrained the possible range of alternatives in violation of NEPA).

³⁸⁹ Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 196 (D.C. Cir. 1991).

³⁹⁰ Id.

³⁹¹ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 175

³⁹² Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 2.

need was substantially broader.³⁹³ Such a sudden narrowing of the Project’s purpose for the alternatives section only ensured that the AGP would only be compared to other natural gas alternatives. Therefore, rather than FERC acknowledging the purpose is to provide energy, FERC converted the purpose to the provision of 250 million, 350 million, and an additional 250 million cubic feet of natural gas per day. Such a narrowing statement of purpose and need results in a failure to examine other viable system alternatives that would provide energy generally and undermines the NEPA process.³⁹⁴

In addition, FERC’s narrowing of the AGP’s need and purpose limited consideration of alternatives for converting and repurposing the 40-year-old Zone South zone, which many commenters asked FERC to reconsider due to the public health and safety risks that allowing continued use and conversion of an older pipeline can bring.³⁹⁵ Thus, instead of considering alternatives other than a natural gas pipeline, such as renewable energy (which could have eliminated some health and safety risks), FERC’s limited definition of the AGP’s purpose in the alternatives analysis ensured that the Zone South segment would still be a fossil fuel pipeline, just one now carrying natural gas and not oil.³⁹⁶

Additionally, the narrow description of purpose allowed for FERC to ignore other mechanisms for achieving energy goals in the region that are not shale gas dependent – such as implementation of increased energy efficiency strategies and renewable energy

³⁹³ Certificate Order, ¶ 101.

³⁹⁴ *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 234 F. App’x 440, 443 (9th Cir. 2007) (agencies cannot “define[] the objectives of the project so narrowly that the project [is] the only alternative that would serve those objectives”).

³⁹⁵ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 178

³⁹⁶ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 179

strategies such as solar, wind, geothermal, and environmentally protective hydroelectric power. Considering such alternatives is required by NEPA.³⁹⁷ Further, as discussed in the DRN's expert report from Key-Log Economics, submitted with DRN's comments:

Changes in energy markets due to energy efficiency gains and/or further market penetration by renewable alternatives to fossil fuels are reasonably foreseeable. For example, renewable energy accounted for 40% of new domestic power capacity installed (American Council On Renewable Energy, 2014), and the relative cost of producing power from renewable sources, which is already competitive, is falling (Randall, 2016; U.S. Energy Information Administration, 2016). Moreover, and as shown in Lander (2016), "there are 49.9% more resources available to meet peak day demand from local gas distribution companies in the region than is needed (p.9)." In light of these facts and related factors, FERC must consider alternatives that reflect the likely future reality in which the gas the PennEast pipeline would transport is not needed and/or is not a cost-effective choice for consumers or electric power generators. To do otherwise—that is, to focus narrowly on only transportation options—could lead to a federal action that imposes significant environmental effects and associated economic costs for no reason.³⁹⁸

Therefore, through this artificial act of narrowing the statement of purpose, FERC ensured that only the AGP offers the means of meeting the stated requirements and all alternatives are preordained to fail in comparison. Such a flawed alternative analysis review undermines the NEPA process.³⁹⁹

3. The EA Fails to Provide Proper Justification for Denying the Alternatives Discussed, Including the No Action Alternative

FERC's alternatives analysis was further and fundamentally flawed because it

³⁹⁷ See, e.g., *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991).

³⁹⁸ Key-Log Economics, LLC, *Economic Costs of the PennEast Pipeline*, January 2017.

³⁹⁹ *Env'tl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 234 F. App'x 440, 443 (9th Cir. 2007) (agencies cannot "define[] the objectives of the project so narrowly that the project [is] the only alternative that would serve those objectives").

arbitrarily limited the “no action” alternatives and presumes, with no facts, that if Adelphia is not afforded this opportunity to convert a pipeline, another pipeline will be built.⁴⁰⁰ The analysis assumes as true the characterizations of “need” made by Adelphia and other pipeline projects in the Northeast, despite the multiple analyses already on the record, as well as comments filed, in addition to this comment, that demonstrate there is no need for the AGP or another natural gas pipeline.

Although FERC claims that it cannot consider alternative energy sources,⁴⁰¹ in order to satisfy NEPA requirements, FERC should consider that, if the AGP is not built, market conditions particularly given the increased strength of the renewables sector could be an energy alternative to meet the supposed demand that exists and could be utilized. This small change could vastly alter the environmental impacts of the AGP.

Additionally, there are numerous existing natural gas transmission pipeline projects in the Project area that could be used as system alternatives as identified in the EA: Columbia, TETCO, Transco, Eastern Shore Natural Gas, and PennEast.⁴⁰² Yet FERC dismisses that they could replace Adelphia under the claims that that capacity of the projects cannot meet the supposed need that exists, which is why Adelphia should be built. However, as already noted in Section IV.C. above, these claims are not based in any evidence in the record, and are actually contradicted by the record, especially as to

⁴⁰⁰ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 176

⁴⁰¹ Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 174. (“USEPA and numerous other stakeholders regarding need to evaluate alternatives to the proposed Project, including alternatives not within the jurisdiction of FERC (e.g. use of renewable energy sources) and which would not meet the Project’s stated objections.”)

⁴⁰² Adelphia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 176; Many of the projects still have issues with need. See *The Art of the Self-Deal, How Regulatory Failure Lets Gas Pipeline Companies Fabricate Need and Fleece Ratepayers*, Oil Change International, September 2017.

PennEast. Further, these projects, as well as other projects, could be fabricating actual need⁴⁰³ or in the case of PennEast, in which NJR has a stake, servicing customers that PennEast might have served. However, FERC never examines this because FERC takes precedent agreements at face value rather than doing its due diligence of ensuring actual need exists through verifying shippers, market demands, and alternatives.⁴⁰⁴

By failing to sufficiently examine other alternatives outside of natural gas pipelines, FERC violates the NGA's overriding purpose "to protect consumers against exploitation at the hands of natural gas companies."⁴⁰⁵ However, despite this directive, FERC rejected all alternatives except the AGP in order to promote the pecuniary interests of the private parties involved. Thus, the alternatives analysis is factually and legally deficient.

4. The EA Failed to Adequately Consider Alternatives that Were Identified Because FERC Arbitrarily Limited the Facts and Analysis Provided for Each Alternative

FERC's alternatives analysis was also flawed because it limited its publicly-disclosed analysis to solely the alternatives for facilities that the public commented on.⁴⁰⁶ Further, the analysis that FERC did provide rested on conclusory statements and not actual evidence.

FERC arbitrarily limited the alternatives analysis "[c]oncerning alternatives for the compressor stations, meter stations, BAVs and MLVs" by mandating that in order for an alternative to the facility to be considered the public must have commented on it.⁴⁰⁷

⁴⁰³ *The Art of the Self-Deal, How Regulatory Failure Lets Gas Pipeline Companies Fabricate Need and Fleece Ratepayers*, Oil Change International, September 2017.

⁴⁰⁴ *The Art of the Self-Deal, How Regulatory Failure Lets Gas Pipeline Companies Fabricate Need and Fleece Ratepayers*, Oil Change International, September 2017.

⁴⁰⁵ *United Distrib. Co. v. FERC*, 88 F.3d 1105, 1122 (D.C. Cir. 1996) (citation omitted).

⁴⁰⁶ Certificate Order, ¶ 107.

⁴⁰⁷ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001,

Aside from the fact that this is a violation of NEPA's requirement to identify and consider alternatives without requests from the public to do so, DRN *did* identify the proximity of blowdowns in Chester in their scoping comment as an issue that should be addressed.⁴⁰⁸ DRN's comment should have prompted a discussion of potential alternatives that would not lead to locating these facilities so close together.

For the limited number of compressor stations, meter stations, BAVs and MLVs that FERC did take the time to consider, it arbitrarily denied the alternatives as infeasible despite the possibility that such alternatives would help to substantially reduce the environmental impacts of the AGP. For example, when considering the Quakertown Compressor Station alternatives, FERC was able to identify alternative sites away from residences, yet determined the additional construction entailed did not merit moving the compressor station.⁴⁰⁹ Similar to the Quakertown Compressor Alternative, when considering the alternative for Paoli Pike BAV, FERC again dismissed what could have been an environmentally-better alternative, simply because more construction may be entailed. In fact, throughout the analysis FERC relies on conclusory statements that claim any extra construction would make other benefits inconsequential. For example, the EA identifies that while alternatives "would avoid potential bog turtle habitat, to construct one of the alternatives, the amount of land disturbance would be doubled...."⁴¹⁰ and

Accession No. 2019104-3005 at 182 . "[b]ecause our alternative analysis are comment and resource driven, we have not evaluated alternatives for Transco, Monroe, and Tilghman Meter Stations, the Marcus Hook Compressor station, or five of the BAVs.

⁴⁰⁸ Comment Regarding Adelpia Gateway Pipeline Project- Scoping Period, Delaware Riverkeeper Network, June 1, 2018, pg. 33.

⁴⁰⁹ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 183. (Alternatives 1 and 2 "would also be further from residences" but are "non-developed sites.")

⁴¹⁰ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 192.

therefore not worth an adequate consideration.

Additionally, FERC’s evaluation of changing the electrical technology for the compressor stations was deficient and dependent on conclusory statements instead of facts. Changing from natural gas electricity generation to power lines at compressor stations could help alleviate the strain that the compressor stations would have on the communities where the compressor stations would be sited. However, ultimately, the reason FERC rejected the electric-driven compressor turbine alternative had more to do with the fact that “gas-driven engines are **generally preferred by operators** over electric compression for providing reliable, uninterrupted natural gas transmission because the fuel supply does not require a third party for operation....”⁴¹¹ This analysis is flawed because it elevated industry preference above a true alternatives analysis. Further, despite concluding in the EA that electric compressor were “technically feasible,” and that changing the form of electricity would lessen air emissions within the community,⁴¹² FERC ultimately rejected it also saying that it could not determine the impact of higher electrical loads at the compressor stations on the power generation facility emissions.⁴¹³ This is somewhat ironic considering that FERC, when evaluating GHG emissions and climate change impacts of the AGP, refuses to consider upstream emissions of natural gas production. Yet, here, when it comes to rejecting an alternative that would ease the burden on local communities, it relied on its inability to decipher upstream emissions (in addition to industry preference) in order to reject the electric compressor alternative.

E. FERC’s Decision Elevates Alleged Need, as Demonstrated Solely by Precedent Agreements, above All Other Costs Associated with the AGP,

⁴¹¹ Adelpia Gateway Project Environmental Assessment, Docket No. CP18-46-000 and CP18-46-001, Accession No. 2019104-3005 at 187. (emphasis added)

⁴¹² AGP EA, pp. 186-87.

⁴¹³ Certificate Order, ¶¶ 118-119.

Which it Ignores or Improperly Minimizes, in Violation of the NGA and NEPA

FERC’s NGA Section 7 duty to consider the public interest is broader than promoting a plentiful supply of cheap gas.⁴¹⁴ Rather, FERC must ensure “the [public] benefits of the proposal outweigh the adverse effects on other economic interests.”⁴¹⁵ FERC’s 1999 Policy Statement, additionally clarifies that the Commission should evaluate projects by:

balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will the Commission then proceed to complete the environmental analysis where other interests are considered⁴¹⁶

The record shows that the net costs resulting from the construction and operation of the AGP outweigh its alleged public benefits. FERC’s consideration of economic benefits and harms is unbalanced, inaccurate and deficient, and fails to fulfill the mandates of NEPA, NGA, or FERC’s Policy Statement to fully and fairly consider the public benefit, including the economic costs and benefits involved with the AGP.

As demonstrated in the attached reports by Key-Log Economics, DRN’s comments, the comments of others on the docket, and this rehearing request, the claims of economic benefit advanced by AGP and adopted by FERC are flawed and indefensible. Originally, FERC in the EA appeared to accept Adelphia’s overestimation of short-term job “creation” impacts and other impacts, while underestimating or

⁴¹⁴ See Fla. Gas Transmission Co. v. FERC, 604 F.3d 636, 649-651 (D.C. Cir.2010)(Brown, J., concurring in part and dissenting in part).

⁴¹⁵ AES Ocean Express, LLC, 103 FERC ¶ 61,030 at ¶ 19.

⁴¹⁶ Statement of Policy, FERC Docket No. PL99-3, September 15, 1999, retrieved from: <https://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>.

discounting entirely the costs of the AGP. In so doing, FERC failed to conduct a proper analysis of the project's costs and benefits through its "unqualified and uncritical acceptance of applicants' claims that new pipeline capacity will produce economic benefits; and FERC's equally unqualified and uncritical disregard for likely, significant, and economically costly external effects."⁴¹⁷

In its decision, FERC asserted that it did not rely on the above-described information, and could not verify the information either.⁴¹⁸ It said that it merely provided the information and made "no attempt to quantify the degree of impact on the local economies."⁴¹⁹

FERC also continues to significantly discount or otherwise ignore the economic impacts of pipeline projects on landowners and communities, as evidenced by its very short paragraph 24 basically stating that Adelpia has done what it can to minimize adverse impacts to landowners – although it does not directly address impacts to communities.⁴²⁰ FERC ultimately finds no significant environmental impact, yet that determination appears separate from its NGA determination, and fails to speak to the adverse economic impacts on landowners and communities from the environmental harms the AGP and similar and cumulative FERC actions have and will have. FERC continues to improperly isolate environmental impacts from their concomitant adverse economic impacts on landowners and communities, including environmental justice communities like Chester, and to ignore the associated economic toll repeated FERC-

⁴¹⁷ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February 2019.

⁴¹⁸ Certificate Order, ¶ 186.

⁴¹⁹ Certificate Order, ¶ 186.

⁴²⁰ Certificate Order, ¶ 24.

approved projects take on those same landowners and communities.⁴²¹ This is in addition to FERC’s arbitrary determination of insignificance regarding GHG emissions and climate change impacts about which it could not determine significance.⁴²²

Despite the NGA and NEPA, and despite FERC’s Certificate Policy, FERC’s AGP decision reflects that FERC ultimately elevates Adelphia’s purported need for the AGP, as demonstrated solely through contracts, above all other considerations. There is no true balancing here. This violates the NGA and NEPA, and is not focused on the public benefit at large, but simply the profits of those involved with the AGP. Indeed, the only benefit that FERC ultimately relies on is “reliable natural gas service”⁴²³ without any evidence that the existing services are unreliable, as already explained herein.

Among the many deficiencies in FERC’s decisionmaking are the following adverse impacts it ignored, among the other impacts described herein:

- “ecosystem service value as natural areas are converted from forests to shrublands, from open space to industrial zones, or from more to less productive agricultural land;”⁴²⁴
- recreation and ecotourism;
- future investment in open space preservation;
- the economic damage to agricultural crop production is overlooked as are harms to other businesses;⁴²⁵

⁴²¹ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelphia Gateway Project*, February 2019 (Appendix A, discussing, *inter alia*, externalities and economic costs of environmental impacts from FERC pipeline projects).

⁴²² WildEarth Guardians, 870 F.3d at 1237 (“In order for the agency’s conclusions to be upheld, ‘an agency must ‘examine[] the relevant data and articulate[] a rational connection between the facts found and the decision made.’”)(internal citations omitted). FERC articulated no rational connection regarding its insignificance determination as to GHG emissions and climate change impacts.

⁴²³ Certificate Order, ¶ 42.

⁴²⁴ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelphia Gateway Project*, February 2019.

⁴²⁵ We have learned from farmers, and it has been documented on the record, that crop production has gone down by as much as 30% when a pipeline cuts through farm crop lands. The EA also did not consider harms to other local businesses.

- “diminished property value within the high consequence area and evacuation zones surrounding pipelines and in the vicinity of new compressor stations;”⁴²⁶
- the costs to the community to respond to emergencies, to the increased stormwater runoff, pollution inputs, and other adverse impacts that could result from this project and be foisted upon the shoulders of local towns and residents;
- the health impacts to the residents who will be impacted by construction and operation of this project, including costs from medical and other health visits from compressor station air impacts;
- the distribution of economic impacts and Environmental Justice impacts; and
- “the cost of upstream and downstream greenhouse emissions that are facilitated by more natural gas transmission.”⁴²⁷

These costs could have been easily accounted for had FERC used an ecosystem services analysis or similar methodology.

Key-Log Economics has found through its analysis of at least five recent pipeline proposals before FERC that:

[t]hese costs, conservatively estimated, can run into tens of billions of dollars over their designed lifetime. See, for example, analyses done for the following projects to see the costs and methods used to calculate: the Mountain Valley Pipeline, PennEast Pipeline, and the Millennium Eastern System Upgrade project.⁴²⁸

By way of more specific examples, FERC ignored the many and varied economic harms that would result from the construction, operation and maintenance of the AGP, including the SCC of the AGP and the Ecosystem Service Values lost. Attached is a more detailed analysis of the many deficiencies that FERC systematically fails to

⁴²⁶ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelpia Gateway Project*, February 2019.

⁴²⁷ Id.

⁴²⁸ Id.

consider in its evaluation of pipeline projects,⁴²⁹ in addition to the AGP's SCC.⁴³⁰ As these conservative estimates make clear, the significant economic harms that would result from the AGP would clearly outweigh the supposed public benefits if FERC were to conduct a proper analysis.

F. The Environmental Assessment Prepared For the AGP is Woefully Inadequate and the AGP, Properly Considered Will Cause a Substantial Impact on the Environment and Requires an Environmental Impact Statement

FERC essentially claims that because its EA found that there would not be significant effects on the environment, no environmental impact statement ("EIS") is needed. This is circular logic because of the many flaws discussed herein, including particularly its failure to even address the significance of GHG emissions and associated climate change impacts, and then, in the face of such a failure, declaring without any basis that such impacts are not significant.

FERC's EA failed to fulfill its legal obligations under NEPA. It needed to prepare an EIS with an associated comment period and public hearings.

Under 18 C.F.R. § 380.6(a)(1-3), any authorization, certificate applications, or construction projects under section 7 of the Natural Gas Act are statutorily required to have an environmental impact statement. Adelphia is applying to convert and construct the Adelphia Gateway Project under section 7 of the Natural Gas Act and is therefore required to have an EIS.⁴³¹ FERC's response is that it can choose to prepare an EA if it thinks that a project may not have a significant impact on the environment.⁴³² In an ideal

⁴²⁹ Comment on FERC Docket No. PL18-1 by Key-Log Economics, LLC, July 23, 2018.

⁴³⁰ Key-Log Economics, LLC, *The Social Cost of Carbon and the Adelphia Gateway Project*, February 2019.

⁴³¹ 18 C.F.R. § 380.6

⁴³² Certificate Order, ¶ 87.

world, the EA would be a neutral analysis seeking to actually determine whether or not an EIS is needed. In reality, particularly given the significant gaps and analytical flaws in FERC's EA, the EA is a means to an end – a means to say that there is no significant impact on the environment anticipated.

The numerous unknown impacts here; the fact that PennEast and the AGP will be interconnected one way or another and need to be addressed together; the GHG emissions and associated climate change impacts that FERC improperly dismissed; and other gaps and significant impacts identified specifically in this rehearing request and also in DRN's comments illustrate that an EIS is required here. All of the information that an EIS could bring into FERC would better support any FERC decision's compliance with the NGA and NEPA, as Commissioner Glick notes, and better allow FERC to address, as it must, the climate change ramifications of the AGP approval.

Also, part of FERC's basis for finding no significant impact on the human environment is an assumption that, because companies say they will abide by FERC policies, FERC can assume that environmental impacts will not be significant.⁴³³ However, many recent experiences have shown that once certification is granted, pipeline companies tend to show little regard for the actual effects of the project on the surrounding environment and local communities. Rover Pipeline, Tennessee Gas Pipeline's 300 Line and Northeast Upgrade Projects, and Columbia's Line 1278 Expansion are merely a few examples, yet many more exist and DRN has provided documentation of such issues to FERC and other governmental agencies.⁴³⁴ Further, as

⁴³³ See, e.g., Certificate Order, ¶ 264.

⁴³⁴ See, e.g., DRN Comments on AGP EA, Feb. 28, 2019 (Attachment #10 (TGP, Columbia projects); Attachment #40 (TGP Projects))

noted earlier, project compliance with FERC's environmental policies has not been protective of the environment, and FERC's policies lack any accounting for climate change impacts – e.g. increased, unpredictable stormwater flows. Assumptions of compliance with policies and laws that have not been protective, and are not designed to be protective in our changing climate cannot serve as a basis to say that the AGP will not have a significant impact on the human environment.

In addition, as part of its comments, DRN identified a list of examples of deficiencies in the EA.⁴³⁵ These items appear to have been included as conditions on the Certificate Order. However, seeking this information *after* approval prevents the public from being involved in assessing and evaluating that information and its significance, contrary to NEPA. It places the burden on the *public* to keep checking in as to whether this information has been filed, rather than it being part of a comprehensive document, namely an EIS.

Based on these and the other issues identified in this rehearing request, FERC did not conduct the kind of independent, rigorous review anticipated or mandated by NEPA, and lacked key data to make reasoned determinations as to the significance of environmental impacts and, in turn, how those adverse impacts compared to Adelphia's purported need for the AGP. The contradictory statements in the EA also provide no reasoned support for FERC's conclusions and AGP approval. Thus, there is a need for a draft EIS that is subject to the rigors of the public process prior to advancement to the final EIS stage. Agencies that rely on the EA, such as the U.S. Environmental Protection Agency, or the PA Department of Environmental Protection, for evaluation or decision-

⁴³⁵ DRN 2-28-19 Comments, pp.93-94.

making purposes, are at a significant disadvantage and risk a legal challenge for relying on a document that fails to comprehensively address the AGP's environmental and economic impacts on landowners, communities, and the human environment in the path of the Project.

V. REQUEST FOR STAY

FERC has the authority under the Administrative Procedure Act, to stay its actions when “justice so requires.”⁴³⁶ In assessing a request for a stay, FERC considers: (1) whether the party requesting the stay will suffer irreparable injury without a stay; (2) whether issuing the stay may substantially harm other parties; and (3) whether the stay is in the public interest.⁴³⁷ Additionally, courts also take into account availability of a legal remedy to address the harm done, and likelihood of success on the merits.⁴³⁸

Here, justice requires the granting of DRN's request for a stay of the Certificate Order. Without a stay, the AGP will commence without the meaningful environmental analysis that NEPA requires and without the proper public interest determination that the NGA demands. DRN members who live, work, and/or recreate in the areas that the AGP will adversely impact will permanently lose important ecological resources, be subjected to new or expanded industrial activity even after construction is complete, or otherwise be irreparably harmed. Further, harm to the environment is almost always irreparable because such harm, “by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, *i.e.*, irreparable.”⁴³⁹

In contrast, if a stay were granted, Adelpia would, at most, experience a

⁴³⁶ 5 U.S.C. § 705 (2006).

⁴³⁷ See Ruby Pipeline, L.L.C., 134 FERC ¶ 61,020, at 15 (Jan. 12, 2011).

⁴³⁸ Virginia Petroleum Jobbers. v. FERC, 259 F.2d 921, 925 (D.C. Cir. 1958).

⁴³⁹ Amoco Prod. Co. v. Vill. of Gambell, 480 U.S. 531, 545 (1987).

construction delay, which may not even occur because Adelphia still lacks certain permits, including Pennsylvania Chapter 102 erosion and sedimentation control approvals. Indeed, it appears that Adelphia still lacks a Section 401 water quality certification from Pennsylvania, even though FERC approved the AGP without such certification, contrary to the plain language of 33 U.S.C. § 1341(a).

Lastly, a stay is in the public interest and the interest of justice. DRN raises substantial issues regarding FERC's compliance with NEPA and the NGA. Without a stay, Adelphia can commence the AGP without FERC having conducted a meaningful environmental analysis as NEPA requires, which in turn, negatively impacted FERC's public interest balancing under the NGA. Granting DRN's request for a stay will preserve existing environmental conditions pending review of the adequacy of a FERC's review, promoting the goals of NEPA and the NGA.

VI. COMMUNICATIONS

All communications regarding this rehearing request and request for stay should be directed to:

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VII. CONCLUSION

For the foregoing reasons, DRN respectfully requests that FERC grant DRN's request for rehearing, vacate the Certificate Order, and grant DRN's stay request.

Date: January 21, 2020

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I served a copy of the foregoing on this date on each person designated on the official service list for these proceedings.

Date: January 21, 2020

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