

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

Transcontinental Pipe Line Company, LLC

Docket No. CP15-138-000

**COMMENTS OF ALLEGHENY DEFENSE PROJECT, APPALACHIAN MOUNTAIN
ADVOCATES, CHESAPEAKE CLIMATE ACTION NETWORK, CLEAN AIR
COUNCIL, DAMASCUS CITIZENS FOR SUSTAINABILITY, HEARTWOOD, LOWER
SUSQUEHANNA RIVERKEEPER, AND SIERRA CLUB**

The following comments are provided on behalf of the Allegheny Defense Project, Appalachian Mountain Advocates, Chesapeake Climate Action Network, Clean Air Council, Damascus Citizens for Sustainability, Heartwood, Lower Susquehanna Riverkeeper, and Sierra Club (collectively, “Commenters”) regarding the Federal Energy Regulatory Commission’s (“FERC”) draft environmental impact statement (“DEIS”) for Transcontinental Pipe Line Company’s (“Transco”) proposed Atlantic Sunrise Project (“Atlantic Sunrise” or “Project”). Transco proposes to (i) construct 183.7 miles of 30- and 42-inch-diameter greenfield known as the Central Penn Line (“CPL”) North and CPL South in Pennsylvania; (ii) construct 11.5 miles of new 36- and 42-inch diameter loops known as Chapman and Unity Loops in Pennsylvania; (iii) replace 2.5 miles of 30-inch pipeline in Virginia; (iv) construct two new compressor stations (“CS”) in Pennsylvania; (v) increase compression at three existing CSs in Pennsylvania and Maryland; (vi) construct two new meter stations and three new regulator stations in Pennsylvania; and (vii) modify existing aboveground facilities in Pennsylvania, Virginia, North Carolina, and South Carolina to allow for bi-directional flow and the installation of supplemental odorization, odor detection, and/or odor masking/deodorization equipment.

FERC’s decision to grant a certificate to construct the Atlantic Sunrise Project is a “major Federal action” within the meaning of the National Environmental Policy Act (NEPA), and it

must be preceded by the preparation of an Environmental Impact Statement (EIS). 42 U.S.C. § 4332. FERC's EIS must address:

(i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between the local short-term uses of the project as compared to the long term use of the land, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

42 U.S.C. § 4332. Under NEPA, “agencies [must] take a ‘hard look’ at the environmental effects of their planned action.” *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989). Pursuant to the Administrative Procedure Act (APA), reviewing courts are to set aside as arbitrary and capricious any major Federal action that is taken without the requisite “hard look” at the relevant factors in an EIS. 5 U.S.C. § 706(2)(A). FERC’s analysis in the DEIS for the Atlantic Sunrise Project fails to meet NEPA’s standards in several ways and must be significantly improved or FERC’s decision will be subject to vacatur under the APA.

COMMENTS

I. FERC’s purpose and need statement and range of alternatives are inadequate.

FERC failed to provide the legally required purpose and need statement in the DEIS. The Council on Environmental Quality’s (“CEQ”) regulations implementing NEPA (adopted by FERC under 18 C.F.R. § 380.1) require FERC to “specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” 40 C.F.R. § 1502.13. FERC must “exercise a degree of skepticism in dealing with self-serving statements from a prime beneficiary of the project.” *Simmons v. U.S. Army Corps of Eng’s*, 120 F.3d 664, 669 (7th Cir. 1997) (*quoting Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 209 (D.C. Cir. 1991) (Buckley, J., dissenting)). FERC “cannot restrict its analysis to those ‘alternative means by which a particular applicant can reach his goals.’” *Id.* (*quoting Van*

Abbema v. Fornell, 807 F.2d 633, 638 (7th Cir. 1986); *see also Nat'l Parks & Cons. Ass'n v. Bureau of 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).

According to FERC, “[w]hile this EIS briefly describes Transco’s stated purpose, it will not determine whether the need for the Project exists, because this will later be determined by the Commission.” DEIS at 1-2. This is in direct violation of the plain language of the CEQ regulation, which requires FERC to “specify the underlying purpose *and need*” for the project in the EIS. 40 C.F.R. § 1502.13 (emphasis added). Without performing an independent assessment of the need for the project, FERC cannot determine the reasonable range of alternatives that must be analyzed in the DEIS. In particular, without determining the need for the project, FERC cannot reasonably assess the desirability of the required “no action” alternative. Furthermore, by waiting until some unspecified future date to determine the need for the project, FERC denies the public its right to comment on all aspects of the DEIS, including the statement of need and the alternatives analysis that depends on that statement.

Not only did FERC completely fail to provide a statement of need for the Project, but it also framed its statement of purpose far too narrowly. FERC primarily relies on “Transco’s stated objectives for the Project[,]” which are to:

- Provide an incremental 1.7 MMDth/d of year-round firm transportation capacity from the Marcellus Shale production area in northern Pennsylvania to its existing market areas, extending as far south as its Station 85 Pooling Point in Choctaw County, Alabama; and
- Provide its customers and the markets that they serve with greatly enhanced access to Marcellus Shale supplies, including new north-to-south delivery capability.

DEIS at 3-1. By relying almost exclusively on Transco’s ambitions for the project to frame its statement of purpose, FERC impermissibly “restrict[ed] its analysis to just those ‘alternative means by which a particular applicant can reach his goals.’” *Simmons*, 120 F.3d at 669 (quoting *Citizens Against Burlington*, 938 F.2d at 209 (Buckley, J., dissenting)); see also *Nat’l Parks & Cons. Ass’n*, 606 F.3d at 1072.

For example, FERC states that “because the purpose of the Project is to transport natural gas,” the consideration of alternatives that do not transport natural gas “are not considered or evaluated further in this analysis.” DEIS at 3-2. As a result, FERC excluded consideration of meeting any of the Project’s purpose from “the generation of electricity from renewable energy sources or the gains realized from increased energy efficiency and conservation.” *Id.* Not only did FERC limit consideration of alternatives that do not involve transporting natural gas, FERC refused to consider alternatives that did not involve transportation of natural gas from the Marcellus Shale region. See DEIS at 3-2 (explaining that alternatives that do not “provide enhanced access to Marcellus Shale gas supplies . . . would not fulfill the purpose and need of the project”). *Id.*

FERC’s categorical refusal to consider alternative energy and increased energy efficiency alternatives is at odds with other recent statements. For example, in the Constitution Pipeline DEIS, FERC considered energy conservation/efficiency and renewable energy alternatives. See Constitution Pipeline DEIS at 3-3 – 3-12 (Docket CP13-499-000). While FERC ultimately decided against considering these alternatives in greater detail, it at least considered them in some detail. That is in stark contrast to the Atlantic Sunrise DEIS where alternatives that would not “provide enhanced access to Marcellus Shale gas supplies” were excluded from any analysis. FERC’s narrowing of the range of alternatives to just those alternatives that would “provide

enhanced access” to a particular shale basin means that energy conservation and renewable energy alternatives will never be considered, even if they are economically and technologically feasible and serve the broader public interest. Therefore, FERC must prepare a DEIS that includes an independent assessment of both “purpose and need”, taking into account not only the applicant’s stated purpose but also the broader public purpose and need, and put the complete DEIS out for public comment.

II. The lack of complete information in the DEIS renders it legally deficient.

Throughout the DEIS, FERC indicates that information provided by Transco is incomplete. This incomplete information forms the basis for many of the proposed conditions that FERC staff recommends be attached to any certificate authorizing the Atlantic Sunrise Project. *See* DEIS at 5-21 – 5-32. Much of this information should have been included in the DEIS so that the public had an opportunity to review it and provide comments.

The NEPA EIS requirement “guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” *Department of Transportation v. Public Citizen*, 541 U.S. 752, 768 (2004) (citation omitted). This “informational role” assures the public that the agency has considered environmental concerns in its decisionmaking process and provided a “springboard for public comment” in that decisionmaking process. *Id.* (citation omitted). “The purpose here is to ensure that the ‘larger audience[]’ . . . can provide input as necessary to the agency making the relevant decisions.” *Id.* (citation omitted); *see also League of Wilderness Defenders v. Connaughton*, 752 F.3d 755, 761 (9th Cir. 2014) (“Informed public participation in reviewing environmental impacts is essential to the proper functioning of NEPA.”).

In reviewing an EIS, courts look at “whether the EIS’s form, content and preparation foster both informed decisionmaking and informed public participation.” *California v. Block*, 690 F.2d 753, 761 (9th Cir. 1982). Here, FERC decided to publish a DEIS knowing that it lacked information that is critical for its own review, and for meaningful public review and comment. As such, the DEIS is legally deficient and must be redone in accordance with CEQ’s regulations. *See* 40 C.F.R. § 1502.9(a).

We are particularly concerned about the Project’s untold water impacts, and the DEIS’ myriad information gaps with respect to these impacts exemplifies why FERC cannot proceed with supplementing its inadequate draft. For example, regarding Transco’s proposed additional temporary workspace (“ATWS”) within 50 feet of waterbodies and wetlands, FERC asks Transco to submit “additional justification” for dozens of locations identified in bold in Table K-5 of Appendix K (waterbodies) and in Table L-2 of Appendix L (wetlands). *See* DEIS at 5-27. Appendix K identifies at least 58 instances in which FERC is requesting “additional justification” for ATWS within 50 feet of waterbodies. *See* DEIS, App. K, Table K-5. Appendix L identifies at least 36 instances in which FERC is requesting “additional justification” for ATWS within 50 feet of wetlands. *See* DEIS, App. L, Table L-2. In numerous instances, FERC says that it needs “additional site-specific information and mitigation measures” to justify ATWS in wetlands, including exceptional value wetlands. *See* DEIS, App. L at L-11-15, 18, 31-32, 34, 39-43.

Such information gaps pervade the DEIS. FERC similarly requests that Transco provide:

- Updates to list of water wells and springs within 150 feet of construction workspaces based on completed surveys and indicating any water wells and springs that are within areas of known karst. DEIS at 4-41.
- Updates to Transco’s Abandoned Mine Investigation and Mitigation Plan regarding proposed mitigation measures to manage and dispose of contaminated groundwater. DEIS at 4-47.

- Proposed mitigation measures that Transco would implement to protect all Zone A source water protection areas. DEIS at 4-51.
- All outstanding geotechnical feasibility studies for HDD crossing locations and the mitigation measures that Transco would implement to minimize drilling risks. DEIS at 4-66.
- The locations where Transco proposes to use biocides, the name of the specific biocide(s) to be used, material safety data sheets for each biocide, copies of relevant permits, and a description of the measures that would be taken to neutralize the effects of the biocides upon discharge of the test water. DEIS at 4-67.
- A final copy of the PRM Plan, including any comments and required approvals from the USACE and PADEP. DEIS at 4-75.
- Complete results of noxious weed surveys and the final Management Plan. DEIS at 4-83.
- All documentation of Transco's correspondence with the PGC and the PADCNR and any avoidance or mitigation measures developed with these agencies regarding the SGL and Sproul State Forest crossings. DEIS at 4-88.
- Any updated consultations with the FWS regarding migratory birds and a revised Migratory Bird Plan incorporating any additional avoidance or mitigation measures. DEIS at 4-94.
- All fall 2015 hibernacula survey results for the Indiana bat, and any avoidance and mitigation measures developed based on the results. DEIS at 4-107.
- All fall 2015 hibernacula survey results for the northern long-eared bat, and any avoidance and mitigation measures developed based on the results. DEIS at 4-108.
- All survey results for the bog turtle, including any FWS comments on the surveys and their conclusions. DEIS at 4-112.
- All survey results for the northeastern bulrush, including any FWS comments on the surveys and their conclusions, and proposed mitigation that would substantially minimize or avoid the potential impacts. DEIS at 4-114.
- All survey results for the Allegheny woodrat, permit requirements, agency correspondence, and avoidance or mitigation measures developed in consultation with the PGC. DEIS at 4-119.
- All documentation of Transco's correspondence with the PGC and any avoidance or mitigation measures developed with the agency regarding the eastern small-footed bat. DEIS at 4-120.
- All survey results for timber rattlesnake, permit requirements, agency correspondence, and avoidance or mitigation measures developed in consultation with the PFBC. DEIS at 4-121 – 4-122.
- The results of any mussel surveys conducted within the Susquehanna River and any additional avoidance or mitigation measures included in Transco's site-specific HDD contingency crossing plans. DEIS at 4-123.
- All documentation of Transco's correspondence with the VDGIF and any avoidance or mitigation measures developed with this agency regarding state-listed mussels in Virginia. DEIS at 4-123.
- Revised site-specific residential plans for all residences located within 10 feet of the construction work area. DEIS at 4-134.

- An update of the status of the development of the site-specific crossing plans for each of the recreation and special interest areas listed as being crossed or otherwise affected in table 4.8.6-1. DEIS at 4-152.
- Updated information regarding the identified landfill adjacent to the CPL South right-of-way near MP 66.8, including any mitigation measures that Transco would implement to avoid the landfill site or address any contamination that is encountered. DEIS at 4-159.

This information is relevant to FERC’s evaluation of “reasonably foreseeable significant adverse effects” and it should have been included in the DEIS. 40 C.F.R. § 1502.22. The sheer volume of incomplete information indicates that FERC issued a legally deficient DEIS. The fact that the requested information concerns impacts to waterbodies and wetlands, drinking water supplies, threatened and endangered species, and other public resources only underscores the inadequacy of the DEIS. By publishing the DEIS without the required information, FERC denied the public an opportunity to meaningfully participate in the decisionmaking process. *Public Citizen*, 541 U.S. at 768; *League of Wilderness Defenders*, 752 F.3d at 761.

III. The EIS fails to take a “hard look” at the direct and indirect effects of the Atlantic Sunrise Project.

FERC must take a “hard look” at the direct and indirect effects of the Atlantic Sunrise Project. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989). Direct effects are “caused by the action and occur at the same time and place.” 40 C.F.R. § 1508.8(a). Indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). To satisfy the “hard look” requirement, FERC must ensure that it has “adequately considered and disclosed the environmental impact of its actions and that its decision is not arbitrary and capricious.” *Nevada v. Dep’t of Energy*, 457 F.3d 78, 93 (D.C. Cir. 2006) (*quoting Balt. Gas & Elec. Co.*, 462 U.S. 87, 98 (1983)). The DEIS for the Atlantic Sunrise Project fails to provide the requisite “hard look” at both the direct and indirect effects of the proposal.

A. The DEIS fails to adequately analyze the direct effects of the Project on waterbodies and wetlands.

1. Waterbodies

Transco proposes at least 327 waterbody crossings in Pennsylvania as part of its Atlantic Sunrise Project. *See* DEIS at 4-48. 210 crossings would impact perennial waterbodies, 79 would impact intermittent waterbodies, and 38 would impact ephemeral waterbodies. *Id.* Of the 327 waterbody crossings, 58 would impact high-quality, cold water fisheries (“HQ-CWF”) waters. *See id.*, Table 4.3.2-5.

Whether a waterbody qualifies for HQ protection depends on it meeting certain chemical or biological conditions. *See* 25 Pa. Code § 93.4b(a). “Under the chemical test, a surface water is HQ if long-term water quality (at least 1 year of data) for 12 chemical parameters is better than levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.” DEP, Water Quality Antidegradation Implementation Guidance, 2 (2003), *available at* <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-47704/391-0300-002.pdf>. “Under the biological test, a water is HQ if “(a) in comparison to a reference stream, the water shows a macroinvertebrate community score of 83% or greater using a protocol based on EPA’s Rapid Bioassessment Protocol (RPB); or (b) the water is a Class A wild trout stream designated by the [PAFBC] following public notice and comment.” *Id.*

FERC’s decision whether to permit Transco to cross dozens of HQ streams is a significant matter. According to FERC, however, Transco is proposing to use trenchless crossing methods at just two of the HQ stream crossings. *See* DEIS, App. K, Table K-1. Moreover, of the 327 total waterbody crossings, Transco has proposed trenchless crossings at just 8 of these waterbodies. *See id.* FERC must require Transco to reconsider use of these trenchless methods for the other proposed crossings of HQ waterbodies. This reconsideration

should be disclosed, independently scrutinized by FERC and the public, and appropriately incorporated into any potential certification by FERC of the Atlantic Sunrise Project.

Absent the requirement to use trenchless crossing techniques for every water crossing, the Project will have significant water impacts that must be disclosed and weigh towards denial of FERC certification. In its recent water quality certification denial for the proposed Constitution Pipeline, the New York Department of Environmental Conservation (“NYDEC”) explained that “[o]pen trenching is a highly impactful construction technique involving significant disturbance of the existing stream bed and potential long-term stream flow disruption, destruction of riparian vegetation and establishment of a permanently cleared corridor.”

NYDEC, Notice of WQC Denial for Constitution Pipeline, p. 8 (Apr. 22, 2016) (“Constitution WQC Denial”), *available at*

http://www.dec.ny.gov/docs/administration_pdf/constitutionwc42016.pdf. In addition, NYDEC

explained the importance of looking at the cumulative impacts of pipeline construction:

Cumulatively, impacts to both small and large streams from the construction and operation of the [Constitution Pipeline] Project *can be profound* and include loss of available habitat, changes in thermal conditions, increased erosion, creation of stream instability and turbidity, impairment of best usages, as well as *watershed-wide impacts* resulting from placement of the pipeline across water bodies in remote and rural areas.

Id. at 12.

NYDEC’s WQC denial for the Constitution Pipeline is a cautionary tale for FERC as it reviews the proposed Atlantic Sunrise Project since both projects are part of Williams’ expansion efforts in the Appalachian basin. *See Williams, Expansion Projects, available at*

<http://co.williams.com/expansionprojects/>. According to NYDEC, Constitution Pipeline’s

“Trenchless Feasibility Study” did not include information requested by multiple agencies and

“did not provide a reasoned analysis to enable [NYDEC] to determine if the [Constitution

Pipeline] Project demonstrates compliance with water quality standards.” Constitution WQC

Denial at 10-11. NYDEC further explained that:

Of the 251 streams to be impacted by the [Constitution Pipeline] Project, [the Trenchless Feasibility] Study evaluated only 87 streams, in addition to the Schoharie Creek, as part of the Phase I desktop analysis which Constitution used to determine if surface installation methods warranted consideration for a trenchless design. Of the 87 streams reviewed, Constitution *automatically eliminated* 41 streams from consideration for trenchless crossing because those streams were 30 feet wide or less . . . Using its review criteria, Constitution’s [Trenchless Feasibility] Study finally concluded that *only 11 stream crossings of the 251* displayed preliminary evidence in support of a potentially successful trenchless design and were chosen for the Phase III geotechnical field analysis. [NYDEC] staff *consistently told Constitution that its November 2013 Trenchless Feasibility Study was incomplete and inadequate.*

Id. at 11 (emphasis added) (citation omitted).

Did Transco prepare a similar trenchless feasibility study for the *entire* Atlantic Sunrise Project? If not, why not? If so, does it suffer from the same inadequacies that plagued the one prepared for the Constitution Pipeline? For example, did Transco “automatically eliminate” streams from consideration for trenchless crossing because they were 30 feet wide or less? These are important questions that must be answered in light of the fact that there are more stream crossings involved in the Atlantic Sunrise Project than in the Constitution Pipeline Project and even fewer proposed uses of trenchless crossings.

According to FERC, the only “site-specific crossing plans” that Transco has provided are “for the five major waterbody crossings” of the Susquehanna River (two crossings), Tunkhannock Creek, Conestoga River, and Swatara Creek. DEIS at 4-49 (citation omitted). This is woefully insufficient. FERC must require Transco to submit site-specific crossing plans for *all* waterbody crossings and provide a detailed trenchless feasibility study such as the one that NYDEC sought (but never received) in the Constitution Pipeline proceeding. FERC cannot

issue a certificate until Transco submits this information and makes it available for additional public review and comment.

2. Wetlands

Chapter 105 of the Pennsylvania code establishes a clear regulatory regime for protecting wetlands. *See generally*, 25 Pa. Code 105.17-105.18a, et seq. In Pennsylvania, wetlands are classified as either exceptional value (“EV”) wetlands or “other wetlands.” 25 Pa. Code § 105.17(1)-(2). EV wetlands exhibit one or more of the following characteristics:

- (i) Wetlands which serve as habitat for fauna or flora listed as “threatened” or “endangered under the Endangered Species Act of 1973 (7 U.S.C.A. § 136; 16 U.S.C.A. §§ 4601-9, 460k-1, 668dd, 715i, 715a, 1362, 1371, 1372, 1402 and 1531-1543), the Wild Resource Conservation Act (32 P.S. §§ 5301-5314), 30 Pa.C.S. (relating to the Fish and Boat Code) or 34 Pa.C.S. (relating to the Game and Wildlife Code).
- (ii) Wetlands that are hydrologically connected to or located within 1/2- mile of wetlands identified under subparagraph (i) and that maintain the habitat of the threatened or endangered species within the wetland identified under subparagraph (i).
- (iii) Wetlands that are located in or along the floodplain of the reach of a wild trout stream or waters listed as exceptional value under Chapter 93 (relating to water quality standards) and the floodplain of streams tributary thereto, or wetlands within the corridor of a watercourse or body of water that has been designated as a National wild or scenic river in accordance with the Wild and Scenic Rivers Act of 1968 (16 U.S.C.A. §§ 1271-1287) or designated as wild or scenic under the Pennsylvania Scenic Rivers Act (32 P.S. §§ 820.21-820.29).
- (iv) Wetlands located along an existing public or private drinking water supply, including both surface water and groundwater sources, that maintain the quality or quantity of the drinking water supply.
- (v) Wetlands located in areas designated by the Department as “natural” or “wild” areas within State forest or park lands, wetlands located in areas designated as Federal wilderness areas under the Wilderness Act (16 U.S.C.A. §§ 1131-1136) or the Federal Eastern Wilderness Act of 1975 (16 U.S.C.A. § 1132) or wetlands located in areas designated as National natural landmarks by the Secretary of the Interior under the Historic Sites Act of 1935 (16 U.S.C.A. §§ 461-467).

25 Pa. Code § 105.17(1)(i)-(v). Any wetlands that do not meet at least one or more of the abovementioned characteristics are defined as “other wetlands.” 25 Pa. Code § 105.17(2). It is important that the correct classification is identified because it determines the level of environmental protection for the wetland and is reflective of the functions and values of that wetland. For example, proposed projects are not permitted to have an “adverse impact” on an EV wetland. 25 Pa. Code § 105.18(a).

Pipeline construction can have significant adverse impacts on wetlands. For example, construction of Tennessee Gas Pipeline Company’s “300 Line” in northern Pennsylvania “highly impacted” the hydrological connectivity between a wetlands complex and a stream to the point that the stream, which had previously flowed from the wetlands complex, is now “barely discernable.” *See* Attachment 1.¹ In addition, according to the Western Pennsylvania Conservancy, construction of a pipeline through Tamarack Swamp in Clinton County “appears to have been particularly disruptive, physically separating contiguous sections of wetland, altering hydrological patterns and introducing strips of highly altered substrate that will not easily recover.” Western Pennsylvania Conservancy, Clinton County Natural Heritage Review at 79 (2002), *available at* http://www.clintoncountypa.com/departments/county_departments/planning/pdfs/Natural%20Heritage%20Inventory.pdf.

The Atlantic Sunrise Project will almost certainly have significant “adverse impacts” on numerous EV wetlands in Pennsylvania. FERC identifies at least 51 EV wetlands that would be crossed by the proposed pipeline. *See* DEIS at 4-71. In only six of these wetlands, however, is

¹ This attachment was part of Tennessee Gas Pipeline Company “Aquatic Resources Report” in for its proposed Susquehanna West Project and was included as Appendix 2-A in Resource Report 2. *See* FERC Docket No. CP15-148-000, Accession No. 20150402-5213.

Transco proposing to utilize a conventional bore or horizontal directional drill (“HDD”) crossing method. *See id.* at 4-47. FERC must require Transco to reconsider use of these trenchless methods for the other proposed crossings of EV wetlands. This reconsideration should be disclosed, independently scrutinized by FERC and the public, and appropriately incorporated into any potential certification by FERC of the Atlantic Sunrise Project.

B. The DEIS fails to adequately analyze the direct effects of the Atlantic Sunrise Project on high-value lands protected from development in compliance with the Chesapeake Bay Total Maximum Daily Load (TMDL).

In its DEIS, FERC completely failed to consider how this pipeline project will impact the Chesapeake Bay clean-up plan by developing “high-value” lands that are supposed to be permanently protected from development. In response to high levels of pollution in the Chesapeake Bay, the federal government has developed a comprehensive plan to clean up and protect the watersheds that feed the Bay. That plan relies heavily on permanently protecting certain lands from pollution-generating development. Construction of the Atlantic Sunrise Project would have significant impact on many of these high value lands and would thus interfere with the federal clean-up plan for the Chesapeake Bay. FERC must address this through a supplemental DEIS, not only to comply with NEPA, but as a practical matter: It is unconscionable to spend billions² of dollars on Chesapeake Bay clean up only to turn around and allow new forms of industrial pipeline pollution to undermine that investment.

1. Authority for the Chesapeake Bay Clean-Up Plan

The Chesapeake Bay was designated a national treasure by Executive Order in 2009. The Order also established a federally-led Program tasked with cleaning up the Bay by 2025. Exec.

² *See* Chesapeake Bay Foundation, *The Economic Benefits of Cleaning Up The Chesapeake*, p. 3 (Oct. 2014), available at <http://www.cbf.org/document.doc?id=2258>.

Order No. 13508 (May 12, 2009). To comply with this Order, EPA established the Bay clean-up plan, known as the “Total Maximum Daily Load” (TMDL). The TMDL identifies the necessary pollution reductions of nitrogen, phosphorus, and sediment across Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia and sets pollution limits necessary to meet applicable water quality standards in the Bay and its tidal rivers. The applicable water quality standards vary depending on the particular water body. When setting the standard, a state must first designate the use of the water body (fishing or recreation, for example) and then establish criteria necessary to protect that use. 40 C.F.R. § 131.6. Under the TMDL, all pollution control measures needed to fully restore the Bay must be in place by 2025, with at least 60 percent of the actions completed by 2017. *Am. Farm Bureau Fed., v. EPA*, 984 F. Supp. 2d 289, 305 (Pa. 2013).

2. Development is a Main Stressor to the Chesapeake Bay

Population growth and land development continue to be top stressors to the Chesapeake Bay ecosystem and a threat to the goal of remediating the Chesapeake Bay. CHESAPEAKE BAY PROGRAM: PROTECTED LANDS - ANALYSIS AND METHODS DOCUMENTATION 3 (2013), *available at* http://www.chesapeakebay.net/indicators/indicator/preserving_lands. Converting land from forests and open lands to urbanized and industrial uses increases pollution by removing the ecosystem services responsible for capturing rainfall and reducing runoff, filtering nutrients and sediment, and stabilizing soils. Margaret Walls & Virginia McConnell, *Incentive-Based Land Use Policies and Water Quality in the Chesapeake Bay*, Discussion Paper 04–20, 4 (March 2004), *available at* <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-04-20.pdf>. An 18 percent increase in impervious surfaces results in an 80 percent increase in runoff volume. Stephen J Gaffield, *Public Health Effects of Inadequately Managed Stormwater Runoff*,

93 AM. J. PUB. HEALTH. 1527, 1528 (2003), *available at*

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1448005/pdf/0931527.pdf>. By contrast, natural groundcover undisturbed by development generally results in only 10 percent of the precipitation traveling as runoff. PRINCE GEORGE’S COUNTY, LOW IMPACT DEVELOPMENT HYDROLOGIC ANALYSIS 4 (1999), *available at*

http://www.lowimpactdevelopment.org/pubs/LID_Hydrology_National_Manual.pdf. The remaining precipitation is soaked up and filtered by the land.

Stormwater runoff is one of the “non-point” sources of pollution that have become the dominant water quality problem in the Bay, dwarfing all other sources of nutrients and sediments. *Am. Farm Bureau*, 984 F. Supp. 2d at 296. Increased land disturbance increases the discharge of sediments into streams, raising total suspended solids concentrations. P.J. Drohan & M. Brittingham, *Topographic and Soil Constraints to Shale-Gas Development in the North Central Appalachians*, 76 SOIL SCI. SOC. AM. J. 1696, 1706 (2012). In addition, removing vegetation for construction can cause excess runoff and sedimentation that are harmful to river ecosystems, especially in sensitive headwater streams. Susan L. Brantley et al., *Water Resource Impacts during Unconventional Shale Gas Development: the Pennsylvania Experience*, 126 INT’L J. OF COAL GEOLOGY 140, 153 (2014). Within the watershed, these rivers and all the pollutants contained within ultimately end up in the Chesapeake Bay.

3. A Key Strategy to Meet the Bay Clean-Up Plan is to “Permanently Protect Lands from Development”

To meet the TMDL, the Chesapeake Bay Program has identified and set aside specific high-value land. This action is part of the Bay Program’s strategy to clean up the Bay. On June 16, 2014, representatives from all seven jurisdictions in the Bay watershed signed a new Chesapeake Bay Watershed Agreement. CHESAPEAKE BAY PROGRAM, WATERSHED AGREEMENT

(2014), available at

<http://www.chesapeakebay.net/documents/ChesapeakeBayWatershedAgreementFINAL.pdf>.

To achieve the goal of restoring the Bay by 2025, the jurisdictions identified protecting lands as a top priority. Since signing the Watershed Agreement, the Chesapeake Bay Program has been crafting “management strategies” that describe the steps necessary to achieve the goals of the Agreement. Among the steps, jurisdictions committed to protecting an additional two million acres of lands throughout the watershed—currently identified as high-conservation priorities at the federal, state or local level—by 2025. *Management Strategies, Chesapeake Bay Program*, available at http://www.chesapeakebay.net/managementstrategies/strategy/protected_lands.

The Bay Program defines “protected lands” as those “permanently protected from development, whether by purchase or donation, through a perpetual conservation or open space easement or fee ownership . . . including transfer of development rights programs.” *Chesapeake Bay Program, Protected Lands: Additional Information*, available at

http://www.chesapeakebay.net/indicators/indicator/preserving_lands. Protected lands may be held in private ownership as working farms or forests; designated open space and recreational land such as a county, town, city, state or federal park; publicly owned forests or wetlands; or historically significant properties held as battlefields, colonial towns and farms or military-owned parks. *Analysis and Methods Documentation* at 1.

The Chesapeake Bay Program recommends forest and farm land be targeted for conservation because they are the land covers with the greatest water-pollution-reduction factor. *Chesapeake Bay Program, Protected Lands*, available at

http://www.chesapeakebay.net/indicators/indicator/preserving_lands. These lands protect water

quality, sustain fish and wildlife, maintain working farms and forests, preserve our history, and provide opportunities for outdoor recreation.

These protected lands are meant to be “permanently protected from development.” *Chesapeake Bay Program, Protected Lands*. The Chesapeake Bay Program’s Watershed Model, which is used to analyze the impact on the watershed of various pollution-reducing actions, assumes that these lands are permanently protected from development. CHESAPEAKE BAY PROGRAM, PHASE 5.3 WATERSHED MODEL Section 4.7.3, at p.4-40, *available at* ftp://ftp.chesapeakebay.net/modeling/P5Documentation/SECTION_4.pdf. The model helps guide decision-making for reducing pollution and meeting water quality standards and cannot accurately predict impacts to the Bay if it is based on false assumptions.

The state of Pennsylvania is also invested in protecting these lands. As the largest agricultural state in the watershed, Pennsylvania has been working to preserve prime farmland since the 1980s to help slow the loss to non-agricultural uses. PA. DEP’T OF ENVTL. PROTECTION, PA. CHESAPEAKE WATERSHED IMPLEMENTATION PLAN: PHASE I, at 76. To date, the state has invested more than \$1 billion to permanently protect land within the watershed from development. CHESAPEAKE BAY PROGRAM: ANALYSIS AND METHODS DOCUMENTATION 2–3, *available at* http://www.chesapeakebay.net/indicators/indicator/preserving_lands.

4. The Atlantic Sunrise Project will Set Back Efforts to Clean Up the Bay

Despite Pennsylvania’s financial commitment to protecting lands in the Chesapeake Bay watershed and all the resulting water quality, public health, and other gains these protected lands have achieved, the state is supporting the proposed Atlantic Sunrise Project, which threatens to permanently set back efforts to protect the Bay. The Project will disturb 3,905.8 acres of land in connection with the installation and operation of 195.2 new miles of pipeline in Pennsylvania.

During construction, temporary right-of-ways will require trees and vegetation to be removed from a 90- to 150-foot swath over the path of the pipeline. DEIS at 2-15 & 2-23. The construction process involves digging trenches deep enough to submerge 30- and 42-inch pipes a minimum of three feet below the surface. *Id.* at table 2.3.1-1. Upon completion of the trenching phase, the construction zone will be allowed to start the decades-long process of reversion back to its natural state. Permanent right-of-ways between 50 and 75 feet wide along which trees will never be allowed to grow will remain along the entire stretch of the project. *Williams, Atlantic Sunrise, What Size Will the Easement Be?*, <http://atlanticsunriseexpansion.com/faq/size-will-easement/>.

Construction of the pipeline will impact agricultural lands the most at 51 percent of the acreage, followed by upland forest at 30 percent and open space at 11 percent. DEIS at 4-125. Already-developed land with the least ecological value accounts for less than five percent of the total lands affected by the pipeline. *Id.*

Pennsylvania is already failing to meet the land-use and water-quality goals set forth in the Bay TMDL. “Without . . . changes, compliance rates will remain low and the commonwealth will fail on its clean water commitments at a huge cost to society. Don Hopey, *EPA Gives Poor Marks to Pa. on Protecting Chesapeake Bay Watershed*, PITT. POST-GAZETTE, Mar. 23, 2015, available at <http://www.post-gazette.com/news/environment/2015/03/23/EPA-gives-poor-marks-to-Pa-on-protecting-Chesapeake-Bay-watershed/stories/201503230007>. In June 2015, the EPA deemed Pennsylvania’s progress insufficient to meet water quality expectations for the 2017 midpoint goal, with a remaining reduction of 648 million pounds of sediment still necessary to meet the TMDL’s 2025 target. PA DEP’T OF ENVTL. PROTECTION, STRATEGY TO ENHANCE PENNSYLVANIA’S CHESAPEAKE BAY RESTORATION EFFORT, ES-1 (Jan. 21, 2016).

Pennsylvania's inability to meet the TMDL has triggered EPA backstops: \$2,896,723 in federal funding was withheld for Chesapeake Bay-related pollutant reduction projects, and the EPA will consider additional federal action against the state if it becomes necessary to address further restoration shortfalls. EPA INTERIM EVALUATION OF PENNSYLVANIA'S 2014-2015 MILESTONES 3 (June 10, 2015). EPA estimates that in order to reach the sediment goals, Pennsylvania will have to set aside an additional 22,000 acres of forest cover per year, among other practices. An average of 44,000 acres, however, are lost to development annually. PA. DEP'T OF ENVTL. PROTECTION, PA. CHESAPEAKE WATERSHED IMPLEMENTATION PLAN: PHASE I 164 (2011). This loss does not account for the impacts of pipeline projects such as the Atlantic Sunrise Project, which are allowed to undermine conservation easement restrictions and develop protected land.

Of specific concern to the Bay clean-up plan, the proposed Atlantic Sunrise Project will intersect 52 private, federal, or state "protected lands"—lands that have supposedly been permanently protected from development. *Chesapeake Climate Action Network et al., Easement to Industry: Mapping the Proposed Path of the Atlantic Sunrise Pipeline*, available at <http://chesapeakecommons.org/gists/pipeline/asp/index.html>. Four environmental nonprofits³ used open-source geographic information systems to calculate the total protected land acreage intersected by the Atlantic Sunrise Project. *See Easement to Industry*, at 4 (describing analytical methods used). Those 52 intersections will directly impact 177.4 acres of private land that an owner chose to protect indefinitely; 63.1 acres of state land that cost taxpayer money to acquire and maintain; 8.2 acres of federally owned lands; and 1.3 acres of non-profit owned lands.

³ These groups are the Chesapeake Climate Action Network, Chesapeake Commons, Chesapeake Legal Alliance, and FracTracker.

In total, the pipeline will develop a total of 250 acres that the Chesapeake Bay Program Watershed Model assumes are permanently protected lands that are untouchable by development. Volume I of the DEIS mentions the Chesapeake Bay a mere nine times in the 472-page document. It does not mention protected lands even once. The DEIS acknowledges that “the Project would cross a number of areas enrolled in a variety of federal and Commonwealth of Pennsylvania conservation programs.” DEIS at 4-152. This acknowledgement does not cover the full breadth of protected lands, however, as Chesapeake Bay’s definition of protected lands encompasses more than federal and state conservation programs. FERC makes no effort to account for this unexpected development. The DEIS concludes that “construction across land enrolled in [conservation] programs with provisions for tree plantings on the proposed permanent right-of-way would have a permanent effect.” DEIS at 4-153. Yet, despite acknowledging a permanent effect, the DEIS places no conditions on these crossings. Instead it accepts Transco’s claim that it “has not yet determined where all of the [conservation] lands involving tree planting are located,” despite the fact that the four environmental groups mentioned above created a website showing the exact location of forest and other protected land crossings. FERC concludes this already abbreviated section by allowing “Transco to develop restoration measures [to] ensure enrolled properties remain eligible to participate in the [conservation] programs” at some future time and with no formal conditions in place.

FERC, however, cannot reasonably conclude that the impacts to protected lands can somehow be adequately mitigated if it has not even identified the location and nature of those lands nor the mitigation measures to protect them. Protected lands play a key role in the federal government’s—and Pennsylvania’s—plan to meet the Bay TDML. The proposed Atlantic Sunrise Project will impact 250 acres of protected lands that are supposed to be permanently

protected from development, including 75-foot swaths of currently forested land upon which trees can never be planted if this pipeline is built. Because FERC completely fails to consider the importance of protected lands and also fails to describe the measures that may be used to mitigate the impacts of the pipeline right-of-way on conservation programs, its conclusion that adverse environmental “impacts would be reduced to less-than-significant levels with the implementation of Transco’s proposed and our recommended mitigation measures” is arbitrary and capricious and renders the DEIS deficient.

C. The DEIS fails to consider the indirect effects of shale gas development that is both causally related to and a reasonably foreseeable consequence of the Atlantic Sunrise Project.

In analyzing the potential impacts of its approval of the Atlantic Sunrise project, FERC must consider the indirect effects of shale gas development. Indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). “Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use . . . and related effects on air and water and other natural systems, including ecosystems.” *Id.* Because the Atlantic Sunrise Project would induce further shale gas development, FERC must fix its omission of this development from the DEIS. Specifically, as part of the indirect effects analysis for the Project, NEPA requires FERC to issue a supplemental draft EIS that addresses these induced shale gas development impacts.

For several years now, FERC has categorically refused to consider induced gas development as an indirect effect of pipeline projects such as the Atlantic Sunrise. FERC’s argument is usually two-fold. First, FERC claims that gas drilling and pipeline projects are not “sufficiently causally related” to warrant a detailed analysis. *See e.g., National Fuel Gas Supply Corporation*, 150 FERC ¶ 61,162, at P 44 (2015). Second, FERC claims that even if gas drilling

and pipeline projects are “sufficiently causally related,” the potential environmental impacts of the gas development are not “reasonably foreseeable” as contemplated by CEQ’s NEPA regulations. *Id.* The DEIS continues this head-in-the-sand approach, failing to consider at all the indirect effects of shale gas development. FERC is wrong on both points and, therefore, the DEIS for the Atlantic Sunrise Project does not satisfy the requirements of NEPA.

1. There is a clear causal connection between the proposed Atlantic Sunrise Project and shale gas development.

Courts have said that an agency must consider something as an indirect effect if the agency action and the effect are “two links of a single chain.” *Sylvester v. U.S. Army Corps of Engineers*, 884 F.2d 394, 400 (9th Cir. 1989). It cannot be disputed that gas development and infrastructure that transports that gas are “two links of a single chain.” The Project’s express purpose is to expand gas extraction and transport (both temporally and in terms of volume), and so FERC cannot ignore its growth-inducing effects.⁴

The gas industry certainly considers gas development and infrastructure as “two links of a single chain.” For example, in a 2014 report, the Interstate Natural Gas Association of America (“INGAA”) stated that:

[M]idstream infrastructure development is *crucial* for efficient delivery of growing supplies to markets. Sufficient infrastructure goes *hand in hand* with well-functioning markets. *Insufficient infrastructure can constrain market growth and strand supplies . . .* New infrastructure will be required to move hydrocarbons from regions where production is expected to grow to locations where the hydrocarbons are used. Not all areas will require significant new pipeline infrastructure, but many areas (even those that have a large amount of existing pipeline capacity) may require investment in new capacity to connect new supplies to markets. In analogous cases to date, oil and gas producers and marketers have been the principal shippers on new pipelines. These “anchor shippers” have been willing to commit to long-term contracts for transportation services that provide the financial basis for pipeline companies to pursue projects. Going forward, producers will likely continue to be motivated *to ensure that the capacity exists to move*

⁴ However, as discussed above, FERC must independently articulate the Project’s purpose and need, and not accept the Project proponent’s statements, alone, as sufficient evidence of need.

supplies via pipelines. Producers have learned from past experience that the consequences of insufficient infrastructure for gas transport are severe, and that the cost of pipeline transport is a relatively small cost compared with the revenues lost as a result of price reductions or well shut-ins that occur when transport from producing areas to liquid pricing points is constrained.

INGAA, North American Midstream Infrastructure through 2035: Capitalizing on Our Energy Abundance, Executive Summary, p. 1, 8-9 (Mar. 18, 2014) (emphasis added), *available at* <http://www.ingaa.org/file.aspx?id=21498>. In other words, according to INGAA, gas producers rely on there being sufficient infrastructure capacity to continue if not expand production activities.

Indeed, Transco's filings reveal the close causal relationship between the Atlantic Sunrise Project and shale gas drilling. For example, Transco says that the Atlantic Sunrise Project, if constructed, will "provide [its] customers and the markets they serve with *greatly enhanced access* to Marcellus Shale supplies." Resource Report 1 at 1-2 (emphasis added). These customers include (1) Anadarko Energy Services Company (44,048 dt/d); (2) Cabot Oil & Gas Corporation (850,000 dt/d); (3) Chief Oil & Gas LLC (420,000 dt/d); (4) Inflection Energy LLC (26,429 dt/d); (5) MMGS, Inc. (22,024 dt/d); (6) Seneca Resources Corporation (189,405 dt/d); (7) Southern Company Services, Inc. (60,000 dt/d); (8) Southwestern Energy Services Company (44,048 dt/d); and (9) WGL Midstream, Inc. (44,048 dt/d). *See* Application at 10-11. Several of these customers are major gas producers operating in the Marcellus and Utica shale formations.

For example, according to Anadarko, "a significant portion of the company's [U.S.] production comes from the Marcellus Shale in north-central Pennsylvania, where the company currently produces more than 380 million cubic feet of natural gas per day." Anadarko, Operations – Pennsylvania, *available at* <http://www.anadarko.com/Operations/Upstream/Pennsylvania/>. According to Chief Oil and Gas,

it “has focused its Marcellus Shale development in northeastern Pennsylvania” and “is actively adding to its 210,000 acres leasehold position in Bradford, Lycoming, Sullivan, Susquehanna, Tioga and Wyoming Counties[,]” Pennsylvania. Chief Oil and Gas, Where We Operate, available at <http://www.chiefog.com/WhereWeOperate.aspx>. According to Southwestern Energy Services Company, it has at least 270,335 net acres in northeastern Pennsylvania, but its ability to bring production in this acreage to market depends on “the construction of and/or availability of capacity on gathering systems *and pipelines that we do not own.*” See Southwestern Energy Services Company, 2015 Annual Report (Form 10-K), at 11 (Feb. 25, 2016) (emphasis added), available at <http://files.shareholder.com/downloads/SWN/2272386925x0xS7332-16-38/7332/filing.pdf>.

According to Seneca Resources, the exploration and production subsidiary of National Fuel Gas Company, it has rights (either in fee or by lease) to approximately 785,000 acres in northern Pennsylvania. See National Fuel, Investor Presentation – Q2 Fiscal 2016 Update, p. 10 (Apr. 2016), available at http://s2.q4cdn.com/766046337/files/doc_presentations/2016/April/20160428_NFG-IR-Presentation.pdf. Seneca Resources divides this acreage into a western development area (“WDA”) and an eastern development area (“EDA”). *Id.* According to Seneca Resources, it has drilled 153 wells in the EDA and there are at least “50-60 remaining Marcellus locations” as well as “[a]dditional strong Utica & Geneseo [shale gas] potential.” *Id.* However, Seneca Resources expressly states that any further shale gas development in its EDA will be “[l]imited . . . until firm transportation on Atlantic Sunrise (190 Mdth/d) is available in late 2017.” *Id.* In other words, Seneca Resources directly links its future EDA shale gas development to FERC’s authorization of the Atlantic Sunrise Project.

This linkage can be seen on page 17 of National Fuel’s investor presentation. Seneca Resources identifies the area it has leased in Lycoming County as the “DCNR Tract 100 & Gamble” lease. *Id.* at 17. The map shows this lease area directly connected to Transco’s Leidy Line⁵ just to the south via National Fuel’s “Trout Run Gathering System.” *Id.* The sidebar notes that the capacity to be created on Atlantic Sunrise will be available in FY2018 and that Seneca Resources could develop an additional 100-120 locations in the Geneseo shale. *Id.* Thus, there is a clear causal connection between FERC’s authorization of the Atlantic Sunrise Project and future shale gas development in Seneca’s EDA.

Likewise, subscriber Cabot Oil & Gas’s “Marcellus Shale position in northeast Pennsylvania has developed into the cornerstone asset of its portfolio[.]” Cabot Oil & Gas, Marcellus Shale, available at <http://www.cabotog.com/operations/marcellus/>. Cabot has “approximately 200,000 net acres in the dry gas window of the Marcellus Shale, primarily in Susquehanna County, Pennsylvania.” *Id.* Cabot’s subscribed capacity on Atlantic Sunrise is equivalent to all of the other customers combined.

Cabot is not just a customer of the Atlantic Sunrise Project, but also has an ownership interest in the Project. According to Cabot’s 2013 Annual Report:

Subsequent to the year-end, Cabot announced the execution of an agreement with [Transco] for a new pipeline with committed takeaway capacity from Cabot’s acreage position in Susquehanna County, Pennsylvania. Transco plans to construct and operate approximately 177 miles of new pipeline, referred to as the Central Penn Line, from our Zick area in Susquehanna County to an interconnect with Transco’s mainline in Lancaster County, Pennsylvania. These new facilities will be an integral part of Transco’s Atlantic Sunrise project. Cabot will be an equity owner of the project as well as hold 850,000 MMBtu per day of firm transportation capacity on the pipeline. This project represents another major step in Cabot’s *long-term plan for monetizing its Marcellus reserves* as this pipeline secures new takeaway capacity from the basin on a new large

⁵ Transco proposes to expand the capacity of the Leidy Line through construction of the Chapman and Unity Loops as part of the Atlantic Sunrise Project. See DEIS at 2-1, 2-7.

diameter pipeline that *connects our operating area directly to multiple new markets* including new pricing opportunities.

Cabot Oil & Gas, 2013 Annual Report, at 7 (emphasis added), *available at*

<http://www.cabotog.com/wp-content/uploads/2013/03/COG-2013-AnnualReport.pdf>. In 2014,

Cabot “acquired a 20% equity interest in Meade [Pipeline Co.], which was formed to participate in the development and construction of [the Central Penn Line].” Cabot Oil & Gas, 2015 Annual

Report (Form 10-K), at 16 (Feb. 22, 2016), *available at* [http://phx.corporate-](http://phx.corporate-ir.net/phoenix.zhtml?c=116492&p=irol-)

[ir.net/phoenix.zhtml?c=116492&p=irol-](http://phx.corporate-ir.net/phoenix.zhtml?c=116492&p=irol-)

[SECText&TEXT=aHR0cDovL2FwaS50ZW5rd2l6YXJkLmNvbS9maWxpYmNlcueG1sP2lwYWd](http://phx.corporate-ir.net/phoenix.zhtml?c=116492&p=irol-SECText&TEXT=aHR0cDovL2FwaS50ZW5rd2l6YXJkLmNvbS9maWxpYmNlcueG1sP2lwYWd)

[IPTEwNzYxMTc0JkRTRVE9MCZTRVE9MCZTUURFU0M9U0VDVEIPTI9FTIRJUKUmc3V](http://phx.corporate-ir.net/phoenix.zhtml?c=116492&p=irol-IPTEwNzYxMTc0JkRTRVE9MCZTRVE9MCZTUURFU0M9U0VDVEIPTI9FTIRJUKUmc3V)

[ic2lkPTU3](http://phx.corporate-ir.net/phoenix.zhtml?c=116492&p=irol-ic2lkPTU3). Cabot’s equity interest in the construction and operation of the Atlantic Sunrise

Project is directly related to its “long-term plan for monetizing its Marcellus reserves.” In other words, construction and operation of the Atlantic Sunrise Project is intended to facilitate future production by Cabot. Thus, the Atlantic Sunrise Project and shale gas development in northern Pennsylvania are “two links of a single chain.” *Sylvester v. U.S. Army Corps of Engineers*, 884 F.2d 394, 400 (9th Cir. 1989).

FERC often tries to avoid its duty to consider induced gas drilling by claiming that pipeline projects are not “creating the growth” of additional shale gas development but rather are simply “responding to a need for transportation” after development has occurred. *See e.g., National Fuel Gas Supply Corporation*, 150 FERC ¶ 61,162, at P 45 (2015). According to the Energy Information Administration (“EIA”), however, pipeline projects do facilitate an increase in gas production. In a recent report on NGL market trends, EIA stated that “[e]thane production is increasing *as midstream infrastructure projects become operational* and ethane recovery and transport capacities grow.” EIA, *Hydrocarbon Gas Liquids (HGL): Recent Market Trends and*

Issues, p. 6 (Nov. 2014) (emphasis added), *available at*

<http://www.eia.gov/analysis/hgl/pdf/hgl.pdf>. In other words, an increase in infrastructure to transport a product results in an increase in production of that product.

Recent statements from oil and gas industry officials corroborate this. For example, in May 2015, Dennis Xander, president of Denex Petroleum spoke about the recent downturn in gas drilling, stating that “[d]rilling is hard to justify” due, in part, “to lack of infrastructure[.]” Casey Junkins, Number of Drilling Rigs on the Decline, *The Intelligencer/Wheeling News-Register*, May 19, 2015, *available at*

<http://www.theintelligencer.net/page/content.detail/id/633293/Number-of-Drilling-Rigs-on-the-Decline.html?nav=526>. According to Corky DeMarco, executive director of the West Virginia

Oil and Natural Gas Association, “when drilling slows down, that is when you build pipelines”

because “[i]t’s just the way the industry works.” *Id.* According to Tim Greene, owner of

Mineral Management of Appalachia, “more pipelines will lead to more drilling[.]” Casey

Junkins, Local Gas Will Be Transported By Four Interstate Pipelines, *The*

Intelligencer/Wheeling News-Register, Oct. 26, 2014, *available at*

<http://www.theintelligencer.net/page/content.detail/id/615510/Billion-Dollar-Projects-To--Beco--.html>. Both the specific statements from the prospective subscribers of the Atlantic Sunrise

project and the general statements from the broader industry community demonstrate the direct

causal link between increased gas transmission capacity and increased gas drilling. FERC thus

cannot ignore the impacts of that induced drilling.

FERC has also claimed that it need not consider the indirect effects of shale gas development because:

[S]uch development will likely continue regardless of whether the proposed projects are approved because multiple existing and proposed transportation alternatives for production from the region are available.

National Fuel Gas Supply Corporation, 150 FERC ¶ 61,162, at P 45 (2015). As the statements above indicate, that does not appear to be the case. The corollary to “more pipelines will lead to more drilling” is that fewer pipelines may lead to less drilling. Moreover, when FERC says shale gas development will continue because there are other “proposed transportation alternatives,” those other “proposed transportation alternatives” are almost certainly interstate natural gas pipelines subject to FERC’s jurisdiction. To say in one proceeding that shale gas development will continue regardless of whether that particular project is approved because there are other similar projects that will likely be authorized only proves the causal connection between FERC’s decision to approve pipeline projects and shale gas development. Indeed, if existing infrastructure could fully meet the needs of the shippers that propose to use the capacity created by the Atlantic Sunrise Project, then FERC could not possibly conclude that the project serves the “public convenience and necessity,” as is required to grant a certificate under the Natural Gas Act.

2. Shale gas development is reasonably foreseeable.

Shale gas development is reasonably foreseeable. An indirect effect 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.” *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992). “[W]hen the *nature* of the effect is reasonably foreseeable but its *extent* is not, [an] agency may not simply ignore the effect.” *Mid States Coalition for Progress v. Surface Transportation Board*, 345 F.3d 520, 549 (8th Cir. 2003) (emphasis in original). *See also Habitat Education Center v. U.S. Forest Service*, 609 F.3d 897, 902 (7th Cir. 2010). Here, additional shale gas

drilling is sufficiently likely to occur that a person of ordinary prudence would take it into account when assessing the impact of the Atlantic Sunrise Project on the environment. Moreover, FERC is well aware of the nature of the effects of shale gas development and, therefore, may not ignore those effects.

FERC, however, consistently and stubbornly claims that even if there is a sufficient causal relationship between projects such as the one under review here and induced gas production, “such production is not reasonably foreseeable as contemplated by CEQ’s regulations and case law.” *See, e.g., National Fuel Gas Supply Corporation*, 150 FERC ¶ 61,162, at P 46 (2015). There, FERC said that it “need not address remote and highly speculative consequences.” *Id. (citing Hammond v. Norton*, 370 F.Supp.2d 226, 245-46 (D.D.C. 2005)). FERC also said that it is not required “to engage in speculative analysis” or “to do the impractical, if not enough information is available to permit meaningful consideration.” *Id. (citing N. Plains Res. Council v. Surface Transp. Board*, 668 F.3d 1067, 1078 (9th Cir. 2011)). Finally, FERC said that even if it knew the “identity of a supplier of gas . . . and even the general area where the producer’s existing wells are located,” it does not mean that FERC can engage in forecasting future development. *Id.*

FERC’s claim that if it does not know the exact timing and location of future shale gas development, it may “simply ignore the effect” cannot be squared with the requirements of NEPA. *See Mid States Coalition*, 345 F.3d at 549. FERC’s practice “would require the public, rather than the agency, to ascertain the cumulative effects of a proposed action.”⁶ *Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Department of the Interior*, 608 F.3d 592, 605 (9th Cir.

⁶ While this case was about cumulative impacts, the same rationale holds true for indirect effects in terms of effects being “reasonably foreseeable.”

2010). “Such a requirement would thwart one of the ‘twin aims’ of NEPA – to ‘ensure[] that the agency will inform the public that it has indeed considered environmental concerns in its decision making process.’” *Id.* (quoting *Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97, 103 S.Ct. 2246, 76 L.Ed.2d 437 (1983)) (emphasis added by Ninth Circuit). Compliance with NEPA “is a primary duty of every federal agency; fulfillment of this vital responsibility should not depend on the vigilance and limited resources of environmental plaintiffs.” *City of Carmel-by-the-Sea v. U.S. Dept. of Transportation*, 123 F.3d 1142, 1161 (9th Cir. 1997) (quoting *City of Davis v. Coleman*, 521 F.2d 661, 671 (9th Cir. 1975)). *See also* *Center for Biological Diversity v. U.S. Forest Service*, 349 F.3d 1157, 1166 (9th Cir. 2003) (“The procedures prescribed both in NEPA and the implementing regulations are to be strictly interpreted ‘to the fullest extent possible’ in accord with the policies embodied in the Act...’[g]rudging, pro forma compliance will not do.”) (citations omitted)). Thus, FERC’s insistence that it is incumbent upon others to produce the kind of information it claims to need is wholly inconsistent with its obligations under NEPA.

As the D.C. Circuit has explained, “[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.’” *Delaware Riverkeeper*, 753 F.3d 1304, 1310 (quoting *Scientists’ Inst. For Pub. Info., Inc. v. Atomic Energy Comm’n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973)); *see also* *Northern Plains Resource Council v. Surface Transportation Board*, 668 F.3d 1067, 1078-79 (9th Cir. 2011). FERC’s labeling any and all discussion of future environmental effects of induced shale gas drilling as “crystal ball inquiry” is an obvious attempt to “shirk [its] responsibilities” under NEPA. *Delaware Riverkeeper*, 753 F.3d at 1310.

Contrary to FERC’s assertions, there is ample information about existing and projected shale gas development for FERC to engage in reasonable forecasting. According to a report by the research investment firm Morningstar, several companies, including Cabot, have “identified between 10 and 30 years of drilling locations across the Marcellus, which should fuel several more years of production growth at relatively low cost.” Morningstar Energy Observer, *Shale Shock: How the Marcellus Shale Transformed the Domestic Natural Gas Landscape and What It Means for Supply in the Years Ahead*, p. 17 (Feb. 2014) (emphasis added), available at http://marcelluscoalition.org/wp-content/uploads/2014/03/Morning-Star_EnergyObserverFebruary2014.pdf.

As stated above, Seneca Resources has specifically identified that further development of its EDA is contingent on authorization of Atlantic Sunrise. National Fuel, Investor Presentation – Q2 Fiscal 2016 Update, p. 17. Thus, it is reasonably foreseeable that authorization of the Atlantic Sunrise Project will facilitate Seneca Resources’ development of the “50-60 remaining Marcellus [shale] locations” and “100-120 [Geneseo shale] locations” in its EDA. *Id.* at 10, 17.

FERC is also well aware of the nature of the impacts of shale gas drilling. According to a recent U.S. Geological Survey (“USGS”) report:

A recent analysis of Marcellus well permit locations in Pennsylvania found that well pads and associated infrastructure (roads, water impoundments, and pipelines) required nearly 3.6 hectares (9 acres) per well pad with an additional 8.5 hectare (21 acres) of indirect edge effects (Johnson, 2010). This type of extensive and long-term habitat conversion has a greater impact on natural ecosystems than activities such as logging or agriculture, given the great dissimilarity between gas-well pad infrastructure and adjacent natural areas and the low probability that the disturbed land will revert back to a natural state in the near future (high persistence) (Marzluff and Ewing, 2001).

Slonecker, E.T., et al., Landscape Consequences of Natural Gas Extraction in Bradford and Washington Counties, Pennsylvania, 2004-2010: USGS Open-File Report 2012-1154, p. 8 (2012), available at <https://pubs.usgs.gov/of/2012/1154/of2012-1154.pdf> (“USGS Report”). In a

2012 presentation provided through the Penn State Cooperative Extension, The Nature Conservancy (“TNC”) estimated that 60,000 shale gas wells could eventually be drilled in Pennsylvania. TNC, Marcellus Gas Well & Pipeline Projections, p. 13, *available at* <http://extension.psu.edu/natural-resources/forests/private/training-and-workshops/2012-goddard-forum-oil-and-gas-impacts-on-forest-ecosystems/marcellus-gas-well-and-pipeline-projections>.

In its 2014 report on Marcellus shale supplies, Morningstar stated that there is “somewhere between 30 and 75 years of Marcellus resource potential at current production rates” and that “approximately 1,000 wells will need to be brought on line each year to hold gas production flat.” Morningstar Energy Observer at 15; 17. In other words, at 1,000 new wells per year, there is the potential for 30,000 to 75,000 Marcellus shale gas wells.

TNC further reviewed how these projected wells would be distributed on the landscape under various well pad development scenarios. TNC, Marcellus Gas Well & Pipeline Projections, p. 13. TNC also analyzed where Marcellus Shale drilling was likely to occur (*id.* at 15-17) and how many miles of new pipelines and the direct and indirect effects of those pipelines on forests by 2030 (*id.* at 21). For example, by 2030, TNC estimated that there could be 10,000 – 25,000 miles of new gathering pipelines causing an estimated 60,000 to 150,000 acres of direct forest clearing and 300,000 to 900,000 acres of forest edge effects. *Id.*

According to TNC, pipeline mileage in Pennsylvania will at least double if not quadruple by 2030. *Id.* at 22. The footprint from pipelines alone is projected to be larger than the “cumulative area impacted by all other Marcellus gas infrastructure combined.” *Id.* Thus, when shale gas wells, roads, and other associated infrastructure (besides pipelines) are included, these figures will be much higher. These are enormous impacts to our landscapes, watersheds, wildlife habitat, and recreation opportunities that FERC routinely ignores due to its self-imposed “tunnel

vision.” Here, FERC knows the identity of many of the shippers that will supply the gas to fill the capacity created by the Project, how much gas those suppliers will ship, the location of many of those companies’ gas holdings, and the nature of the environmental impacts that would be caused by developing those holdings. FERC has all of the information required to assess the impacts of the shale gas drilling that would be induced by its approval of the Atlantic Sunrise Project. FERC thus may not shirk its responsibilities under NEPA by dismissing the environmental impacts of that future shale gas extraction in the Marcellus and Utica shale formations as too speculative. *Delaware Riverkeeper*, 753 F.3d 1304, 1310.

D. FERC Fails to Take a Hard Look at the Direct and Indirect Effects of the Project on Climate Change.

There is a “pressing need” for agencies to account for climate change in performing their duties under NEPA. *Conservation Nw. v. Rey*, 674 F. Supp. 2d 1232, 1253 (W.D. Wash. 2009). As a result, it has become relatively routine practice to account for indirect greenhouse gas (GHG) emissions from proposed federal actions.⁷ FERC, however, concludes “that neither construction nor operation of the Project would significantly contribute to GHG cumulative effects or climate change.”⁸ The analysis falls short in at least three ways. First, FERC’s quantification of the direct GHG emissions are underestimated. Second, FERC underestimated the indirect emissions from the project while also impermissibly narrowing the scope of the

⁷ See, e.g., BLM, Final EIS for South Gillette Area Coal Lease Applications (Aug. 2009) available at http://www.blm.gov/pgdata/etc/medialib/blm/wy/information/NEPA/hpdo/south_gillette/feis.Par.57426.File.tmp/vol1.pdf (BLM accounted for the emissions from coal mining and the combustion of coal in its NEPA review of mine leases. BLM did not evaluate GHG emissions from the transportation of the coal because it claimed that data was unavailable); see also *WildEarth Guardians v. U.S. Forest Serv.*, 828 F. Supp. 2d 1223, 1231 (D. Colo. 2011) (discussing final EIS by Forest Service that included an evaluation of GHG emissions from mining a coal seam and from combustion of the recovered coal).

⁸ DEIS for Transcontinental Pipe Line Co., Docket No. CP15-138-000 (May 2016).

indirect emissions it quantified. Third, the conclusory statement that the project will make no significant contribution to climate change fails to meet the hard-look standard required under NEPA.

1. FERC Underestimates the Project's Direct Emissions

First, FERC's quantification of the direct GHG emissions from the Project, DEIS at 4-196, have been underestimated. The DEIS understates the Project's direct GHG emissions, by understating the impact of methane emissions. The primary component of natural gas is methane, and methane is also a potent GHG. The DEIS does not identify the Project's methane emissions. Instead, it reports GHG emissions in terms of carbon dioxide equivalents ("CO₂e"). To calculate CO₂e, emissions of non-CO₂ GHGs are multiplied by a pollutant-specific "global warming potential" ("GWP"), which reflects the ratio between the amount of warming a ton of that pollutant causes and the amount of warming that would be caused by a ton of CO₂.⁹ While methane is a much more potent GHG than carbon dioxide, methane is much shorter-lived in the atmosphere.¹⁰ Thus, in converting methane to CO₂e, different values must be used for different timescales.

The DEIS's use of a methane GWP of 25 is flawed for two reasons. DEIS at 4-196. First, FERC must explain the basis for its decision to use the 100-year, rather than 20-year, assessment of methane's impacts. Authorities including the Environmental Protection Agency (EPA), the Obama Administration, and the Intergovernmental Panel on Climate Change ("IPCC") have emphasized the importance of acting quickly on climate change and the danger of reaching

⁹ See EPA, *Glossary of Climate Change Terms - Carbon Dioxide Equivalent*, <http://www.epa.gov/climatechange/glossary.html#C> (last visited June 16, 2014).

¹⁰ IPCC, *Climate Change 2013: The Physical Science Basis, Carbon and Other Biogeochemical Cycles 473* (2013), available at http://www.climatechange2013.org/images/report/WG1AR5_Chapter06_FINAL.pdf.

“tipping points” triggering cascading releases of GHGs within the coming decades.¹¹ A century-long assessment therefore is an inappropriate period to use to evaluate the impacts of the Project’s methane emissions.

Second, even on the 100-year timeframe, the 100-year methane GWP used in the DEIS does not represent the best available science. The basis for this figure is the EPA’s GHG reporting rule that adopted this report’s conclusion.¹² EA at 7. Yet as the U.S. Department of Energy (“DOE”) acknowledged in its report titled “Life Cycle Greenhouse Gas Perspective On Exporting Liquefied Natural Gas From The United States,” the IPCC’s superseding Fifth Assessment Report represents the best available science regarding methane’s GWP.¹³ FERC itself, in this DEIS, called the IPCC “the leading international, multi-governmental scientific

¹¹ IPCC, Climate Change 2013: The Physical Science Basis, Long-term Climate Change: Projections, Commitments, and Irreversibility 1029-1119 (2013), *available at* http://www.climatechange2013.org/images/report/WG1AR5_Chapter12_FINAL.pdf (discussing irreversible effects of climate change and tipping points); *see also* U.S. Env’tl. Prot. Agency, Proposed Rule, Carbon Pollution: Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, <http://www2.epa.gov/sites/production/files/2014-05/documents/20140602proposal-cleanpowerplan.pdf> (“[r]ecognizing the urgent need for actions to reduce GHG emissions”); *see also* U.S. Global Change Research Program, Climate Change Impacts in the United States: The Third National Climate Assessment 657 (Jerry M. Melillo et al. eds 2014) (“delay by any of the major emitters makes meeting any such target even more difficult and may rule out some of the more ambitious goals”); *see also id.* at 5, 28, 592 (discussing tipping points and thresholds in climate system).

¹² EPA, 2013 Revisions to the Greenhouse Gas Reporting Rule and Proposed Confidentiality Determinations for New or Substantially Revised Data Elements; 78 Fed. Reg. 19,802, 19,808-10 (proposed Apr. 2, 2013), EPA, 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements, 78 Fed. Reg. 71,904, 71,909 (Nov. 29, 2013).

¹³ DOE, Nat’l Energy Technology Lab., Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States (May 29, 2014), *available at* <http://www.energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf> (“DOE Life Cycle GHG Perspective”); *see also* IPCC, Climate Change 2013: The Physical Science Basis, Anthropogenic and Natural Radiative Forcing 714, Table 8.7 (2013), *available at* http://www.climatechange2013.org/images/report/WG1AR5_Chapter08_FINAL.pdf [hereinafter IPCC AR5].

body for the assessment of climate change.” DEIS at 4-287. The most recent IPCC report estimates that fossil methane has 36 times the GWP of carbon dioxide over a 100-year time frame and at least 86 times the GWP of carbon dioxide over a 20-year time frame.¹⁴ Thus, the available evidence overwhelmingly indicates that the methane GWP FERC used in the DEIS is too low. Because the Fifth Assessment Report represents the best available science, FERC should use the GWPs identified therein.

2. FERC’s DEIS Fails to Consider Indirect Emissions

The Commission’s assessment of indirect GHG emissions is limited to direct emissions from construction and operation of the pipeline and related infrastructure. FERC acknowledges that operation of Atlantic Sunrise Project “would provide an incremental 1.7 million dekatherms per day of year-round firm transportation capacity from the Marcellus Shale production area in northern Pennsylvania to Transco’s existing market areas . . . for natural gas consumption.” DEIS at ES-2. However, unlike recent NEPA assessments, see, e.g., Environmental Assessment for Leidy South Project, Docket No. CP13-113-000 (May 2014), FERC does not consider the climate effects of combusting this gas. FERC cannot continue to ignore the effects on the climate from production, transport, and combustion.

Indirect effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8. In draft guidance, CEQ, the agency charged with overseeing NEPA, has asked FERC to assess both “downstream” and “upstream” emissions. CEQ’s draft guidance states:

When assessing direct and indirect climate change effects, agencies should take account of emissions from activities that have a reasonably close causal relationship

¹⁴ IPCC AR5. These figures represent the global warming potential of methane when climate feedbacks are included in the analysis. Although DOE used the estimates without climate feedbacks, that decision was unsupported; FERC must use the more comprehensive estimates.

to the Federal action, such as those that may occur as a predicate for the agency action (often referred to as upstream emissions) and as a consequence of the agency action (often referred to as downstream emissions) should be accounted for in the NEPA analysis.¹⁵

Likewise, EPA has asked the Commission to discuss “emissions associated with the production, transport, and combustion of the natural gas.”¹⁶ Natural gas production, processing, and transmission are a significant source of GHGs, particularly methane. Methane is the primary component of natural gas. Methane can be directly vented into the atmosphere or can escape from the wells, the gathering pipelines at the well pads and the larger pipelines in the distribution system, and the compressor stations that shuttle the gas through the distribution system.¹⁷ Estimates vary about the quantities of methane leaked into the atmosphere during the natural gas lifecycle, but some estimates range from 1.4 to over 15 percent of the total produced gas.¹⁸ EPA has identified natural gas systems as the “single largest contributor to United States

¹⁵ CEQ Guidance at 11.

¹⁶ Env'tl. Protection Agency, Comments on the Draft Guidance Manual for Environmental Report Preparation for Applications Filed Under the Natural Gas Act, Jan. 19, 2016.

¹⁷ Dana R. Caulton et al., *Toward a better understanding and quantification of methane emissions from shale gas development*, Proc. Nat'l Acad. Sci. (Apr. 14, 2014), submitted herewith (evaluating methane emissions from fractured wells in the Southwestern Pennsylvania Marcellus shale region during drilling prior to gas flow stimulation and finding that “overall sites leak rates can be higher than current inventory estimates”); see also Anna Karion et al., *Methane emissions estimates from airborne measurements over a western United States natural gas field*, 40 Geophysical Res. Letters 4393-97 (2013) (measuring methane emissions from a producing oil and gas field in Utah, and finding emissions were five times the US EPA nationwide average estimate of leakage from the production and processing of natural gas).

¹⁸ EPA's Inventory of Greenhouse Gas Emissions and Sinks uses a “bottom-up” method based on engineering estimates of emissions from particular pieces of equipment or events multiplied by estimate of the census of such events. Many of these studies have estimated total lifecycle leak rates around 1.4 percent. See, e.g., Jeffrey Logan et al., JOINT INST. FOR STRATEGIC ANALYSIS, *Natural Gas and the Transformation of the U.S. Energy Sector* 5 (2012), available at <http://www.nrel.gov/docs/fy13osti/55538.pdf>. The academic literature published in 2014 on methane leakage over the natural gas lifecycle showed leakage rate measurements well in excess of 15 percent in some parts of the country. A review and short summary of those studies are available at <http://chesapeakeclimate.org/wp/wp-content/uploads/2015/01/2014-methane-leakage-studies.pdf>.

anthropogenic methane emissions,” with emissions from the oil and gas industry amounting to over 40 percent of total methane emissions.¹⁹ Even when using an estimate of total methane emissions that many recent studies have criticized as too low, and a GWP that has been superseded by recent higher estimates, EPA concluded that methane emissions from the oil and gas industry constituted five percent of all CO₂e emissions in the country.²⁰

As discussed above, the climate change impacts of methane are of particular concern because methane has 86 times the GWP of CO₂ over 20 years, when considering the potential for positive climate carbon feedbacks.²¹ The latest IPCC Report also found that methane has 70 times the global temperature change potential, the change in global mean surface temperature resulting from emissions, of CO₂.²² Emissions of methane therefore will have a greater and more immediate effect on the climate than emissions of CO₂.

FERC’s analysis, therefore, underestimates the emissions from the transport of the gas. It further completely fails to quantify the emissions from upstream production and transportation, giving the public and decision makers no information with which to form a decision. In previous NEPA assessments, FERC has at least considered the climate emissions from combustion of the gas. Environmental Assessment for Leidy South Project, Docket No. CP13-113-000, p.88 (May 2014). In that case, a primary objective of the Project was to supply natural gas to the Panda Stonewall Power Project. With no specified destination for the additional gas made possible through the Atlantic Sunrise Project, FERC appears to assume that the gas will not be

¹⁹ EPA, Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 76 Fed. Reg. 52,738, 52,792 (Aug. 23, 2011).

²⁰ *Id.* at 52,791–92.

²¹ IPCC AR5 at 714.

²² *Id.*

combusted. This head-in-the-sand approach is irrational and fails to meet the “hard look” standard of NEPA.

3. FERC’s Conclusory Statement that the Project Will Not Significantly Contribute to Climate Change Is Insufficient Under NEPA.

NEPA is our “basic national charter for protection of the environment.”²³ The statute makes environmental protection a part of the mandate of every federal agency, and requires federal agencies to take environmental considerations into account in their decision-making “to the fullest extent possible.”²⁴ Accordingly, each agency must take a “hard look” at the environmental consequences of its proposed actions.²⁵ Under the “hard look” standard, the burden rests entirely on the agency to make a “convincing case” for its FONSI.²⁶ A FONSI is legally inadequate when, for example, “1) it does not adequately investigate all the environmental issues raised by the plaintiffs, and 2) with respect to a number of environmental issues considered, it does not include a statement of reasons why those effects are not significant.”²⁷

FERC failed entirely to quantify emissions from upstream production and transport. That is because, according to FERC, upstream production activities are not under FERC’s jurisdiction. *See* DEIS at 4-263 (“FERC’s authority under the NGA review requirements relate only to natural gas facilities that are involved in interstate commerce. Thus, the facilities associated with the production of natural gas are not under FERC jurisdiction.”). However, just because upstream

²³ 40 C.F.R. § 1500.1(a).

²⁴ 42 U.S.C. § 4332; *Calvert Cliffs Coordinating Comm. v. U.S. Atomic Energy Comm’n*, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

²⁵ *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 378 (1989).

²⁶ *Grand Canyon Trust v. FAA*, 290 F.3d 339, 341 (D.C. Cir. 2002) (quoting *Sierra Club v. U.S. Dep’t of Transp.*, 753 F.2d 120, 127 (D.C. Cir. 1985)).

²⁷ *Joseph v. Adams*, 467 F. Supp. 141, 155 (E.D. Mich. 1978).

production is not under FERC's jurisdiction does not mean that it can avoid considering these impacts as part of the cumulative impacts analysis in the DEIS. *See* 40 C.F.R. § 1508.7.

Consequently, FERC's conclusion that "neither construction nor operation of the Project would significantly contribute to GHG cumulative effects or climate change" is not based on a hard look at the lifecycle GHG emissions from this Project.

IV. The DEIS fails to take a hard look at cumulative impacts, including those impacts associated with gas development.

In addition to considering the direct and indirect effects of the project, FERC must also consider cumulative impacts. A cumulative impact is the:

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

40 C.F.R. § 1508.7. FERC's cumulative impact analysis in the DEIS is impermissibly restrictive and does not satisfy NEPA's "hard look" standard.

A. FERC's analysis of cumulative impacts is impermissibly restrictive and understates the significant impacts that pipeline construction activities cause.

FERC claims that its cumulative impacts analysis is "consistent with the methodology set forth in relevant guidance (CEQ, 1997b, 2005; EPA, 1999)." DEIS at 4-258. The analysis that follows, however, is anything but consistent with the "relevant guidance" that FERC cites. As a result, FERC did not take a "hard look" at the cumulative impacts of the Atlantic Sunrise Project.

FERC's cumulative impacts analysis is fatally flawed because it substantially limited the analysis area. For example, FERC states that "[f]or the most part, the area of potential cumulative impact is limited to the area *directly affected by the Project* and, depending on the resources, in the *adjacent areas*." *Id.* (emphasis added). Based on this limited analysis area,

FERC concluded that, “as a whole, minimal cumulative effects are anticipated when the impacts of the [Atlantic Sunrise] Project are added to the identified ongoing actions *in the immediate area.*” *Id.* at 4-290 (emphasis added). Such a limited cumulative impacts analysis is plainly inconsistent with both the Council on Environmental Quality’s (“CEQ”) and Environmental Protection Agency’s (“EPA”) guidance on cumulative impacts.

The CEQ guidance recommends significantly expanding the cumulative impacts analysis area beyond the “immediate area of the proposed action” that is often used for the “project-specific analysis” related to direct and indirect effects:

For a project-specific analysis, it is often sufficient to analyze effects within the immediate area of the proposed action. When analyzing the contribution of this proposed action to cumulative effects, however, the geographic boundaries of the analysis *almost always should be expanded.* These expanded boundaries can be thought of as differences in hierarchy or scale. Project-specific analyses are usually conducted on the scale of counties, forest management units, or installation boundaries, *whereas cumulative effects analysis should be conducted on the scale of human communities, landscapes, watersheds, or airsheds.*

CEQ, Considering Cumulative Effects under the National Environmental Policy Act, p. 12 (1997) (emphasis added). CEQ further says that it may be necessary to look at cumulative effects at the “ecosystem” level for vegetative resources and resident wildlife, the “total range of affected population units” for migratory wildlife, an entire “state” or “region” for land use, and the “global atmosphere” for air quality. *Id.* at 15. FERC’s selected regions of influence for forested lands, forested and scrub-shrub wetlands, and air quality are not consistent with CEQ guidance.

EPA’s guidance states that “[s]patial and temporal boundaries should not be overly restrictive in cumulative impact analysis.” EPA, Consideration of Cumulative Impacts in EPA Review of NEPA Documents, p. 8 (1999). EPA specifically cautions agencies to not “limit the scope of their analyses to those areas over which they have direct authority or to the boundary of

the relevant management area or project area.” *Id.* Rather, agencies “should delineate appropriate geographic areas including *natural ecological boundaries*” such as ecoregions or watersheds. *Id.* (emphasis added). Therefore, FERC’s assertion that, “for the most part, the area of potential cumulative impact is *limited to the area directly affected by the Project* and, depending on the resources, in the *adjacent areas*,” is plainly inconsistent with CEQ’s and EPA’s guidance on cumulative impacts. As a result, the cumulative impacts analysis is fatally flawed and cannot support FERC’s conclusion that there will be “minimal cumulative effects” upon construction and operation of the Atlantic Sunrise Project.

FERC did expand the region of influence (“ROI”) to analyze cumulative impacts for certain “major actions,” such as large commercial, industrial, transportation and energy development projects, including “natural gas well permitting and development projects.” DEIS at 4-259. However, FERC only expanded the ROI for such actions to “within 10 miles of the Atlantic Sunrise Project.” *Id.* FERC provides no explanation for selecting such a restrictive analysis area which not only had the effect of excluding thousands of existing shale gas wells from the cumulative impacts analysis but also hundreds, if not thousands, of reasonably foreseeable future shale gas wells. Thus, FERC’s selection of the 10-mile ROI for the above-referenced projects was arbitrary and capricious and renders the DEIS deficient.

1. Water Resources

FERC claims that “[c]umulative effects on waterbodies and wetlands affected by the Atlantic Sunrise Project would be limited primarily to the wetlands and waterbodies that are affected by other actions within the same major watershed that are constructed at approximately the same time.” DEIS at 4-274. FERC identifies three major watershed basins that are crossed by the Project in Pennsylvania: (1) Upper Susquehanna; (2) Lower Susquehanna; and (3) West

Branch Susquehanna. *Id.* The analysis that follows, however, consists of nothing more than generic statements that fail to put into context the cumulative impacts of the Atlantic Sunrise Project and other past, present, and reasonably foreseeable future actions on these watersheds.

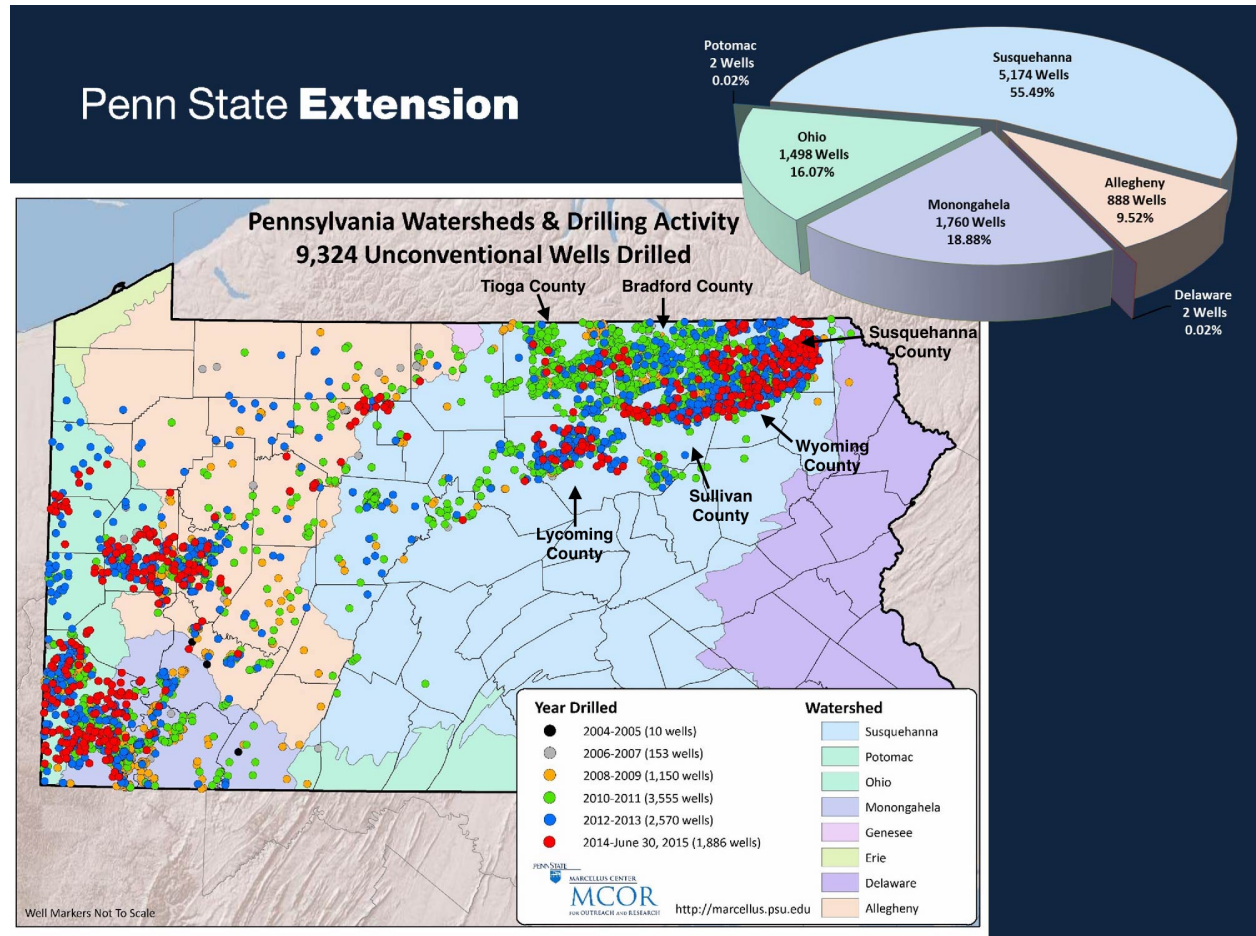
For example, FERC says that “the only impacts on surface waters would be temporary and mostly associated with active construction activities, ceasing upon settling of turbidity and proper restoration and stream bank revegetation.” DEIS at 4-274. FERC claims, however, that because Transco will use “HDD and other dry crossing methods for all but a few of the crossings” and because “[s]imilar mitigation would also be required and implemented by the sponsors of the other listed actions,” that “[c]ollectively, these measures will reduce the cumulative impacts on the watersheds encompassing the waterbodies that would be affected by the Atlantic Sunrise Project.” *Id.* Such vague assertions do not satisfy the “hard look” requirement for considering the cumulative impacts of the Atlantic Sunrise Project on watersheds.

The analysis is further flawed by the fact that FERC failed to consider the cumulative impacts of shale gas development at the watershed level. For example, as stated elsewhere, FERC only considered 1,135 gas wells permitted “within 10 miles of the [Atlantic Sunrise] Project” between July 2011 and February 3, 2015.²⁸ DEIS at 4-263. However, in the “waterbodies and wetlands” subsection of the cumulative impacts analysis, which purportedly considered cumulative impacts on the three “major watersheds” listed above, FERC does not identify any additional existing gas wells beyond the 1,135 that were permitted within 10 miles of the Project.

²⁸ In Appendix P, FERC identifies 2,676 drilling permits issued between July 2011 and Apr. 11, 2016. *See* DEIS, App. P at P-3.

As Figure 1 below shows, there has been a substantial amount of shale gas development in the Susquehanna River Basin since 2004.

Figure 1: Pennsylvania Watersheds & Unconventional Wells Drilled (2004 - June 30, 2015).



Source: Penn State – Marcellus Center for Outreach and Research, Resources: Maps and Graphs, available at <http://www.marcellus.psu.edu/images/Watershed%20Map%2020150630.jpg>. Note: County names and arrows added.

FERC cannot claim to have considered the cumulative impacts of shale gas development on the Upper, Lower, and West Branch Susquehanna Watersheds when it only considered the wells permitted “within 10 miles” of the Atlantic Sunrise Project. As Figure 1 shows, at least 5,174 shale gas wells were drilled in the Susquehanna River Basin between 2004 and June 30, 2015, substantially more than the number of wells considered in the DEIS.

FERC appears to have further limited its analysis of shale gas impacts on watersheds to consumptive water uses only. Although FERC acknowledges that “[c]oncerns have been raised regarding the potential impact of Marcellus Shale development on surface water resources,” DEIS at 4-274, nowhere does FERC discuss impacts such as increased erosion and sedimentation and pollution from wastewater spills that are caused by shale gas development. This is a major oversight in a basin that has approximately 55% of all shale gas wells in Pennsylvania. See Figure 1.

It is critical that FERC consider the impacts of erosion and sedimentation on the Susquehanna River Basin and Chesapeake Bay from future shale gas development, especially as this development encroaches upon the most forested part of the Susquehanna River Basin. As Figure 1 above shows, most of the shale gas development that has occurred in the Susquehanna River Basin has been concentrated in six counties in northeastern Pennsylvania. While some of this development has certainly impacted forests, much of the existing shale gas development has occurred in areas dominated by agriculture. Compare Figure 1 with Susquehanna River Basin Commission, Susquehanna River Basin – Land Use Land Cover, 2006, available at http://srbc.net/atlas/downloads/BasinwideAtlas/PDF/1507_LandUse.PDF.

As the shale gas industry expands to the south and west of this region, however, it impacts forested lands. This is very concerning since forested lands “contribute[] the lowest loading rate per acre of all the land uses[.]” Environmental Protection Agency, Chesapeake Bay TMDL, Section 4, p. 4-36, available at <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-tmdl-document> (“Chesapeake Bay TMDL”). According to the U.S. Geological Survey:

Natural gas exploration and development result in spatially explicit patterns of landscape disturbance involving the construction of well pads and impoundments, roads, pipelines, and disposal activities that have structural impacts on the landscape . . . Forest loss as a

result of disturbance, fragmentation, and edge effects has been shown to negatively affect water quality and runoff (Wickham and others, 2008).

USGS Report at 8; *see also* STAC (Chesapeake Bay Program Scientific and Technical Committee). 2013. Exploring the environmental effects of shale gas development in the Chesapeake Bay Watershed, STAC Publ. #13-01, Edgewater, MD. p. 16, *available at* http://www.chesapeake.org/pubs/297_Gottschalk2013.pdf (“STAC Report”) (“well pad[s] and associated infrastructure (including roads and pipelines) . . . change the hydrology and sediment, nutrient, and organic export to receiving streams . . . lead[ing] to altered flow regimes and habitats and increased sedimentation and nutrient input into streams”). It is no surprise that researchers have concluded that one of the “key priorities” for protecting Chesapeake Bay is to require that there is “no net loss of forest lands.” Claggett, Peter, and Thompson, Renee, eds., 2012, Proceedings of the Workshop on Alternative Futures – Accounting for growth in the Chesapeake Bay watershed: USGS Open-File Report 2012-1216, p. 8, *available at* <http://pubs.usgs.gov/of/2012/1216/OFR2012-1216.pdf>.

FERC must consider how the loss of forested areas from past, present and future shale gas development will impact the Susquehanna River watershed and compliance with the Chesapeake Bay TMDL. *See* Chesapeake Bay TMDL. In addition to the direct effects of construction of the Atlantic Sunrise Project through protect lands discussed above, the cumulative impacts of sedimentation in the Susquehanna River watershed from clearing forested areas for roads, other pipelines, well pads, and other shale gas infrastructure could cause Pennsylvania to fall short of its obligations pursuant to the Chesapeake Bay TMDL.

Regardless of whether shale gas development in the Susquehanna River watershed causes significant impacts on Chesapeake Bay, researchers “agree[] that there is a high probability of a possible-long term landscape effect in Pennsylvania[.]” STAC Report, p. 17. According to the

Susquehanna River Basin Commission (“SRBC”), as of 2012, there were at least 2,000 shale gas well pads in the Susquehanna River Basin, “creat[ing] 13,000 acres of disturbed lands” from the well pads themselves and associated road construction. *Id.* at 11. However, “[t]his level of disturbance should be viewed as a minimum, since additional lands must also be cleared for gathering and transmission pipelines.” *Id.* Thus, the acres disturbed from shale gas development is likely much higher than 13,000 acres.

According to the Nature Conservancy, shale gas companies could drill 27,600 wells in the Susquehanna River basin by 2030. *Id.* Extrapolating from the SRBC’s calculations, that would result in approximately 6,900 well pads, assuming four wells per pad. Subtracting the existing 2,000 well pads results in an additional 4,900 well pads, which would create an additional 31,850 acres of disturbed lands. Again, these figures are conservative since they are only based on SRBC’s estimates for the well pad and associated road network. The Nature Conservancy believes that up to 110,000 acres of forested land could be cleared by 2030. *Id.*

FERC failed to consider how this level of disturbance to forested lands in the Susquehanna River watershed will impact water quality within the basin and sub-basins as well as Pennsylvania’s compliance with the Chesapeake Bay TMDL. The only reference to the Chesapeake Bay TMDL is in a single paragraph on page 4-53 of the DEIS. This discussion, however, only concerned the direct effects of the Atlantic Sunrise Project and is itself deficient, as described above. There is no discussion in the DEIS regarding either the indirect or cumulative effects of shale gas development on the Chesapeake Bay TMDL. FERC’s failure to address these reasonably foreseeable cumulative impacts renders the DEIS deficient under NEPA.

2. Vegetation and Wildlife

FERC failed to take a hard look at the cumulative effects of shale gas development on vegetation and wildlife. FERC acknowledges that “Marcellus shale development would also contribute to the cumulative vegetation and wildlife impacts.” DEIS at 4-276. However, FERC claims that because Marcellus Shale development projects would likely be required by state agencies and other federal agencies to implement various mitigation measures, that cumulative impacts would only be “moderate in areas of rapid ongoing [shale gas] development like Susquehanna County and minor elsewhere.” *Id.* at 4-277. FERC’s dismissive assertion that these landscape level effects are, at most, “moderate,” bears no relationship to the reality on the ground, especially in light of the 10-mile ROI used in the DEIS.

CEQ specifically recommends considering cumulative effects on wildlife at the “ecosystem” level for resident wildlife and the “total range of affected population units” for migratory wildlife. *See Cumulative Effects under the National Environmental Policy Act*, p. 15. This is particularly important in the context of pipeline expansions and related shale gas development. For example, according to recent research published in *Environmental Science & Technology*:

Potential effects [of shale gas drilling] on terrestrial and aquatic ecosystems can result from many activities associated with the extraction process and the rate of development, such as road and pipeline construction, well pad development, well drilling and fracturing, water removal from surface and ground waters, establishment of compressor stations, and by unintended accidents such as spills or well casing failures . . . The cumulative effect of these potential stressors will depend in large part on the rate of development in a region. Depending on extent of development, oil and gas extraction has the potential to have a large effect on associated wildlife, habitat and aquatic life.

Brittingham, M.C., et al., *Ecological Risks of Shale Oil and Gas Development to Wildlife, Aquatic Resources and their Habitats*, *Environmental Science & Technology*, pp. 11035-11037 (Sept. 4, 2014) (citations omitted) (Attachment 2). Shale gas development “changes the landscape” as “[l]and is cleared for pad development and associated infrastructure, including

pipelines, new and expanded roads, impoundments, and compressor stations[.]” *Id.* at 11037 (citations omitted). “Seismic testing, roads, and pipelines bisect habitats and create linear corridors that fragment the landscape.” *Id.*

“Habitat fragmentation is one of the most pervasive threats to native ecosystems and occurs when large contiguous blocks of habitat are broken up into smaller patches by other land uses or bisected by roads, transmission lines, pipelines or other types of corridors.” *Id.* “Habitat fragmentation is a direct result of shale development with roads and pipelines having a larger impact than the pads.” *Id.* (citations omitted). In Bradford County where part of the Project area is located, “forests became more fragmented primarily as a result of the new roads and pipelines associated with shale development, and development resulted in more and smaller forest patches with loss of core forest (forest > 100 m from an edge) at twice the rate of overall forest loss.” *Id.* (citation omitted). “Pipelines and roads not only resulted in loss of habitat but also created new edges.” *Id.* “Fragmentation from linear corridors such as pipelines, seismic lines, and roads can alter movement patterns, species interactions and ultimately abundance depending on whether the corridor is perceived as a barrier or territory boundary or used as an avenue for travel and invasion into habitats previously inaccessible.” *Id.* (citations omitted).

According to the New York Department of Environmental Conservation, “development of one horizontal [shale] well requires over 3300 one-way truck trips.” *Id.* at 11038 (citation omitted). “This is a concern because roads of all types have a negative effect on wildlife through direct mortality, changes in animal behavior, and increased human access to areas, and these negative effects are usually correlated with the level of vehicular activity.” *Id.* (citations omitted). “Even after a well is drilled and completed, new roads and pipelines provide access for more people, which results in increased disturbance.” *Id.* “In Wyoming, Sawyer et al. found

that mule deer migratory behavior was influenced by disturbance associated with coal bed gas development and observed an increase in movement rates, increased detouring from established routes, and overall decreased use of habitat along migration routes with increasing density of well pads and roads. *Id.* (citation omitted).

Shale gas development “is associated with both short-term and long-term increases in noise.” *Id.* “In the short term, site clearing and well drilling, [high volume hydraulic fracturing], and construction of roads, pipelines and other infrastructure are a limited time disturbance similar to disturbance and sound associated with clearing land and home construction.” *Id.* (citation omitted). “Depending on number of wells drilled, construction and drilling can take anywhere from a few months to multiple years.” *Id.*

“Compressor stations, which are located along pipelines and are used to compress gas to facilitate movement through the pipelines, are a long-term source of noise and continuous disturbance.” *Id.* (citation omitted). “Because chronic noise has been shown to have numerous costs to wildlife, compressors have potential to have long-term effects on habitat quality. *Id.* (citation omitted). “For many species of wildlife, sound is important for communication, and noise from compressors can affect this process through acoustical masking and reduced transmission distances.” *Id.* “Studies on effects of noise from compressors on songbirds have found a range of effects including individual avoidance and reduced abundance, reduced pairing success, changes in reproductive behavior and success, altered predator-prey interactions, and altered avian communities . . . Greater sage-grouse (*Centrocercus urophasianus*) gather at leks where males display in order to attract females.” *Id.* “Lek attendance declined in areas with chronic natural gas-associated noise and, experimentally, sage-grouse were shown to experience higher levels of stress when exposed to noise.” *Id.* (citations omitted).

“Because of the large overlap between the Appalachian shale play and core forest habitat in the East, many forest species are vulnerable to development.” *Id.* at 11040. “Area-sensitive forest songbirds are primarily insect-eating Neotropical migrants, are an important component of forest ecosystems, and, as a group, many have declined in numbers in response to forest fragmentation.” *Id.* (citations omitted). “These birds are area-sensitive because breeding success and abundance are highest in large blocks of contiguous forest, and numerous research studies have documented negative effects of fragmentation on abundance and productivity[.]” *Id.* “The impact that shale development has on this group of species will depend on the scale and extent of development.” *Id.* “*By some estimates, less than 10% of potential shale gas development has occurred in the Appalachian basin [and] [i]f this is the case, there is the potential for a 10-fold increase in the amount of shale gas development which would likely have negative impacts on area-sensitive forest songbirds and other forest specialists.*” *Id.* (emphasis added) (citation omitted).

“Development of shale resources, which clears land for well pads and roads, is occurring across a large portion of the native range of brook trout, *especially in Pennsylvania.*” *Id.* (emphasis added) (citation omitted). “If remaining high-quality stream reaches become unsuitable to brook trout, there may be further fragmentation of the larger meta-population.” *Id.*

“Rare species with limited ranges are always a concern when development occurs” and “any type of disturbance can be very detrimental to them.” *Id.* “Freshwater mussels are an additional taxonomic group of interest because of already high numbers of listed species and relative sensitivity to toxicants.” *Id.* (citation omitted). “The endangered Indiana Bat, (*Myotis sodalis*), is another example of a species where a large portion of its native range is within areas of shale development.” *Id.* (citation omitted). “Gillen and Kiviat 2012 reviewed 15 species that

were rare and whose ranges overlapped with the Marcellus and Utica shale by at least 35%.” *Id.* “The list included the West Virginia spring salamander (*Gyrinophilus subterraneus*), a species that is on the IUCN Red List as endangered and whose range overlaps 100% with the shale layers.” *Id.* This salamander “requires high quality water and is sensitive to fragmentation suggesting that this species is at great risk to oil and gas development.” *Id.* “The list also included eight Plethodontid salamanders, a group that tends to be vulnerable because of the overlap between their range and shale layers, their dependence on moist environments and sensitivity to disturbance.” *Id.* at 11040-11041.

“Habitat fragmentation, effects on water quality and quantity, and cumulative effects on habitats and species of concern have already been identified as problems and are expected to increase in magnitude as shale resource development continues to expand.” *Id.* at 11043.

Brittingham et al. (2014) “suggests that species and habitats most at risk are ones where there is an extensive overlap between a species range or habitat type and one of the shale plays (leading to high vulnerability) coupled with intrinsic characteristics such as limited range, small population size, specialized habitat requirements, and high sensitivity to disturbance.” *Id.* “Examples include core forest habitat and forest specialists, sagebrush habitat and specialists, vernal pond inhabitants, and stream biota.” *Id.*

Brittingham et al. (2014) demonstrates the substantial impact that shale gas drilling is having and will continue to have on wildlife throughout the Marcellus and Utica shale region. Such impacts will only worsen if FERC continues facilitating such drilling by authorizing infrastructure projects such as the one proposed here without analyzing the cumulative impacts on wildlife, disclosing that information to the public, and incorporating it into FERC’s decisionmaking process.

According to Souther et al. (2014):

The few studies that consider cumulative impacts suggest that shale-gas development will affect ecosystems on a broad scale . . . As cumulative impacts' methodology and knowledge improve, research should move toward detecting synergies between shale development and other likely drivers of extinction, such as climate change, as site-specific or single variable risk assessments likely underestimate threats to ecological health.

Souther et al. (2014), Biotic impacts of energy development from shale: research priorities and knowledge gaps. *Frontiers in Ecology and the Environment* 12(6): 334 (Attachment 3). These researchers further state that:

Using criteria related to the environmental risks and current understanding of these impacts, we suggest that top research priorities are related to probabilistic events that lead to contamination of fresh water, such as equipment failure, illegal activities, accidents, chemical migration, and wastewater escape, *as well as cumulative ecological impacts of shale development.*

Id. at 337 (emphasis added).

The U.S. Fish and Wildlife Service recently expressed concerns about the potential noise impacts of National Fuel's Tuscarora Lateral Project on wildlife:

Since the project involves the increase of horsepower at one compressor station and the construction of a new station, we recommend the FERC request data on operating noise levels at the compressor stations, and an analysis be completed of how the project noise levels will affect wildlife. Noise levels over background levels can adversely affect wildlife, particularly songbirds, that rely on call identification for successful breeding. If noise levels will exceed background levels, the environmental document should identify mitigation measures that will be employed to reduce noise impacts on wildlife such as vegetation screening or barriers.

U.S. Fish and Wildlife Service January 27, 2015 Letter to FERC (Docket CP14-112-000, Accession No. 20150202-0104). While these comments were specific to the Tuscarora Lateral Project, the same rationale applies for other projects as well, such as the one at issue here where Transco is constructing new and expanding existing compressor stations. The DEIS, however, contains no discussion of the potential noise impacts on wildlife resulting from the increase in

horsepower at these compressor stations. FERC may not rely on an EIS that does not include an analysis of the cumulative noise impacts on wildlife associated with these and other compressor station upgrades in the region. In addition to the noise impacts from new and expanded compressor stations, the cumulative noise impacts of shale gas development on wildlife must be considered.

It is likely that the dramatic increase in shale gas drilling in this region of Pennsylvania has already disrupted wildlife populations. For example, in 2012, the New York Department of Environmental Conservation (“NYDEC”) revised its “Bobcat Management Plan” because:

Observations by hunters and trappers, and reports from the general public suggest that bobcat populations are increasing and expanding throughout New York State outside of their historic core range in the Taconic, Catskill, and Adirondack mountains and into central and western New York. *In addition, emigration of bobcats from Pennsylvania has likely fostered growth of the bobcat population in the southern tier of the state* (Matt Lovallo, Pennsylvania Game Commission, personal communication).

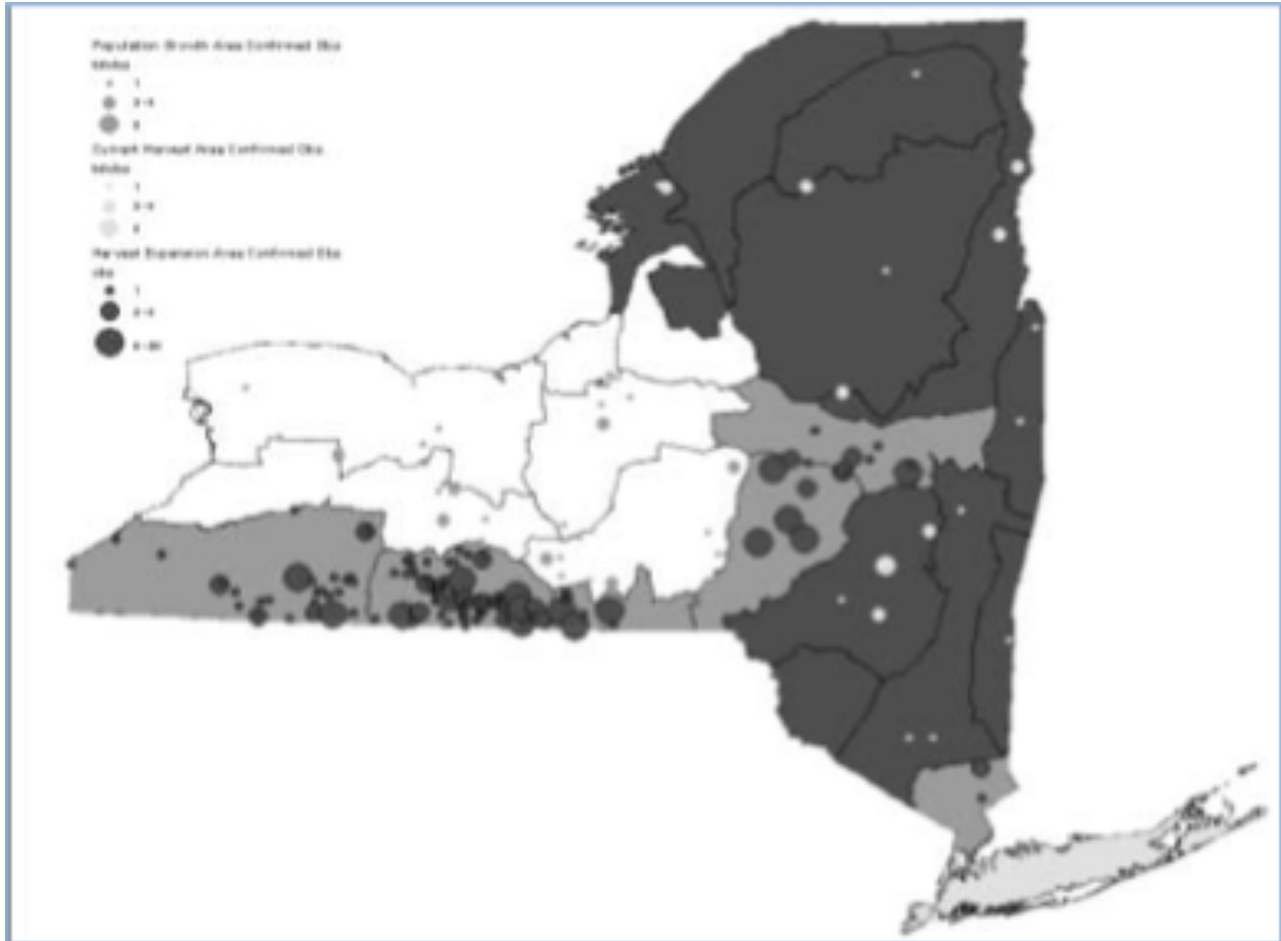
New York Department of Environmental Conservation. Management Plan for Bobcat in New York State 2012-2017. p. 8. 2012 (emphasis added). *available at:*

http://www.dec.ny.gov/docs/wildlife_pdf/finalbmp2012.pdf. The plan further stated:

The presence of bobcat in New York’s Southern Tier has *increased dramatically* over the past decade. What began as occasional sightings along the New York/Pennsylvania border has progressed to large numbers of observations, trail camera photos, and incidental captures and releases by trappers. *Over the past five years* there have been 332 bobcat observations documented in the harvest expansion area[.]

Id. at 17 (emphasis added). The following figure, showing the number confirmed bobcat observations in New York from 2006-2011, reveals a concentration of observations along the Pennsylvania border:

Figure 2: Total Confirmed Bobcat Observations, 2006-2011.



Source: NYDEC Bobcat Management Plan, p. 17.

While NYDEC was documenting an increase in bobcat observations in the southern tier of New York between 2006-2011, hundreds and then thousands of shale gas wells were being drilled in the northern tier of Pennsylvania. *See* Figure 2 above. As Figure 2 indicates, between 2006-2011, gas companies drilled at least 4,858 shale gas wells in Pennsylvania. Many of these wells were drilled in Pennsylvania’s northern tier. Thus, at the same time the gas industry began and then rapidly escalated gas drilling across the northern tier of Pennsylvania, the bobcat population in the southern tier of New York “increased dramatically.” Since there has been no shale gas

development in New York throughout this time period due to a moratorium (and now ban)²⁹ on shale gas development, this suggests that the rapid increase in shale gas development in Pennsylvania may be causing “emigration of bobcats from Pennsylvania” into southern New York.

National Fuel’s 2013 Annual Report suggests why this could be happening. For example, National Fuel stated that the drilling operations of its exploration and production subsidiary, Seneca Resources, occur 24-hours a day. *See* National Fuel 2013 Annual Report, p. 3, *available at* http://s2.q4cdn.com/766046337/files/doc_financials/2013/NFG_SAR_13_Final.pdf (emphasis added). If Seneca and other shale gas drilling companies are operating in remote, forested areas 24-hours a day, then it is reasonable to assume that those operations have significant consequences on wildlife that depend on remote, forested habitat for survival. Since Seneca Resources has expressly stated that it is awaiting authorization of the Atlantic Sunrise Project to increase shale gas development in its EDA, which is located in remote, forested areas that are important for wildlife, FERC must examine the impacts that 24-hour shale gas drilling operations are having on wildlife populations, not only in this region but throughout the Appalachian Basin. Failing to adequately consider these “inter-regional” cumulative impacts on wildlife populations would “eviscerate NEPA.” *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 299 (D.C. Cir. 1988).

3. Fisheries and Other Aquatic Resources

²⁹ *See* New York State Department of Conservation and Natural Resources, High-Volume Hydraulic Fracturing in NYS, *available at* <http://www.dec.ny.gov/energy/75370.html>.

FERC did not take a hard look at the cumulative effects on fisheries and other aquatic resources. For example, FERC states that cumulative impacts “could occur” on these resources but because of Transco’s proposed mitigation measures and similar measures implemented in other FERC-regulated and state-regulated actions, “none of these impacts are expected to be cumulatively significant.” DEIS at 4-278. FERC cannot abdicate its obligation to analyze cumulative impacts by pointing to the potential implementation of mitigation measures in the future, particularly where those mitigation measures are not identified in the DEIS. Nor can FERC delegate its NEPA responsibilities by deferring “to the scrutiny of other [agencies].” *Idaho v. Interstate Commerce Comm’n*, 35 F.3d 585, 595 (D.C. Cir. 1994) (citing *Calvert Cliffs’ Coordinating Comm., v. U.S. Atomic Energy Comm’n*, 449 F.2d 1109 (D.C. Cir. 1971)). Therefore, FERC failed to take a hard look at cumulative impacts on fisheries and other aquatic resources.

4. Special Status Species

In addition to wildlife in general, FERC failed to take a hard look at the cumulative effects of gas drilling on special status species. The entire section on special status species is two paragraphs. *See* DEIS at 4-278. FERC simply states that [b]ecause protection of threatened, endangered, and other special status species is part of the federal and state permitting processes, cumulative impacts on such species would be reduced or eliminated[.]” *Id.* “Consequently,” says FERC, “past and present projects in combination with the Atlantic Sunrise Project would have minor cumulative effects on special status species.” *Id.* This will not suffice.

First, FERC’s conclusion that “past and present projects in combination with the Atlantic Sunrise Project would have minor cumulative effects on special status species” excluded analysis of “reasonably foreseeable future actions” in violation of CEQ’s regulations. 40 C.F.R. §

1508.7. Second, FERC cannot rely on statutes like the Endangered Species Act (“ESA”) as a substitute for its compliance with NEPA. *See e.g., Conservation Congress v. U.S. Forest Service*, 720 F.3d 1048, 1054-55 (9th Cir. 2013) (explaining that NEPA’s definition of “cumulative impact” is broader than ESA’s definition). Third, the 10-mile ROI for shale gas development excluded the broader landscape level effects from consideration. By failing to analyze cumulative impacts of shale gas development beyond the 10-mile ROI, FERC is willfully disregarding impacts to special status species.

For example, the timber rattlesnake is a “candidate species for listing in Pennsylvania.” DEIS at 4-120. Candidate species “are at risk for becoming endangered or threatened in the future and are legally protected in Pennsylvania.” *Id.* FERC acknowledges that “portions of CPL South and Chapman Loop would be within the range of the timber rattlesnake in Lebanon, Northumberland, Schuylkill, and Clinton Counties.” *Id.* (citation omitted). The cumulative impacts analysis, however, fails to analyze the impacts of shale gas development beyond the 10-mile ROI.

It is important to note that the timber rattlesnake is already “extirpated from Maine, Rhode Island, and Ontario,” listed as “state endangered in New Hampshire, Vermont, Massachusetts, Connecticut, Ohio, and New Jersey,” listed as “threatened in New York, and considered a species of concern in West Virginia and Maryland.” PAFBC, Species Action Plan – Timber Rattlesnake, p. 4 (June 2011), *available at* <http://fishandboat.com/water/amprep/species-plan-timber-rattlesnake.pdf>. In comparison, the timber rattlesnake “continues to persist in relatively large population densities across some regions of Pennsylvania, though these populations are highly disjunct.” *Id.* “Consequently,

*Pennsylvania may function as a stronghold for the continued survival of this species.*³⁰ *Id.*
(emphasis added) (citation omitted).

According to DCNR, “[t]he largest populations of timber rattlesnakes occur in remote, heavily forested regions of Pennsylvania, *which means they often call state forests home.*” DCNR, Rattlesnakes in Pennsylvania State Forests (emphasis added), *available at* <http://dcnr.state.pa.us/forestry/wildlife/rattlesnakes/index.htm>. Pennsylvania’s “2.2 million acres of State Forest lands provide the *largest blocks of timber rattlesnake range remaining in the Northeastern states.*” *Id.* (emphasis added).

Pipeline construction and shale gas drilling could change that, however. According to PAFBC, some of the leading threats to timber rattlesnakes include “natural resource extraction and associated infrastructure development,” “habitat destruction or disturbance in hibernacula areas,” “increase of human activity within habitat range,” “new road construction,” and “high vehicular traffic on previously low volume roadways.” *Id.* at 5. These are precisely the kinds of impacts that result from pipeline construction and shale gas drilling.

FERC failed to adequately consider the cumulative impacts of the Project and shale gas drilling on timber rattlesnake. This same flaw infected FERC’s analysis regarding other special status species as well, including federally threatened and endangered species. Therefore, FERC DEIS does not satisfy NEPA.

5. Land Use, Recreation, Special Interest Areas, and Visual Resources

FERC failed to take a hard look at cumulative impacts of shale gas development on land use, recreation, special interest areas, and visual resources. For example, regarding land use,

³⁰ Considering that shale gas drilling has increased substantially across Pennsylvania since PAFBC’s Action Plan for timber rattlesnakes was published in 2011, the population density figures could be outdated.

FERC only considered “ongoing Marcellus shale development in Susquehanna County.” DEIS at 4-279. There are two major problems with this.

First, while this geographic scope is broader than the 10-mile ROI used elsewhere in the DEIS, it is still far too narrow. For example, as noted above, Seneca Resources has expressly stated that it is waiting for authorization of the Atlantic Sunrise Project to increase shale gas development in its EDA, which includes leases in Potter, Tioga, Clinton, and Lycoming Counties. *See* National Fuel, Investor Presentation – Q2 Fiscal 2016 Update, p. 10. At least three of these leases, DCNR Tracts 595, 100, and 007, are on state forest land. *See id.* at 17. At a minimum, FERC must expand the geographic scope of its analysis of shale gas drilling to the counties in which the Project’s natural gas suppliers are operating.

Second, FERC is required to consider the cumulative impacts of “past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7. By only considering “ongoing Marcellus shale development,” FERC necessarily excluded past actions from consideration. These restrictive parameters obfuscate the significant and long-term land use impacts that have already occurred and may continue to occur in this region, especially if FERC continues authorizing pipeline projects without ever taking a comprehensive region-wide analysis.

Regarding recreation and special interest areas, FERC claims that the impacts of other projects “could result” in cumulative impacts if those other reasonably foreseeable future actions “affect the same area at the same time as the [Atlantic Sunrise] Project.” DEIS at 4-280. In other words, the cumulative impacts of shale gas development are only considered as potentially impacting these resources if that development occurs within the 10-mile ROI and occurs at the same time as construction of the Project.

To satisfy NEPA, FERC must take a much broader view of cumulative impacts of shale gas development on land use, recreation, special interest areas, and visual resources because such development is encroaching upon, currently impacting and substantially altering remote, forested areas in Pennsylvania, including state forest lands that provide outstanding opportunities for remote recreation. According to the DCNR's 2015 Draft Forest Management Plan:

The majority of [shale gas] development [on state forests] has occurred in the Devonian-aged Marcellus Shale. Approximately 1.5 million acres of state forest lands lie within the prospective limits of the Marcellus Shale. Assuming a drainage area of 120 acres per well, the [DCNR's Bureau of Forestry (Bureau)] expects that approximately *3,000 wells may be drilled* to fully develop the lands it currently has leased . . . In recent years, there has been a marked increase in the development of the Ordovician-aged Utica Shale in western Pennsylvania and eastern Ohio . . . As development moves eastward from the Pennsylvania-Ohio border, the [Bureau] has seen an increased interest in the Utica Shale on state forest lands. Development of the Utica has become increasingly prevalent adjacent to state forest lands, primarily in Tioga County and the northwestern section of the state forest system.

DCNR, 2015 Draft State Forest Management Plan, 134-35 (emphasis added), *available at* http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_20031287.pdf. Thus, these remote, forested area of Pennsylvania, which contains outstanding biological and recreational features, are seriously threatened by rapidly encroaching shale gas development. As DCNR explains:

Unconventional shale-gas development can cause short-term or *long-term conversion of existing natural habitats to gas infrastructure*. The footprint of shale-gas infrastructure is a byproduct of shale-gas development. The use of existing transportation infrastructure on state forest lands, such as roads and bridges, increase considerably due to gas development . . . Shale-gas development requires *extensive truck traffic by large vehicles*, which may require upgrades to existing roads to support this use. These upgrades may affect the wild character of roads, a value that is enjoyed by state forest visitors . . . Compressor stations commonly are used in association with gas production and pipelines. Compressor stations increase the gas pressure at the well bore or within pipelines to overcome friction or production volume decreases. *Noise from compressors can dramatically affect a state forest user's recreational experience and generate conflict*. Unlike compressors, most sources of potential noise on state forest land are temporary in nature . . . The development of oil and gas resources requires pipelines for delivering the product to market. When compared to other aspects of gas development, *pipeline*

construction has the greatest potential to cause forest conversion and fragmentation due to the length and quantity of pipelines required.

Id. at 136-38 (emphasis added).

The U.S. Forest Service (“USFS”) has also explained how oil and gas development “industrializes” forest environments and impacts recreation on public lands:

The value of the land to provide recreation opportunities is diminished in intensively developed oil fields. The land area is *crisscrossed with roads*, which are confusing to navigate and usually not open to public travel. *The sounds of vehicles, pump engines and heavy equipment are common and pervasive.* Trail systems that traverse these fields are interrupted by *frequent road crossings*. Some trails may be converted to roads when the trail is located in an appropriate location for road building. Mineral owners may continue to expand the oil field to the extent of its geologic limit. Some of the developed oil fields cover thousands of acres. *The inherent character of the landscape is converted to an industrial atmosphere in the midst of the forest.*

USFS, Allegheny National Forest Roads Analysis Report, 44 (2003) (emphasis added), available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5048405.pdf. In the 2007 Forest Plan FEIS, the USFS cautioned that, because of the amount of oil and gas drilling in the Allegheny National Forest, “those seeking a more remote and less developed recreation experience *could be displaced to other State or National Forests where remote, semi-primitive settings and experiences are more readily available.*” USFS, Allegheny National Forest Land and Resource Management Plan FEIS, 3-327 (2007) (emphasis added), available at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5044089.pdf. Now, pipeline projects like Atlantic Sunrise and related shale gas development are combining to rapidly fragment Pennsylvania’s remote, state forest lands. These are long-term land use changes from a rural, forested setting to an increasingly industrialized setting.

DCNR has modeled how shale gas development in Tioga State Forest could quickly erode the forest’s “wild character.” See DCNR, Impacts of Leasing Additional State Forest for Natural Gas Development, 20-28. First, the model shows this portion of Tioga State Forest as it

exists with no gas wells. *Id.* at 20. Next, DCNR states that an “estimated 54 new well pads could be developed within the next 5-10 years in this ~65,000 acre landscape view.” *Id.* at 21. Next, DCNR ranks the existing landscape in terms of its “wild character” before drilling, ranging from “primitive” and “semi-primitive” to “semi-developed.” *Id.* at 22. When DCNR overlays new roads and well pads, it results in “significant decreases in Primitive and Semi-Primitive” forests and “a dramatic increase in semi-developed [] areas.” *Id.* at 23-25. DCNR says that 54 new well pads in this part of Tioga State Forest would result in a net loss of 8,171 acres of primitive forest, a net loss of 5,274 acres of semi-primitive forest, and a net gain of 13,545 acres of semi-developed area. *Id.* at 27. DCNR concludes that any “additional natural gas development involving surface disturbance would *significantly damage the wild character of the state forest.*” *Id.* at 28 (emphasis added).

FERC’s approval of the Project would expand the capacity of Transco’s Leidy Line. A likely consequence of that decision would be increased shale gas drilling on nearby state forest lands, threatening significant damage to their wild character. For example, as noted above Seneca Resources has leased a large amount of acreage in Potter, Tioga, and Lycoming Counties. *See* National Fuel, Investor Presentation at 17. Seneca Resources’ “DCNR Tract 100” lease is directly connected to Transco’s Leidy Line. *Id.* All of DCNR Tract 100, which covers 8,891 acres, is within Loyalsock State Forest. *See* DCNR, Index to Existing Oil and Gas Leases on Pennsylvania State Forest Lands, at 1 (last updated Aug. 26, 2014), *available at* http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_20029754.pdf (Attachment 4). To date, Seneca has constructed 10 well pads and four freshwater impoundments on Tract 100. *Id.* Seneca’s lease, however, allows it to construct a total of 35

well pads on Tract 100. *Id.* Thus, Seneca could construct an additional 25 well pads on Tract 100. This would significantly fragment this area of Loyalsock State Forest.

For example, DCNR's Shale Gas Monitoring Data website identifies the existing 10 well pads and associated infrastructure that has been constructed on Tract 100. *See* Seneca Resources, Tract 100 Map (Attachment 5).³¹ The existing 10 well pads and access roads have already fragmented this part of Loyalsock State Forest. If Seneca Resources constructs an additional 25 well pads on Tract 100, the entire 8,891-acre tract will be an industrialized landscape that is incapable of providing remote, recreation opportunities. Even though Seneca Resources is a subscriber on the Atlantic Sunrise Project and has expressly stated that it is awaiting approval of the Atlantic Sunrise Project to increase further shale gas development in its EDA, which includes Tract 100 in Loyalsock State Forest, FERC ignored impacts of shale gas development on land use, recreation and special interest areas, and visual resources. As such, FERC cannot rely on the DEIS to support authorization of the Project.

It is imperative that FERC greatly expand the scale at which it considers cumulative impacts on public lands. As noted above, the USFS has already told the public that oil and gas development has so impacted Pennsylvania's Allegheny National Forest that "those seeking a more remote and less developed recreation experience *could be displaced to other State or National Forests where remote, semi-primitive settings and experiences are more readily available.*" USFS, Allegheny National Forest Land and Resource Management Plan FEIS, 3-327. But as pipeline construction and shale gas development continues expanding, these "other

³¹ This map was created using DCNR's State Forest Shale Gas Infrastructure Interactive Map, available at <http://www.gis.dcnr.state.pa.us/maps/index.html?shaledata=true>. The leased area is shaded in blue and shale gas wells are identified as red squares.

State or National Forests” are rapidly being impacted by the sights and sounds of shale gas development.

As explained above, shale gas development is currently encroaching upon and impacting state forest lands across Pennsylvania. In addition, shale gas development and pipeline projects are impacting public lands in states surrounding Pennsylvania. For example, the proposed Atlantic Coast Pipeline would cut through the Monongahela National Forest in West Virginia and the George Washington National Forest in Virginia. *See* FERC, Supplemental Notice of Intent to Prepare an EIS for the Atlantic Coast Pipeline Project (Docket CP15-554-000; Accession No. 20160503-3002). The proposed Mountain Valley Pipeline would also cut through the Jefferson National Forest in West Virginia and Virginia. *See* Mountain Valley Pipeline, LLC, Mountain Valley Pipeline Project, Resource Report 8 at 8-29 (Docket CP16-10-000, Accession No. 20151023-5035).

In Ohio, pipeline construction and shale gas development are threatening the Wayne National Forest. The proposed Leach Xpress Pipeline Project would be located within a half-mile of the Wayne National Forest in Ohio. *See* Columbia Gas Transmission, LLC, Leach Xpress Pipeline Project, Resource Report 8 at 8-19 (Docket No. CP15-514-000, Accession No. 20150608-5049). Recently, the Bureau of Land Management (“BLM”) issued a draft environmental assessment to lease up to 40,000 federally-owned minerals located in the Wayne National Forest. *See* BLM, Draft Environmental Assessment for Oil and Gas Leasing in the Wayne National Forest, *available at* https://eplanning.blm.gov/epl-front-office/projects/nepa/53939/73225/80423/EAWayneNFleasing2016MariettaUnit_finaldraft.pdf.

As pipeline construction and shale gas development proliferate in Appalachia, remote recreation opportunities are rapidly diminishing. FERC failed to consider whether its authorization of

projects like Atlantic Sunrise are causing the same kind of impacts to “other State and National Forests” that USFS officials in the Allegheny National Forest say have made that national forest undesirable for remote recreation. Therefore, the DEIS is legally deficient.

6. Air Quality

FERC failed to take a hard look at the cumulative impacts of the Project and past, present and reasonably foreseeable future shale gas development on air quality. For example, FERC states that:

There are gas wells to the north and west of Compressor Stations 517 and 520 within 10 miles of each station. Each of the wells would need to comply with applicable air regulations, including emission controls required by regulations, which would minimize their impact on local air quality. The potential for these wells to contribute to cumulative air impacts in the areas surrounding the compressor stations is low due to the differences in the compounds emitted from well sites compared to Transco’s compressor stations and the small quantity of emissions typically produced at well sites.

DEIS at 4-286. There are several problems with FERC’s “analysis.”

First, FERC provides no basis for limiting the analysis area to within 10 miles of the two compressor stations. Such a restrictive ROI for cumulative air impacts of shale gas development excludes thousands of shale gas wells that have been drilled in recent years in the counties where the Project is located. In other recent NEPA documents, FERC relied on a 50-kilometer (31-mile) ROI for its cumulative impact analysis on air quality. *See e.g.*, FERC, Broad Run Expansion Project EA, at 118 (Docket No. CP15-77-000) (“[t]he region of influence considered for cumulative impacts on air quality is at least 50 km surrounding each compressor station, or the [air quality control region], if applicable”); FERC, New Market Project EA, at 104 (Docket No. CP14-497-000) (the “[a]ir emissions from operational sources have the greatest potential to be cumulative within a [region of influence] of 50 kilometers (approximately 31 miles).”). It is

arbitrary for FERC to use a region of influence of 31 miles to consider cumulative impacts in some projects while using 10 miles in others, including this Project.

Second, the fact that gas wells “would need to comply with applicable air regulations,” does not excuse FERC from its obligation of analyzing these cumulative impacts. FERC has an independent duty to review the environmental and human health impacts of the Project and cannot simply rely on the regulatory efforts by the EPA and DEP. *See, e.g., Idaho v. Interstate Commerce Comm’n*, 35 F.3d 585, 595-96 (D.C. Cir. 1994) (agency fails to take a “hard look” when it “defers to the scrutiny of others”); *North Carolina v. Fed. Aviation Admin.*, 957 F.2d 1125, 1129-30 (4th Cir. 1992) (“[NEPA] precludes an agency from avoiding the Act’s requirements by simply relying on another agency’s conclusions about a federal action’s impact on the environment.”)

Moreover, the issuance of a permit simply means that a polluting source has met a “minimum condition”; it does not establish that a project will have no significant impact under NEPA. *Calvert Cliff’s Coordinating Comm. v. U.S. Atomic Energy Comm’n*, 449 F.2d 1109, 1123 (D.C. Cir. 1971); *WildEarth Guardians v. U.S. Office of Surface Mining, Reclamation & Enforcement*, 104 F. Supp 3d 1208, 1227-28 (D. Colo. 2015) (rejecting argument that coal mine’s compliance with the Clean Air Act exempts mine from review for significant impacts to the environment under NEPA because “[i]t is the duty of OSM [Office of Surface Mining] to determine where a mining plan modification would contribute to such an effect, whether or not the mine is otherwise in compliance with the Clean Air Act’s emissions standards.”)

Third, FERC provides no explanation for its claim that the potential for cumulative air impacts is low because of the “differences in the compounds emitted from well sites compared to Transco’s compressor stations.” FERC must provide a detailed explanation why emissions from

well sites and compressor stations do not combine to cumulatively impact air quality. This claim is based, in part, on FERC's reliance on "the small quantity of emissions typically produced at well sites." Even assuming that each well site emits only a small quantity of pollutants, the fact remains that there are several thousand well sites in northern Pennsylvania. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

V. FERC must prepare a programmatic EIS for infrastructure projects related to increasing takeaway capacity from the Appalachian Basin.

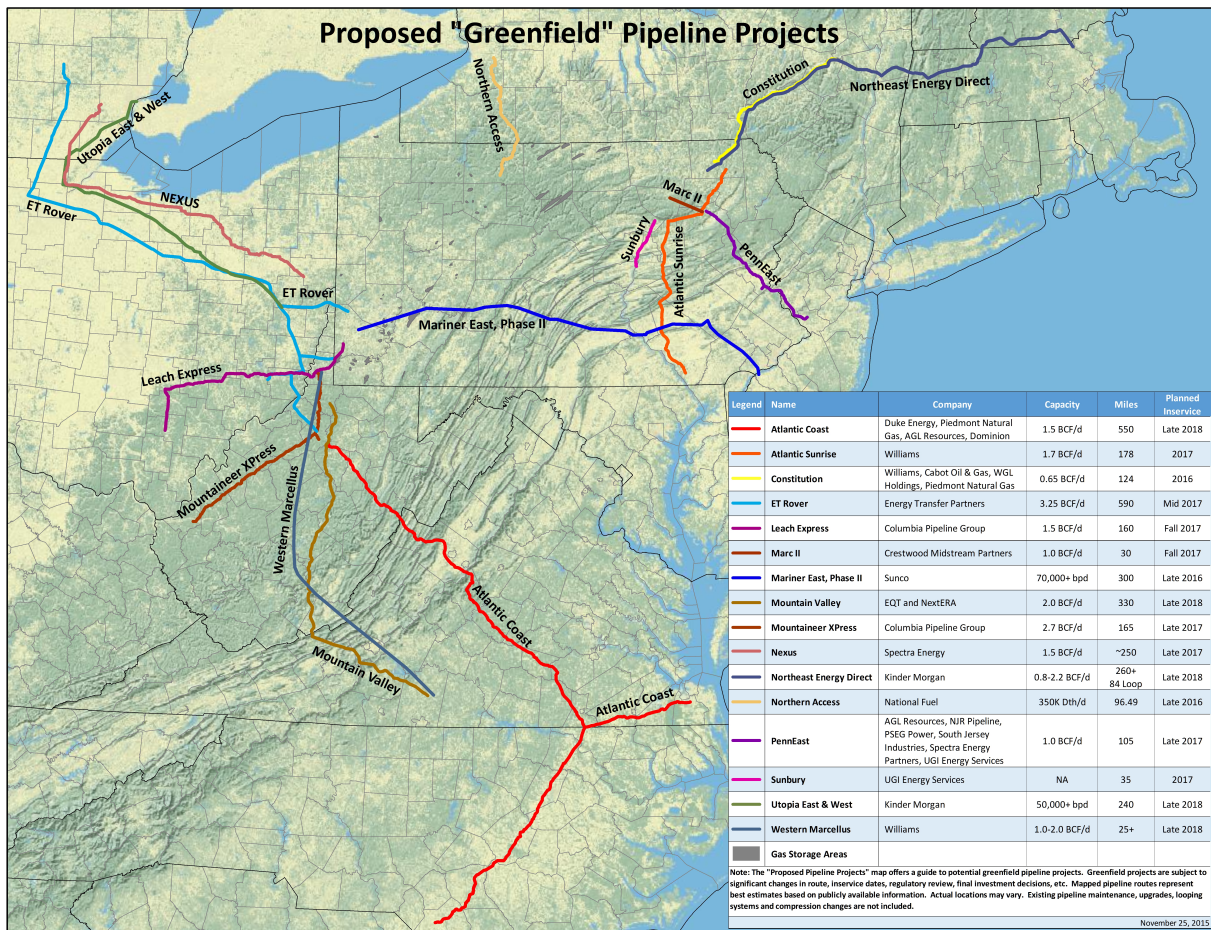
A programmatic EIS ("PEIS") is required for certain "broad Federal actions." 40 C.F.R. § 1502.4(b). The Supreme Court specified that NEPA requires a PEIS "in certain situations where several proposed actions are pending at the same time." *Kleppe v. Sierra Club*, 427 U.S. 390, 409 (1976). The Court explained that:

when several proposals . . . that will have cumulative or synergistic environmental impacts upon a region are pending concurrently before an agency, their environmental impacts must be considered together. Only through comprehensive consideration of pending proposals can the agency evaluate different courses of action.

Id. at 410.

Here, FERC is well aware that there are more than "several proposed actions are pending at the same time . . . that will have cumulative or synergistic environmental impacts upon a region." Figure 3 below identifies current proposed "greenfield" pipeline projects impacting the Appalachian basin.

Figure 3: Proposed “Greenfield” Pipeline Projects Impacting the Appalachian Basin.



Source: Penn State – Marcellus Center for Outreach and Research, Nov. 25, 2015. (Attachment 6). See also Attachment 7, which is the same map as Figure 3 but with gas wells.

As Figure 3 shows, there are at least nine greenfield pipeline projects totaling over 2,500 miles targeting shale gas supplies in the OH-PA-WV tri-state area. This would expand gas capacity out of this region by 13.45 Bcf/d and NGL capacity by 120,000 bpd. In other words, “several proposed actions are pending at the same time . . . that will have cumulative or synergistic environmental impacts upon a region.” *Kleppe*, 427 U.S. at 409-410. FERC cannot stick its head in the sand and ignore the cumulative impacts of these projects while it incrementally authorizes this massive infrastructure build-out.

In December 2014, CEQ published guidance for when agencies should prepare a PEIS. According to this guidance, “[a] well-crafted programmatic NEPA review” provides a basis for “identifying broad mitigation and conservation measures that can be applied to subsequently tiered reviews.” CEQ, *Effective Use of Programmatic NEPA Reviews*, p. 10 (2014), available at https://www.whitehouse.gov/sites/default/files/docs/effective_use_of_programmatic_nepa_review_18dec2014.pdf. Additionally:

Programmatic NEPA reviews may also support policy- and planning-level decisions when there are limitations in available information and uncertainty regarding the timing, location, and environmental impacts of subsequent implementing action(s). For example, in the absence of certainty regarding the environmental consequences of future proposed actions, agencies may be able to make broad program decisions and establish parameters for subsequent analyses based on a programmatic review that adequately examines the reasonably foreseeable consequences of a proposed program, policy, plan, or suite of projects.”

Id. at 11. FERC has no justification for evading a programmatic review here; any uncertainty surrounding future gas projects is certainly no excuse. In fact, a programmatic review may assist FERC (and the public) in understanding the broader reasonably foreseeable consequences of jurisdictional and non-jurisdictional natural gas infrastructure projects in the Appalachian Basin.

The 2014 guidance recommends preparing a PEIS when “several energy development programs proposed in the same region of the country [have] similar proposed methods of implementation and similar best practice and mitigation measures that can be analyzed in the same document.” *Id.* at 21. Additionally, CEQ says that “broad Federal actions may be implemented over large geographic areas and/or a long time frame” and “must include connected and cumulative actions, and the responsible official should consider whether it is helpful to include a series or suite of similar actions.” *Id.* at 22.

According to CEQ, the benefit of a PEIS is obvious:

When the public has a chance to see the big picture early it can provide fresh perspectives and new ideas before determinations are made that will shape the programmatic review and how those determinations affect future tiered proposals and NEPA reviews. Early outreach also provides an opportunity to develop trust and good working relationships that may extend throughout the programmatic and subsequent NEPA reviews and continue during the implementation of the proposed action.

Id. at p. 25 (citations omitted). Furthermore:

Programmatic NEPA reviews provide an opportunity for agencies to incorporate comprehensive mitigation planning, best management practices, and standard operating procedures, as well as monitoring strategies into the Federal policymaking process at a broad or strategic level. These analyses can promote sustainability and allow Federal agencies to advance the nation's environmental policy as articulated in Section 101 of NEPA.

By identifying potential adverse impacts early during the broad programmatic planning, programmatic NEPA reviews provide an opportunity to modify aspects of the proposal and subsequent tiered proposals to avoid or otherwise mitigate those impacts. A thoughtful and broad-based approach to planning for future development can include best management practices, standard operating procedures, adaptive management practices, and comprehensive mitigation measures that address impacts on a broad programmatic scale (e.g., program-, region-, or nation-wide).

Id. at 35. All of this supports the need for FERC to prepare a PEIS for gas-related infrastructure projects in the Appalachian Basin so that the public has a chance to see the big picture.

In comments on the proposed Atlantic Sunrise Project, former Pennsylvania Governor Tom Corbett urged FERC to take a more comprehensive approach to reviewing pipeline projects in order to mitigate impacts on our environment and communities:

The *significant increase in infrastructure development* to transport natural gas to markets raises unique concerns and questions for communities who host these pipelines. I have heard from many citizens of Pennsylvania who live near or along the proposed corridor of the Atlantic Sunrise pipeline and are concerned about the potential environmental impact of this project . . . While your current review is focused specific to the proposed Atlantic Sunrise pipeline, I also *strongly encourage FERC to seek coordination to the greatest extent possible among other proposed pipeline projects that seek to move natural gas to market*. A recurring issue raised by local residents is whether we are efficiently deploying infrastructure – and the appropriate level of communication is occurring between potential project developers – in a manner that *minimizes and mitigates overall disturbance on both the environment and local communities*. Such coordination and efficiency has the advantage of maximizing benefit to consumers as well. *Given the*

agency's regulatory responsibility, and unique vantage point of being aware of other potential projects, I believe FERC is best suited to consider these factors as you continue your review of this proposed project.

Gov. Tom Corbett's comments on the Atlantic Sunrise Project, Aug. 18, 2014 (emphasis added) (Docket No. PF14-8-000; Accession No. 20140825-0011). FERC's "unique vantage point of being aware of other potential projects" supports the need for it to seek coordination with pipeline companies and the public in order to truly consider the need for and reasonable alternatives to the many projects targeting this region, instead of analyzing those issues in isolation with blinders on for each project.

In July 2012, the Department of Energy ("DOE") and Bureau of Land Management ("BLM") published a final PEIS for Solar Development in southwestern United States. *See* BLM, Final PEIS for Solar Energy Development in Six Southwestern States, *available at* <http://solareis.anl.gov/documents/fpeis/index.cfm>. DOE and BLM prepared the EIS as co-lead agencies in consultation with cooperating agencies. *See id.* at Exec. Summ., Cover Page, *available at* http://solareis.anl.gov/documents/fpeis/Solar_FPEIS_ExecutiveSummary.pdf. For DOE, the Solar FPEIS "includes the evaluation of developing new guidance to further facilitate utility-scale solar energy development and *maximize the mitigation of associated environmental impacts.*" *Id.* at ES-1 (emphasis added).

This is precisely what FERC should be doing for gas-related infrastructure that aims to connect Appalachian Basin shale gas to market areas. As Figure 3 shows, there are "several proposals . . . that will have cumulative or synergistic environmental impacts upon [the Appalachian] region [and they] are pending concurrently before [FERC]." *Kleppe*, 427 U.S. at 410. Therefore, "their environmental impacts must be considered together" in a comprehensive PEIS. *Id.* By preparing a PEIS, FERC could employ a more "thoughtful and broad-based

approach to planning for future development” and “maximize the mitigation of associated environmental impacts” on a multitude of resources, including waterbodies and wetlands, forests, wildlife habitat, threatened and endangered species, public lands, air quality and noise.

VI. FERC has a duty to ensure no jeopardy to listed species under Section 7(a)(2) of the Endangered Species Act.

A. Statutory and Regulatory Background

To fulfill the substantive purposes of the Endangered Species Act (“ESA”), federal agencies are required to engage in Section 7 consultation with the National Marine Fisheries Service or the U.S. Fish and Wildlife Service (“FWS”) (collectively, “Services”), depending on the species at issue, to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined . . . to be critical.” 16 U.S.C. § 1536(a)(2). The definition of agency “action” is broad and includes “all activities or programs of any kind authorized, funded, or carried out, in whole or in part” including “the granting of licenses, contracts, leases, easements, rights-of-way, [or] permits” and any “actions directly or indirectly causing modifications to the land, water, or air.” 50 C.F.R. § 402.02.

Each federal agency must review its actions at “the earliest possible time” to determine whether any action “may affect” listed species or their critical habitat in the “action area.” 50 C.F.R. § 402.14(a). The “action area” encompasses all areas that would be “affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02. The term “may affect” is broadly construed to include “[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character,” and thus is easily triggered. *Interagency Cooperation – Endangered Species Act of 1973, As Amended*, 51 Fed.

Reg. 19,926 (June 3, 1986). If a “may affect” determination is made, “consultation” is required. Therefore, pursuant to the ESA, FERC must inquire as to the presence of listed species in the areas that are affected by the proposed actions and must “use the best scientific and commercial data available” to determine whether listed species are likely to be adversely affected by the action. 16 U.S.C. § 1536(a)(2).

If the action agency concludes that the proposed action is “not likely to adversely affect” the species, then the Services must concur in writing with this determination in order to avoid formal consultation. 50 C.F.R. §§ 402.13(a) and 402.14(b). If the Services concur in this determination, then consultation is complete. *Id.* § 402.13(a). If the Services’ concurrence in a “not likely to adversely affect” finding is inconsistent with the best available science, however, any such concurrence must be set aside. *See* 5 U.S.C. § 706(2). However, when the agency concludes that the action is “likely to adversely affect” listed species or critical habitat, it must then enter into “formal consultation” with the FWS. 50 C.F.R. §§ 402.12(k), 402.14(a). The threshold for triggering the formal consultation requirement is “very low;” “any possible effect ... triggers formal consultation requirements.” *See* 51 Fed. Reg. 19,926.

“Formal consultation” commences with the action agency’s written request for consultation and concludes with the Services’ issuance of a “biological opinion.” 50 C.F.R. § 402.02. The biological opinion issued at the conclusion of formal consultation states the opinion of the Services as to whether the effects of the action are “likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.” *Id.* § 402.14(g)(4). To “jeopardize the continued existence of” means “to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of

both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” *Id.* § 402.02.

The “effects of the action” include all direct and indirect effects of the proposed action, plus the effects of actions that are interrelated or interdependent, added to all existing environmental conditions - that is, added to the environmental baseline. *Id.* “The environmental baseline includes the past and present impacts of all Federal, state, and private actions and other human activities in the action area . . .” *Id.* The effects of the action must be considered together with “cumulative effects,” which are “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.” *Id.*

If jeopardy is likely to occur, the Services must prescribe in the biological opinion “reasonable and prudent alternatives” to avoid “take” of listed species. *Id.* § 402.14(g). If the FWS concludes that a project is not likely to jeopardize listed species, it must provide an “incidental take” statement with the biological opinion, specifying the amount or extent of incidental take, “reasonable and prudent measures” necessary or appropriate to minimize such take, and the “terms and conditions” that must be complied with by the action agency to implement any reasonable and prudent measures. 16 U.S.C. § 1536(b)(4), 50 C.F.R. § 402.14(i).

After the issuance of a final biological opinion and “where discretionary Federal involvement or control over the action has been retained or is authorized by law,” the agency must reinitiate formal consultation if, *inter alia*:

- the amount or extent of taking specified in the incidental take statement is exceeded;
- new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- the identified action is subsequently modified in a manner that causes an effect to the listed species ... that was not considered in the biological opinion; or
- a new species is listed or critical habitat designated that may be affected by the identified

action.”

50 C.F.R. § 402.16.

B. FERC and FWS must enter formal consultation on the northern long-eared bat and northeastern bulrush.

There are at least four federally endangered and threatened species that could be impacted by the Atlantic Sunrise Project – Indiana bat, northern long-eared bat, bog turtle, and northeastern bulrush. *See* DEIS at 4-104 – 4-114. FERC concluded that the Project “may affect, but is not likely to adversely affect” the Indiana bat and bog turtle. *Id.* at 4-107 and 4-113. However, FERC concluded that the Project “may affect, and is likely to adversely affect” the northern long-eared bat and northeastern bulrush. *Id.* at 4-111 and 4-114. Therefore, at a minimum, FERC must engage in formal consultation with FWS regarding northern long-eared bat and northeastern bulrush. 50 C.F.R. §§ 402.12(k), 402.14(a).

FERC, however, attempts to avoid formal consultation by “requesting that the FWS consider this draft EIS, along with various survey reports prepared by Transco, as the BA for the Project in accordance with section 7 of the ESA.” DES at 4-102. This does not comply with the ESA’s implementing regulations. “Formal consultation is not required . . . [i]f the [BA] indicates that there are no listed species or critical habitat present that are likely to be adversely affected by the action and the Director concurs[.]” 50 C.F.R. § 402.12(k). Here, the DEIS, which FERC requests that FWS consider as the BA, determined that the Project is “likely to adversely affect” northern long-eared bat and northeastern bulrush. Therefore, FERC must enter formal consultation with FWS on these two species. *Id. see also* 50 C.F.R. § 402.14(a).

1. Northeastern Bulrush

Northeastern bulrush is a “wetland plant . . . [o]ccurring in isolated areas scattered across seven states [that] is difficult to find and difficult to recognize.” FWS, Northeastern Bulrush,

available at <https://www.fws.gov/northeast/pdf/bulrush.pdf>. “[H]abitat alternations that make a site consistently drier or wetter could make life impossible for northeastern bulrush.” *Id.* “Activities such as filling or ditching in a wetland can destroy or degrade this species’ habitat and pose a threat.” *Id.* The key to recovery for northeastern bulrush is “preventing habitat destruction and deterioration at sites where the plan now grows and any additional locations as they are found.” *Id.*

According to FERC, “surveys identified northeastern bulrush in one wetland in Luzerne County and a second wetland in northern Columbia County.” DEIS at 4-113. However, FERC notes that additional surveys conducted in 2015 have yet to be submitted to FWS. *Id.* Thus, there could be additional locations where northeastern bulrush is found.

Regarding the identified population in Luzerne County, FERC says that Transco revised its route, which “provides a buffer of 250 feet between the workspace and the northern [sic] bulrush population, but does not avoid the wetland entirely.” *Id.* Regarding the identified population in Columbia County, FERC says that “the proposed construction workspace is set back about 110 feet from the northeastern bulrush population and about 50 feet from the wetland.” *Id.* In neither case is Transco’s proposed buffer compliant with the “FWS-preferred buffer of 300 feet[.]” *Id.* Thus, FERC concludes that “the Project has the potential to result in unanticipated adverse effects, such as the alteration of wetland hydrology, the introduction of invasive species, or the inadvertent release of fuels or lubricants during construction.” *Id.*

Indeed, previous pipeline construction in Pennsylvania has significantly impacted wetlands. For example, construction of Tennessee Gas Pipeline Company’s “300 Line” in northern Pennsylvania “highly impacted” the hydrological connectivity between a wetlands complex and a stream to the point that the stream, which had previously flowed from the

wetlands complex, is now “barely discernable.” *See* Attachment 1. In addition, according to the Western Pennsylvania Conservancy, construction of a pipeline through Tamarack Swamp in Clinton County “appears to have been particularly disruptive, physically separating contiguous sections of wetland, altering hydrological patterns and introducing strips of highly altered substrate that will not easily recover.” Western Pennsylvania Conservancy, Clinton County Natural Heritage Review at 79 (2002), *available at* http://www.clintoncountypa.com/departments/county_departments/planning/pdfs/Natural%20Heritage%20Inventory.pdf. Thus, FERC and FWS must require Transco to explore further options to mitigate or avoid impacts to the wetlands containing northeastern bulrush, including using HDD or conventional boring.

Finally, there is no indication that either FERC or FWS considered the cumulative effects of gas drilling on northeastern bulrush. The effects of the action must be considered together with “cumulative effects,” which are “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.” 50 C.F.R. § 402.02. FERC’s failure to consider shale gas drilling, a private activity that is “reasonably certain to occur within the action area,” violates 50 C.F.R. § 402.02.

FERC and FWS must enter formal consultation regarding northeastern bulrush, explore further mitigation and avoidance measures to reduce impacts on wetlands containing northeastern bulrush, and consider the cumulative effects of gas drilling on northeastern bulrush.

2. Northern long-eared bat.

According to FERC, “the northern long-eared bat may occur within all of the counties crossed by the Project in Pennsylvania[.]” DEIS at 4-107. “[K]nown northern long-eared bat

hibernacula have been documented in Clinton, Columbia, Lancaster, Luzerne, Lycoming, Northumberland, and Schuylkill Counties (FWS, 2014a).” *Id.* The Project is within 5 miles of five known hibernacula in Schuylkill, Northumberland, and either Lancaster or York Counties. *Id.* at 4-107 – 4-108. Two hibernacula are within 0.25 mile of the Project in Northumberland County. *Id.* at 4-108. During mist-net surveys, Transco captured 70 northern long-eared bats, all but one of which were captured along the pipeline route. *Id.* In total, Transco confirmed 37 roosts but estimates as many as 48 roosts. *Id.* at 4-109.

FERC acknowledges the severe impacts the Project would have on northern long-eared bat:

Transco would clear 1,063.8 acres of suitable northern long-eared bat habitat, of which 700.5 acres would no longer be available to the species. Transco would provide compensatory mitigation for the permanent removal of known suitable forest habitat; however, *the loss of this habitat would be significant.*

Id. at 4-111 (emphasis added). According to FERC, however, “Transco is currently developing [the compensatory] mitigation plan with the FWS which would be filed with FERC prior to construction.” *Id.* The public must be allowed to review and comment on this mitigation plan as part of the NEPA and ESA reviews. The failure to provide this information during this comment period renders the DEIS legally deficient.

Furthermore, there is no indication that either agency considered the noise impacts from the increase in compression on northern long-eared bat populations. Recent research “indicate[s] that some species of bats are likely negatively affected by noise. *See* Bunkley, Jessie P., et al., Anthropogenic noise alters bat activity levels and echolocation calls. *Global Ecology and Conservation* 3 (2015) 69 (Attachment 8). In one study, researchers found that several bat species, including northern long-eared bat, may “be affected by acoustic habitat degradation.” Schaub, Andrea, et al., Foraging Bats Avoid Noise. *The Journal of Experimental Biology* (2008)

3179 (Attachment 9). FERC must consider this “interrelated or interdependent” indirect effect on northern long-eared bats.

Moreover, as with northeastern bulrush, the effects of the action must be considered together with “cumulative effects,” which are “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.” *Id.* This includes shale gas drilling, a private activity that involves similar impact to northern long-eared bat habitat from tree cutting for roads and well pads and increased noise. As explained above, gas drilling is “reasonably certain to occur within the action area,” such that the FERC’s and FWS’ failure to consider it violates 50 C.F.R. § 402.02.

FERC and FWS must enter formal consultation regarding northern long-eared bat, explore further mitigation and avoidance measures to reduce impacts to a minimum, and consider the cumulative effects of gas drilling on northern long-eared bat.

3. FERC should also initiate formal consultation with FWS on bog turtle.

The bog turtle is a “federally listed threatened species, a state-listed endangered species in Pennsylvania, and a state-listed threatened species in Maryland and North Carolina.” DEIS at 4-111. “One of the smallest turtles in the world . . . , [t]he greatest threats to the bog turtle are the loss and fragmentation of its habitat.” *Id.* “Pennsylvania represents the keystone of the northern population, which extends from Maryland and Delaware through Pennsylvania, New Jersey, New York, Connecticut and Massachusetts.” Andrew L. Shiels, *Bog Turtles Slipping Away*, Pennsylvania Angler & Boater, p. 24 (undated) *available at* <http://fishandboat.com/education/catalog/bogturtle.pdf>. Bog turtles live “in wetlands primarily in the southeastern counties of Pennsylvania” that are already impacted by “the highest human

population densities in the Commonwealth.” *Id.* at 23. Bog turtles “have suffered from more problems associated with habitat loss than any other turtle in the Commonwealth.” *Id.*

Initial surveys for the Atlantic Sunrise Project “identified suitable bog turtle habitat in 18 delineated wetlands, 9 in Lebanon County and 9 in Lancaster County.” DEIS at 4-112. Further surveying identified at least one bog turtle population within one wetland complex in Lancaster County. *Id.* According to FERC, “Transco is currently developing the Phase 2/3 survey report, which will be submitted to the FWS and FERC.” *Id.* This information should have been included in the DEIS. The failure to provide this information during this comment period renders the DEIS legally deficient.

The DEIS raises serious questions about the potential impacts to bog turtles in this wetland. For example, FERC claims that the “bog turtles in the wetland complex are *confined* to the northern end of the wetland and are not using the portion of the wetland within or adjacent to the proposed project workspace.” *Id.* (emphasis added). FERC does not define what it means by “confined” but we doubt that there are impenetrable barriers that prevent bog turtles from “using the portion of the wetland within or adjacent to the proposed project workspace.” Moreover, FERC does not adequately assess whether construction of the pipeline and maintenance of a right of way in the southern portion of the wetland would adversely affect – through sedimentation, alteration of wetland hydrology, or otherwise – the suitability of the northern portion of the wetland as habitat for the bog turtle. Just because bog turtles are not currently using one portion of a wetland at a particular time does not mean that they will not use it at another point in time or that the portion they are using will not be adversely affected by activities within the same wetland. This rationale does not suffice for FERC’s determination that the Project is not likely

to adversely affect bog turtles. At a minimum, FERC must investigate the potential of using a trenchless crossing method of this wetland.

FERC has specific obligations under the ESA and NEPA to consider the environmental effects of the proposed action, including direct, indirect, and cumulative effects, on listed species. Such considerations must be appropriately rigorous and should not rely on weak and erroneous assumptions that fail to recognize both the demonstrated risks to species posed by pipeline and compressor station expansions and the clear manner in which Project approval will facilitate further widespread fracking and attendant environmental impacts.

VII. FERC must avoid overbuilding pipeline infrastructure

Commenters are concerned that FERC and the gas industry are engaged in a rapid overbuilding of infrastructure in the Appalachian basin. In considering the impact of new construction projects, FERC's policy is to consider, among other factors, the possibility of overbuilding natural gas infrastructure. *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227, p. 2 (1999), *clarified*, 90 FERC ¶ 61,128 (2000), *further clarified*, 92 FERC ¶ 61,094 (2000) ("Certificate Policy Statement"). FERC must consider and address the potential for overbuilding before it may issue a certificate for the Atlantic Sunrise Project.

"The financial dynamics of the natural gas industry encourage overbuilding of natural gas pipelines" and a "weak regulatory process and a lack of coordinated planning for natural gas infrastructure facilitate this process." Institute for Energy Economics and Financial Analysis, *Risks Associated With Natural Gas Pipeline Expansion in Appalachia*, p. 4 (Apr. 2016) ("IEEFA Report"), available at <http://ieefa.org/wp-content/uploads/2016/05/Risks-Associated-With-Natural-Gas-Pipeline-Expansion-in-Appalachia-April-2016.2.pdf>. "[C]urrent low natural gas prices in the Marcellus and Utica region are driving a race among natural gas pipeline companies

that want to capitalize on low prices by building new pipeline capacity to higher-priced markets.” *Id.* at 5. “Some upstream producers of natural gas . . . have also moved into the pipeline construction business [which] . . . promises a relatively stable revenue stream compared to the volatility of the natural gas drilling business.” *Id.* at 6. However, “[s]uch short-term balance sheet considerations . . . do not translate into rational planning of long-term infrastructure.” *Id.*

Those financial incentives to construct pipelines even where there is no actual public need for increased capacity are present in this proceeding. As discussed above, gas producer Cabot Oil & Gas “acquired a 20% equity interest in Meade [Pipeline Co.], which was formed to participate in the development and construction of [the Central Penn Line].” Cabot Oil & Gas, 2015 Annual Report (Form 10-K), at 16 (Feb. 22, 2016). According to Cabot, the Atlantic Sunrise Project is directly related to its “long-term plan for monetizing its Marcellus reserves.” Cabot Oil & Gas, 2013 Annual Report, at 7. This is reflected, in part, by the fact that Cabot’s subscribed capacity on the Atlantic Sunrise Project is not only the largest portion of any of the subscribers but is equivalent to all of the other subscribers combined. *See* Application at 10-11.

It thus appears that the primary purpose of projects like the Atlantic Sunrise is not to serve the public convenience and necessity, but rather simply to provide producers like Cabot a higher return for shareholders. For example, in an April 29, 2016 quarterly conference call, Cabot stated in reference to the Constitution Pipeline:

I think it’s well documented that the footprint of our Marcellus assets, though challenged on getting infrastructures to [the Northeastern U.S.], as illustrated by [the] Constitution [Pipeline], we still think the future is going to allow some of the best assets in North America as far as natural gas is concerned *to yield great dividends for Cabot shareholders*. Would we like to have assets that would be out of a footprint that is narrow scoped like where we are in Northeast PA and not have the infrastructure overhang that we discuss every quarter and every conference we go to? That would be

nice, and I would enjoy that. *But I'm not going to compromise or dilute the best assets in North America.*

Oil & Gas 360, Cabot Oil & Gas Q1 2016, Conference Call Recap, at 4 (Apr. 29, 2016)

(emphasis added), available at <http://www.oilandgas360.com/cabot-oil-gas-q1-2016-conference-call-recap/#>. Much like Atlantic Sunrise, Cabot was the largest subscriber of capacity on the proposed Constitution Pipeline. See Constitution Pipeline Co., LLC, Constitution Pipeline Project Application, at 5 (Docket No. CP13-499-000). And, just like Atlantic Sunrise, Cabot is an equity owner in the development and construction of the proposed Constitution Pipeline. See *id.* at 2-3. Both projects, Constitution and Atlantic Sunrise, appear designed simply to provide a means for upstream producers like Cabot to reach higher-priced markets for the benefit of their shareholders rather than addressing need. As Cathy Kunkel, an IEEFA energy analyst and lead author of the IEEFA Report, stated:

“We found that the dynamics of the pipeline business tend toward building excess pipeline capacity,” Kunkel said. “Major pipeline companies are competing with each other to build out the best, most well-connected pipeline networks. And utility companies are entering the pipeline space because much of the risk of overbuilding can be pushed off onto captive ratepayers.

“And *natural gas production companies* are entering the pipeline business because their core business of drilling is underperforming and they are *looking for ways to boost revenue and investment value*. These kinds of financial considerations on the part of individual companies do not add up to the kind of socially rational, long-term planning of natural gas infrastructure that we need.”

IEEFA, IEEFA Study: FERC at Fault in Pipeline Overbuild (emphasis added), available at <http://ieefa.org/ieefa-study-ferc-fault-pipeline-overbuild/>. Boosting revenue and investment value for natural gas production companies is not and should not be a factor in determining whether a pipeline is required by the public convenience and necessity.

VIII. Conclusion

- The purpose and need statement and range of alternatives are legally deficient. First, FERC failed at all to consider the need for the Project in the DEIS in violation of 40 C.F.R. § 1502.13. Second, by relying almost exclusively on Transco’s ambitions for the project to frame its statement of purpose, FERC impermissibly “restrict[ed] its analysis to just those ‘alternative means by which a particular applicant can reach his goals.’” *Simmons v. U.S. Army Corps of Eng’s*, 120 F.3d 664, 669 (7th Cir. 1997) (quoting *Citizens Against Burlington*, 938 F.2d at 209 (Buckley, J., dissenting)); see also *Nat’l Parks & Cons. Ass’n*, 606 F.3d at 1072.
- The lack of information in the DEIS, including missing surveys and mitigation measures to protect resources such as exceptional value wetlands, precluded meaningful analysis and renders it legally deficient. See 40 C.F.R. § 1502.9(a).
- The DEIS fails to take the requisite hard look at the direct and indirect effects of the Project on (i) waterbodies and wetlands; (ii) the Chesapeake Bay TMDL; (iii) shale gas development; and (iv) climate change.
- The DEIS fails to take the requisite hard look at the cumulative impacts of shale gas development on (i) water resources; (ii) vegetation and wildlife; (iii) fisheries and other aquatic resources; (iv) special status species; (v) land use, recreation, special status areas, and visual resources; and (vi) air quality.
- FERC must prepare a programmatic EIS for infrastructure projects increasing takeaway capacity from the Appalachian Basin.
- FERC must enter formal consultation with USFWS on northern long-eared bat, northeastern bulrush and bog turtle.

- FERC must consider and address the potential for overbuilding before it may issue a certificate for the Atlantic Sunrise Project.

Dated: June 27, 2016

Respectfully submitted,

/s/ Ryan Talbott
Ryan Talbott
Executive Director
Allegheny Defense Project
117 West Wood Lane
Kane, PA 16735
(503) 329-9162
rtalbott@alleghenydefense.org

/s/ Ben Lockett
Ben Lockett
Staff Attorney
Appalachian Mountain Advocates
P.O. Box 507
Lewisburg, WV 24901
(304) 645-0125
blockett@appalmad.org

/s/ Anne Havermann
Anne Havermann
General Counsel
Chesapeake Climate Action Network
6930 Carroll Avenue, Suite 720
Takoma Park, MD 20912
(240) 396-1984
anne@chesapeakeclimate.org

/s/ Joseph Otis Minott
Joseph Otis Minott
Executive Director & Chief Counsel
Clean Air Council
135 South 19th Street, Suite 300
Philadelphia, PA 19103
(215) 567-4004
joe_minott@cleanair.org

/s/ Jeff Zimmerman
Jeff Zimmerman
Zimmerman and Associates
13508 Mainstone Lane
Potomac, MD 20854
(240) 912-6685 (tel)
(301) 963-9664 (fax)
zimmermanjj@verizon.net
*Counsel for Damascus Citizens
for Sustainability*

/s/ Ernest Q. Reed Jr.
Ernest Q. Reed Jr.
President
Heartwood
P.O. Box 1065
Charlottesville, VA 22902
lec@wildvirginia.org

/s/ Michael Helfrich
Michael Helfrich
Lower Susquehanna Riverkeeper
2098 Long Level Rd
Wrightsville, PA 17368

/s/ Diana Csank
Diana Csank
Associate Attorney
Sierra Club
50 F Street NW, Eighth Floor
Washington, DC 20001
(202) 548-4595
Diana.Csank@sierraclub.org

CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of FERC's Rules of Practice and Procedure, 18 C.F.R. § 385.2010, I, Ryan Talbott, hereby certify that I have this day served the foregoing document upon each person designated on this official list compiled by the Secretary in this proceeding.

Dated: June 27, 2016

Respectfully submitted,

/s/ Ryan Talbott

Ryan Talbott
Executive Director
Allegheny Defense Project
117 West Wood Lane
Kane, PA 16735
rtalbott@alleghenydefense.org