158 FERC ¶ 61,125
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Acting Chairman;
Norman C. Bay, and Colette D. Honorable.

Transcontinental Gas Pipe Line Company, LLC Docket No. CP15-138-000

ORDER ISSUING CERTIFICATE

(Issued February 3, 2017)

1. On March 31, 2015, Transcontinental Gas Pipe Line Company, LLC (Transco) filed an application under section 7(c) of the Natural Gas Act (NGA)[1] and Part 157 of the Commission's regulations[2] for authorization to construct and operate its proposed Atlantic Sunrise Project in Pennsylvania, Maryland, Virginia, North Carolina, and South Carolina. The purpose of the project is to increase firm incremental transportation service on the Transco system by 1,700,002 dekatherms (Dth) per day.

2. For the reasons discussed below, the Commission grants Transco's requested certificate authorizations, subject to conditions.

I. Background

3. Transco,[3] a Delaware limited liability company, is a natural gas company[4] that transports natural gas in interstate commerce through its natural gas transmission system extending from Texas, Louisiana, and the offshore Gulf of Mexico area, through

[1] 15 U.S.C. § 717f(c) (2012).

[2] 18 C.F.R. pt. 157 (2016).

[3] Transco is a wholly-owned subsidiary of Williams Partners Operating LLC, which is a subsidiary of Williams Partners L.P., which is a subsidiary of the Williams Companies, Inc. On February 2, 2015, Williams Partners L.P. merged with and into Access Midstream Partners, L.P. Transco's subsidiaries are Cardinal Operating Company, LLC; Cardinal Pipeline Company, LLC; Pine Needle Operating Company, LLC; TransCardinal Company, LLC; and TransCardinal LNG Company, LLC.

[4] *See* 15 U.S.C. § 717a(6) (2012).

Mississippi, Alabama, Georgia, South Carolina, North Carolina, Virginia, Maryland, Pennsylvania, and New Jersey, to its termini in the metropolitan New York City area.

II. Proposal

4. Transco proposes to construct and operate its Atlantic Sunrise Project to provide 1,700,002 Dth per day of incremental firm transportation service from northern Pennsylvania in its rate Zone 6 to its Station 85 in Alabama, including to markets along its pipeline system in Pennsylvania, Maryland, Virginia, North Carolina, South Carolina, Georgia, Alabama, and to interconnects with existing pipelines serving Florida markets.

5. Specifically, Transco proposes to construct the following pipeline facilities:

- Central Penn Line North, a 58.7-mile-long, 30-inch-diameter natural gas pipeline with a maximum allowable operating pressure (MAOP) of 1,480 pounds per square inch gauge (psig) from milepost L114.0 on Transco's Leidy Line in Columbia County, Pennsylvania, to the proposed Zick Meter Station in Susquehanna County, Pennsylvania (Zick Interconnection);

- Central Penn Line South, a 127.3-mile-long, 42-inch-diameter natural gas pipeline with a MAOP of 1,480 psig from milepost 1683.3 on Transco's mainline in Lancaster County, Pennsylvania, to milepost L114.0 on Transco's Leidy Line in Columbia County, Pennsylvania;[5]

- Chapman Loop, a 2.5-mile-long, 36-inch-diameter pipeline loop on Transco's Leidy Line with an MAOP of 1,200 psig from milepost L186.0 to milepost L188.6 in Clinton County, Pennsylvania; and

- Unity Loop, an 8.5-mile-long, 42-inch-diameter pipeline loop on Transco's Leidy Line with an MAOP of 1,200 psig from milepost L120.3 to milepost L128.9 in Lycoming County, Pennsylvania.[6]

[5] Central Penn Line North and Central Penn Line South are collectively known as the Central Penn Line.

[6] Once placed into service, the Chapman and Unity Loops would be referred to as the Leidy Line D.

6. Transco also proposes to replace 2.5 miles of noncontiguous segments of its existing 30-inch-diameter Mainline A pipeline and 30-inch-diameter Mainline B pipeline between milepost 1578.7 and milepost 1581.0 in Prince William County, Virginia (Mainline A & B Replacements).[7]

7. Transco proposes to construct the following aboveground facilities:

- Compressor Station 605: two new 15,000-horsepower (hp) electric motor-driven compressor units on the Central Penn Line North at milepost 44.9 in Wyoming County, Pennsylvania;

- Compressor Station 610: two new 20,000-hp electric motor-driven compressor units on the Central Penn Line South at milepost 112.5 in Columbia County, Pennsylvania;

- Two new meter stations (the Zick and Springville Meter Stations in Susquehanna and Wyoming Counties, Pennsylvania, respectively) and three new regulator stations (the North Diamond, West Diamond, and River Road Regulator Stations in Luzerne, Columbia, and Lancaster Counties, respectively) with interconnecting piping in Pennsylvania; and

- Related appurtenant aboveground facilities, such as mainline valves, cathodic protection, communication towers, and internal inspection device launchers and receivers along the Central Penn Line, Chapman Loop, Unity Loop, and the Mainline A and B Replacements.

8. In addition to the proposed new construction, Transco also proposes to make the following modifications to certain existing aboveground facilities:

- Install one new gas turbine compressor generator unit at each of its three existing Transco compressor stations:

    - A 16,000-hp unit at Compressor Station 520 in Lycoming County, Pennsylvania;

    - A 16,000-hp unit at Compressor Station 517 in Columbia County, Pennsylvania; and

[7] The pipeline replacements would be designed with an MAOP of 800 psig.

  - A 30,000-hp unit at Compressor Station 190 in Howard County, Maryland (includes modifications to valves and yard piping for bidirectional flow and installation of a regulator setting);

- Make minor modifications to enable bidirectional flow at Transco's existing Compressor Stations 190, 185, 170, 160, 150, and 145 in Maryland, Virginia, and North Carolina;

- Install odor masking/deodorization equipment at Transco's existing Compressor Stations 160, 155, 150, and 145 in North Carolina;

- Install supplemental odorization, odor detection, and odor masking/deodorization at 42 existing metering and regulating stations along Transco's existing mainline system in North Carolina and South Carolina;

- Install odor masking/deodorization equipment at 14 existing mainline valve locations in North Carolina and South Carolina;

- Modify the existing Puddlefield Meter Station in Pennsylvania for shared use of the existing flare system, communication tower, and additional piping to the adjacent new Springville Meter Station; and

- Install ancillary facilities, such as mainline valves, cathodic protection, communication towers, and internal inspection device launchers and receivers.

9. Pursuant to a Construction and Ownership Agreement with Meade Pipeline Co LLC (Meade),[8] Transco will construct the Central Penn Line. Once constructed, Transco and Meade will jointly own the Central Penn Line.[9] Pursuant to a Lease Agreement between Transco and Meade, once the project is in service, Meade's interests in the

[8] Meade is an electrical, natural gas, and utilities contractor and is owned by WGL Midstream, Inc. (WGL Midstream); COG Holdings LLC; Vega Midstream MPC LLC; and River Road Interests LLC. WGL Midstream is the lead investor with a 55-percent ownership interest in Meade. WGL Midstream, as noted in this order, is a shipper on the project, having executed a precedent agreement for 44,048 Dth per day of firm transportation service.

[9] Central Penn Line South ownership interest will be divided 70.59 percent and 29.41 percent between Transco and Meade, respectively, while Central Penn Line North will be divided 41.18 percent and 58.82 percent, respectively, between the two owners. Transco's Application at 7.

Central Penn Line will be leased to Transco. Meade will be a passive owner. Meade is currently not an NGA jurisdictional entity and does not intend to become one as part of the project ownership structure. Transco will be the sole operator of the project.

10. Transco conducted two open seasons for the project. The initial open season, held from August 8 through September 27, 2013, resulted in commitments from eight shippers for 850,002 Dth per day of firm transportation service on the project, from Transco's Leidy Line to Station 85. A ninth shipper, Cabot Oil & Gas Corporation (Cabot), committed to 850,000 Dth per day of firm transportation service from a new interconnection in Susquehanna County, Pennsylvania, to a new interconnection to Transco's mainline in Lancaster County, Pennsylvania (delivering 500,000 of the 850,000 Dth per day), and to an existing interconnection between Transco's mainline and Dominion Transmission's pipeline in Fairfax County, Virginia (delivering the remaining 350,000 Dth per day). Transco held a supplemental open season in February 2014 to gauge additional interest for firm transportation service on the project. Transco received no bids as a result of the second open season. Transco also conducted a reverse open season from April 10 to April 25, 2014, and received no offers.

11. As a result of the open seasons, Transco executed binding precedent agreements with the following nine shippers (project shippers) for 100 percent of the incremental firm transportation service provided by the project (i.e., 1,700,002 Dth per day):

Shipper	**Contracted Volumes**
Anadarko Energy Services Company[10]	44,048 Dth per day
Cabot[11]	850,000 Dth per day[12]
Chief Oil & Gas LLC[13]	420,000 Dth per day
Inflection Energy LLC[14]	26,429 Dth per day
MMGS, Inc.[15]	22,024 Dth per day

[10] Anadarko Energy Services Company, a marketer, is a subsidiary of Anadarko Petroleum Corporation.

[11] Cabot is an exploration and production company.

[12] *See infra* note 19.

[13] Chief Oil & Gas LLC is an exploration and production company.

[14] Inflection Energy LLC is an exploration and production company.

[15] MMGS, Inc., a marketer, is a subsidiary of Mitsui & Co., Ltd.

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Seneca Resources Corporation[16]	189,405 Dth per day
Southern Company Services, Inc.[17]	60,000 Dth per day
Southwestern Energy Services Company[18]	44,048 Dth per day
WGL Midstream, Inc.[19]	44,048 Dth per day

The precedent agreements require the project shippers to execute 15-year term firm transportation service agreements under Transco's existing Rate Schedule FT.

12. Transco estimates the cost of the proposed project is approximately $2.588 billion, of which Transco will be responsible for $1.839 billion.[20] Transco states that it will undertake permanent financing at a later date as part of its overall, long-term financing program. Transco has proposed an incremental recourse reservation rate for firm transportation service on the project facilities, as described below. Each project shipper has agreed to pay a negotiated rate. Transco will provide service under the terms and conditions of its existing Rate Schedule FT.

III. Notice, Interventions, and Comments

13. Notice of Transco's application was published in the *Federal Register* on April 15, 2015 (80 Fed. Reg. 20,213), with interventions, comments, and protests due by April 29, 2015. The parties listed in Appendix A filed timely, unopposed motions to intervene. The North Carolina Utilities Commission and the New York State Public Service Commission filed timely notices of intervention. Timely, unopposed motions to

[16] Seneca Resources Corporation (Seneca), an exploration and production company, is a subsidiary of National Fuel Gas Corporation.

[17] Southern Company Services, Inc. (Southern Company Services), a public utility company, is a subsidiary of Southern Company and serves as an agent for Alabama Power Company, Georgia Power Company, Gulf Power Company, Mississippi Power Company, and Southern Power Company.

[18] Southwestern Energy Services Company is a marketer.

[19] WGL Midstream, Inc., a marketer, is a subsidiary of Washington Gas Resources Corp., which is a subsidiary of WGL Holdings, Inc.

[20] Exhibit K of Transco's Application. Pursuant to the Construction and Ownership Agreement between Transco and Meade, Meade is responsible for funding its proportional share of the project cost.

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intervene and notices of intervention are granted by operation of Rules 214(a)(2) and 214(c) of the Commission's Rules of Practice and Procedure.[21] Late interventions were granted by notice issued on November 15, 2016 and are listed in Appendix B of this order.[22]

14. Numerous entities and individuals filed comments regarding project route and system alternatives, land use, construction and operational safety, noise impacts, cumulative impacts, indirect effects, socioeconomic impacts, and project impacts on various natural and cultural resources, such as geology, air, groundwater, and wetlands. These concerns are addressed in the Final Environmental Impact Statement (EIS) and/or below.

IV. Procedural Issues

15. The North Carolina Utilities Commission and the New York State Public Service Commission (State Commissions) filed a joint protest to Transco's application, the merits of which we discuss below.[23] The State Commissions also request an evidentiary hearing on the issues of: (1) Transco's use of a 15.34 percent pre-tax rate of return in developing its proposed recourse rates; and (2) whether the lease arrangement associated with the project benefits ratepayers. The State Commissions also request that we partially consolidate this proceeding with Transco's proposals to construct and operate the Virginia Southside Expansion Project II (VSEP II)[24] and the Dalton Expansion Project[25] in order to address issues about Transco's pre-tax rate of return. The Clean Air Council also seeks a hearing on whether Transco has presented enough evidence to demonstrate

[21] 18 C.F.R. §§ 385.214(a)(2) and 385.214(c) (2016).

[22] *See id.* § 385.214(d).

[23] *See infra* section V.B.1.

[24] In VSEP II, Transco was authorized to construct and operate approximately 4.33 miles of pipeline and compression facilities. *See Transcontinental Gas Pipeline Co., LLC*, 156 FERC ¶ 61,022 (2016), *reh'g pending*.

[25] In the Dalton Expansion Project, Transco was authorized to construct, lease, and operate approximately 115 miles of pipeline and compression, metering, and appurtenant facilities in Virginia, North Carolina, and Georgia. *See Transcontinental Gas Pipeline Co., LLC*, 156 FERC ¶ 61,092 (2016), *reh'g pending.*

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that the project is for public use and required by public convenience and necessity, and therefore eminent domain may be exercised for the project.

16. Although our regulations provide for a hearing, neither section 7 of the NGA nor our regulations require that such hearing be a trial-type evidentiary hearing.[26] When, as is usually the case, the written record provides a sufficient basis for resolving the relevant issues, it is our practice to provide for a paper hearing.[27] That is the case here. We have reviewed the requests for an evidentiary hearing and conclude that all issues of material fact relating to Transco's proposal are capable of being resolved on the basis of the written record. Accordingly, we will deny the State Commissions' and the Clean Air Council's requests for a formal hearing.

17. As to the State Commissions' request for partial consolidation, the Commission's policy is to consolidate matters only if a trial-type evidentiary hearing is required to resolve common issues of law and fact and consolidation will ultimately result in greater administrative efficiency.[28] As we previously explained in the VSEP II and Dalton orders, we do not believe administrative efficiency will be served by consolidating the three separate certificate proceedings because the issues raised in the motion are addressed in this order without need for an evidentiary hearing.[29] Thus, we deny the State Commissions' request for partial consolidation.

18. Transco filed an answer to the State Commissions' protest and the State Commissions filed an answer to Transco's answer. Transco also filed an answer to the Clean Air Council's motion. Although the Commission's Rules of Practice and Procedure do not permit answers to protests or answers to answers, we find good cause to

[26] *See Minisink Residents for Environmental Preservation and Safety v. FERC*, 762 F.3d 97, 114 (D.C. Cir. 2014) (stating "FERC's choice whether to hold an evidentiary hearing is generally discretionary.").

[27] *See NE Hub Partners, L.P.*, 83 FERC ¶ 61,043, at 61,192 (1998), *reh'g denied*, 90 FERC ¶ 61,142 (2000); *Pine Needle LNG Co., LLC*, 77 FERC ¶ 61,229, at 61,916 (1996). Moreover, courts have recognized that even where there are disputed issues, the Commission need not conduct an evidentiary hearing if the disputed issues "may be adequately resolved on the written record." *Minisink Residents*, 762 F.3d at 114 (quoting *Cajun Elec. Power Coop., Inc. v. FERC*, 28 F.3d 173, 177 (D.C. Cir. 1994)).

[28] *See, e.g., Transcontinental Gas Pipeline Co., LLC*, 156 FERC ¶ 61,092 at P 13.

[29] *See Transcontinental Gas Pipeline Co., LLC*, 156 FERC ¶ 61,022 at P 26 and n.31; *Transcontinental Gas Pipeline Co., LLC*, 156 FERC ¶ 61,092 at P 13.

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waive our rules and accept the answers because they provide information that has assisted in our decision making process.[30]

V. Discussion

19. Since the proposed facilities will be used to transport natural gas in interstate commerce, subject to the Commission's jurisdiction, the construction and operation of the facilities are subject to the requirements of subsections (c) and (e) of section 7 of the NGA.[31]

A. Certificate Policy Statement

20. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new construction.[32] The Certificate Policy Statement establishes criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. The Certificate Policy Statement explains that in deciding whether to authorize the construction of major new natural gas facilities, the Commission balances the public benefits against the potential adverse consequences. The Commission's goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain in evaluating new pipeline construction.

21. Under this policy, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from existing customers. The next step is to determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the applicant's existing customers, existing pipelines in the market and their captive customers, or landowners and communities affected by the construction. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, the Commission will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is

[30] *See* 18 C.F.R. § 385.213(a)(2) (2016).

[31] 15 U.S.C. §§ 717f(c) and 717f(e) (2012).

[32] *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *order on clarification*, 90 FERC ¶ 61,128, *order on clarification*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

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essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will the Commission proceed to complete the environmental analysis where other interests are considered.

22. As stated, the threshold requirement is that the applicant must be prepared to financially support the project without relying on subsidization from its existing customers. The Commission has determined, in general, that where a pipeline proposes to charge incremental rates for new construction that are higher than the company's existing system rates, the pipeline satisfies the threshold requirement that the project will not be subsidized by existing shippers.[33] As discussed below, Transco proposes an incremental recourse reservation rate that is higher than its existing system-wide rate to recover the cost of the project. The proposed incremental recourse reservation rate is calculated to recover all construction, installation, operation, and maintenance costs associated with the project. Accordingly, we find that the project will not be subsidized by Transco's existing customers and satisfies the threshold no-subsidy requirement under the Certificate Policy Statement.

23. The Atlantic Sunrise Project will provide 1,700,002 Dth per day of incremental firm transportation service on Transco's system from northern Pennsylvania in its Zone 6 to its Station 85 in Alabama. All of the proposed capacity has been subscribed under long-term precedent agreements with nine shippers.

24. The proposal will not adversely affect Transco's existing customers because the project will not degrade any existing service. Also, the project will not replace firm transportation service on any other pipeline. Further, no pipelines or their captive customers have protested Transco's application. Consequently, we find that there will be no adverse impacts on other pipelines or their captive customers.

25. Regarding the project's impacts on landowners and communities, the proposed Atlantic Sunrise Project will disturb approximately 3,741.0 acres of land during construction and about 1,235.4 acres during operation. To minimize impacts on landowners, Transco will, to the extent practicable, collocate the proposed pipeline facilities within or adjacent to existing rights-of-way. For example, Transco states that approximately 47 percent of the Central Penn Line North is collocated within existing rights-of way, approximately 11 percent of Central Penn Line South is collocated within existing rights of way, and the Chapman and Unity Loops and Mainline A & B Replacements are collocated completely within the right-of-way of Transco's Leidy Line and Mainline. Transco states that it will continue to negotiate with landowners for use of their land. Accordingly, we find that Transco's proposal has been designed to minimize impacts on landowners and the surrounding communities.

[33] *Dominion Transmission, Inc.*, 155 FERC ¶ 61,106, at P 15 (2016).

26. Clean Air Council, Friends of Nelson, Wild Virginia, and other commenters question the public need for the project. Clean Air Council alleges demand for the project is lacking because the project was not designed to provide natural gas service to any particular end user or market,[34] none of the project shippers are distribution companies, and some of the natural gas appears to be destined for export. As support, Clean Air Council filed a study by the Institute for Energy Economics and Financial Analysis (IEEFA), which argues, in part, that interstate pipeline infrastructure to ship natural gas from the Marcellus and Utica region[35] is overbuilt.[36] Clean Air Council also references an article that states the same.[37]

27. The IEEFA Study argues that five factors contribute to overbuilding of natural gas infrastructure. First, low natural gas prices in the Marcellus and Utica region are attracting natural gas developers, including producers, to build the pipelines to high-priced markets. Second, the lack of a national or regional planning process for natural gas infrastructure development impedes the ability to assess the need for new pipeline projects. The study suggests that the Commission should implement a planning process for natural gas infrastructure development that resembles the planning process for electric transmission instead of continuing to look primarily at whether an individual pipeline

[34] *See* Clean Air Council's June 27, 2016 Comment on the Draft EIS at 9 (citing Transco's September 3, 2014 Response to Scoping Issues Raised During the July 18, 2014 to August 18, 2014 Scoping Period at 14).

[35] The Marcellus shale formation extends deep underground from Ohio and West Virginia, northeast through Pennsylvania and southern New York. The Utica shale formation lies a few thousand feet below Marcellus shale formation in primarily the same, but slightly larger area as the Marcellus shale formation. *See Beardslee v. Inflection Energy, LLC*, 761 F.3d 221, 224 (2d Cir. 2014).

[36] Institute for Energy Economics and Financial Analysis, *Risks Associated With Natural Gas Expansion in Appalachia*, April 2016 (filed as Exhibit E in Clean Air Council's June 27, 2016 Comment on the Draft Environmental Impact Statement) (IEEFA Study). Although the study focuses on the Mountain Valley Project (CP16-10-000) and Atlantic Coast Project (CP15-554-000), both of which are not owned, operated, or constructed by Transco, we consider the study analysis here because it discusses in general terms risk factors that facilitate overbuilding of pipeline infrastructure.

[37] Natural Gas Intelligence, *Marcellus/Utica On Pace for Pipeline Overbuild, Says Braziel*, http://www.naturalgasintel.com/articles/106695-marcellusutica-on-pace-for-pipeline-overbuild-says-braziel (posted June 8, 2016).

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proposal is fully subscribed, which it alleges would likely result in overbuilding.[38] Third, authorized recourse rates for new pipeline infrastructure that are based on a 14-percent or greater return on equity, paired with the fact that in the event of cost over-recovery, a Commission NGA rate case would not result in a refund to the pipeline's customers. Fourth, state regulatory commissions lack the authority to alter Commission-approved recourse rates or negotiated rates. Last, the study asserts that the natural gas industry expects to overbuild pipeline capacity. The study provides analysis that pipeline capacity out of the Marcellus and Utica region will exceed expected production through 2030.[39] As a result of overbuilding, the study argues that investors in pipelines risk financial loss and affected landowners risk unnecessary land condemnation or property damage.

28. We disagree with the Clean Air Council's assertion that demand for the project is lacking. Under the Certificate Policy Statement, the Commission considers all evidence submitted reflecting on the need for the project, including, but not limited to, precedent agreements, demand projections, potential cost savings to consumers, or a comparison of projected demand with the amount of capacity currently serving the market.[40] The IEEFA Study filed by Clean Air Council speaks in generalities and does not assess the market for the proposed Atlantic Sunrise Project. However, it does suggest that pipelines like the proposed project may serve to aid in the delivery of lower-priced natural gas to higher-priced markets. Such a result would serve the public interest. Moreover, the Commission has found that long-term commitments serve as "significant evidence of demand for the project."[41] Here, nine project shippers have executed long-term binding precedent agreements for firm service using 100 percent of the design capacity of the proposed project.

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[38] Unlike under the Federal Power Act with respect to the regulation of electric transmission lines and electric markets, Congress has not authorized the Commission to plan either a regional or national natural gas pipeline system. Under section 7(c) of the NGA, the Commission shall issue a certificate for any proposal found to be required by the public convenience and necessity.

[39] *See* IEEFA Study, *supra* note 36, at 11-12.

[40] *See Florida Southeast Connection, LLC*, 156 FERC ¶ 61,160, at P 5 (2016), *appeal docketed*, No. 16-1329 (D.C. Cir. Oct. 24, 2016); *see also Minisink Residents*, 762 F.3d at 111, n.10 (stating that the Commission, under its Certificate Policy Statement, may assess public benefits of a project by looking at precedent agreements and other factors).

[41] Certificate Policy Statement, 88 FERC at 61,748.

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29. While it is true that a number of the project shippers are producers, our policy does not require that shippers be end-use consumers of natural gas. Shippers may be marketers, local distribution companies, producers, or end users. As we have previously stated, a project driven primarily by marketers and producers does not render it speculative.[42] Marketers or producers who subscribe to firm capacity on a proposed project on a long-term basis presumably have made a positive assessment of the potential for selling gas to end-use consumers in a given market and have made a business decision to subscribe to the capacity on the basis of that assessment.[43] Here, Transco designed its project to meet the growing demand for natural gas in the Mid-Atlantic and southeastern markets, and substantiated such demand by executing precedent agreements for 100 percent of the project's capacity.

30. The IEEFA Study that the Clean Air Council references does not demonstrate that natural gas is not needed in the southeastern U.S. markets. To the extent the IEEFA Study analyzes the underutilization rate in the Transco's service area, the study only states that existing pipelines are being underutilized in Virginia and North Carolina. Current underutilization does not presage low future demand for existing capacity. In fact, as part of this project, Transco proposes to utilize its underutilized capacity and re-route gas flows on its existing system in these two states in lieu of constructing new pipeline facilities, to serve the growing demand in the southeastern market. Moreover, project shippers have provided evidence of demand in the southeast. Southern Company Services, one of the project shippers, owns and operates 42,000 megawatts of generation facilities to serve its retail and wholesale customers in Alabama, Florida, Georgia, and Mississippi, and states that it needs firm transportation service that will be made available through the project.[44] Another project shipper, Seneca, stated that it has entered into long-term natural gas sales contracts with natural gas and electric end users for all of its capacity on the project.[45] Washington Gas Light Company, an existing end-use customer on Transco's southeastern system, also filed a similar comment that it needs the capacity provided by the project.[46]

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[42] *See Maritimes & Northeast Pipeline, L.L.C.*, 87 FERC ¶ 61,061, at 61,241 (1999).

[43] *See id.*

[44] *See* Southern Company Services' May 8, 2015 Motion for Leave to Intervene Out of Time and Supporting Comments at 3-4.

[45] *See* Seneca's February 8, 2016 Comment at 1.

[46] *See* Washington Gas Light Company's April 29, 2015 Motion to Intervene and

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31. In addition, the IEEFA Study improperly relies on a U.S. Department of Energy (DOE) study concerning the implication of increased demand for electricity on natural gas infrastructure.[47] The DOE Study does not demonstrate that pipelines are currently overbuilt. It concludes that demand for natural gas from the electric power sector will only result in modest additions of new pipeline capacity between 2015 and 2030 (34 to 38 billion cubic feet (Bcf) per day) compared to historical capacity additions between 1998 and 2013 (127 Bcf per day).[48] The study explains that natural gas production and natural gas demand are geographically dispersed and natural gas companies are increasingly utilizing underutilized capacity on existing pipelines, re-routing natural gas flows, and expanding existing pipeline capacity.[49] The DOE Study does not support the contention that natural gas infrastructure is currently being overbuilt.

32. With regard to IEEFA Study's argument that a 14-percent rate of return (ROE) generally is too high, as discussed below, the Commission's policy is to use the ROE approved in the applicant's last NGA general section 4 rate proceeding,[50] which for Transco is 15.34 percent.[51]

33. Based on the benefits that Transco's proposal will provide, the absence of adverse effects on existing customers and other pipelines and their captive customers, and the minimal adverse effects on landowners or surrounding communities, we find, consistent with the Certificate Policy Statement and NGA section 7(c), that the public convenience

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February 17, 2016 Comment.

[47] U.S. DEP'T OF ENERGY, NATURAL GAS INFRASTRUCTURE IMPLICATIONS OF INCREASED DEMAND FROM THE ELECTRIC POWER SECTOR, http://energy.gov/epsa/downloads/report-natural-gas-infrastructure-implications-increased-demand-electric-power-sector (issued Feb. 2015).

[48] *See id.* at 31.

[49] *See id.*

[50] *Texas Gas Transmission*, 153 FERC ¶ 61,323, at PP 18-19 (2015).

[51] *See infra* P 38. We also note that even with respect to greenfield natural gas pipeline projects, we have determined that a 14-percent ROE, based on a 50-50 debt/equity capital structure, is "in tune with prevailing returns in the marketplace." *Florida Southeast Connection*, 156 FERC ¶ 61,160 at P 20 (quoting *Gateway Pipeline Co.*, 55 FERC ¶ 61,488, at 62,678 (1991)).

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and necessity requires approval of Transco's proposal, subject to the conditions discussed below.

B. Rates

1. Pre-tax Rate of Return

34. In their protest, the State Commissions take issue with Transco's proposed use of a pre-tax return of 15.34 percent in calculating its proposed incremental recourse rates. The State Commissions acknowledge Transco's use of the specified pre-tax return most recently approved in a section 4 rate case is consistent with Commission policy, but they emphasize that the Commission approved the settlement in that rate case almost 15 years ago. They argue the incremental recourse rates approved in these proceedings should take into account the significant changes in financial markets since then.[52] The State Commissions assert that the proposed pre-tax return of 15.34 percent accounts for approximately half of Transco's proposed cost of service in these proceedings,[53] and their comments included a discounted cash flow analysis, which they contend reflects current market conditions and supports a median ROE of 10.95 percent for natural gas pipelines.[54]

35. The State Commissions argue that recent Commission orders provide valuable perspective indicating that Transco's proposed 15.34 percent pre-tax return is not reasonable. They reference a 2015 order where the Commission relied on a discounted cash flow analysis for a proxy group of pipelines based on a six-month period ending March 31, 2011, to limit Portland Natural Gas Transmission System's ROE to 11.59 percent, the top of the range of reasonable returns for which the median ROE was 10.28

[52] Transco's last section 4 rate case in which a specified rate of return was used in calculating Commission-approved rates was in Docket No. RP01-245-000, *et al.* A letter order issued in that docket on July 23, 2002, accepted a partial settlement resolving cost classification, cost allocation, and rate design subject to certain reservations and adjustments, and revising Transco's generally applicable rates. *Transcontinental Gas Pipe Line Corp.*, 100 FERC ¶ 61,085, at P 2 (2002).

[53] The State Commissions' April 22, 2015 Notice of Intervention, Protest, and Requests for Partial Consolidation and Evidentiary Hearing (State Commissions' Protest).

[54] Preliminary Pipeline Discount Cash Flow Analysis Exhibit to the State Commissions' Protest.

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percent.[55] The State Commissions also point to the Commission's 2013 orders that limited the ROEs for El Paso Natural Gas Company and Kern River Gas Transmission Company to 10.55 percent and 11.55 percent, respectively.[56]

36. Transco's answer maintains that its current application is a section 7 certificate proceeding, not a section 4 rate case, and that its proposed recourse rates will be initial section 7 rates for incremental services using new expansion capacity. Transco further asserts its proposed initial section 7 recourse rates are consistent with Commission policy in section 7 proceedings, in that they are appropriately designed to recover the project's incremental cost of service.[57]

37. In the State Commissions' answer to Transco's answer, they contend that when the Commission grants a pipeline company negotiated rate authority, it relies on the availability of cost-based recourse rates to prevent the pipeline from exercising market power by ensuring that shippers will have the option of choosing to pay cost-based recourse rates for expansion capacity that becomes available on either an interruptible or firm basis.[58] Therefore, the State Commissions assert that even if a pipeline has negotiated rate agreements for all of the expansion capacity proposed in a certificate proceeding, the recourse rates nevertheless need to be properly designed and based on a reasonable estimate of the actual costs to construct and operate the expansion capacity.

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[55] *Portland Natural Gas Transmission System*, Opinion 524-A, 150 FERC ¶ 61,107, at P 195 (2015).

[56] *El Paso Natural Gas Co.*, Opinion No. 528, 145 FERC ¶ 61,040, at P 686 (2013); *Kern River Gas Transmission Co.*, Opinion No. 486-F, 142 FERC ¶ 61,132, at P 263 (2013).

[57] Transco cites the Commission's order that certificated its Rock Springs Lateral and additional mainline compression to provide service for another new electric generating plant. In that order, the Commission approved Transco's proposed incremental recourse rate for that expansion capacity, which was calculated using the pre-tax return of 15.34 percent from its settlement rates in Docket No. RP01-245. *Transcontinental Gas Pipe Line Co., LLC*, 150 FERC ¶ 61,205, at PP 17-19 (2015).

[58] The State Commissions' May 27, 2015 Answer at 2 (citing *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076, at 61,240, *order granting clarification*, 74 FERC ¶ 61,194 (1996) (Alternatives to Traditional Cost-of-Service Ratemaking)).

(continued…)

38. The State Commissions are correct that "the predicate for permitting a pipeline to charge a negotiated rate is that capacity is available at the recourse rate,"[59] and the Commission therefore requires that shippers have the option of choosing to pay a cost-based recourse rate for expansion capacity that becomes available. However, as the State Commissions acknowledge, the Commission's consistent policy in section 7 certificate proceedings is to require that a pipeline's cost-based recourse rates for incrementally-priced expansion capacity be designed using the rate of return from its most recent general rate case approved by the Commission under section 4 of the NGA in which a specified rate of return was used to calculate the rates.[60] Transco's proposed incremental project recourse rate in this certificate proceeding is based on the specified pre-tax return of 15.34 percent underlying the design of its approved settlement rates in Docket No. RP01-245-000, *et al*.[61] Since Transco's more recently approved general rate case

[59] *Columbia Gas Transmission Corp.*, 97 FERC ¶ 61,221, at 62,004 (2001) (citing Alternatives to Traditional Cost-of-Service Ratemaking, 74 FERC at 61,241).

[60] *See, e.g., Trunkline Gas Co., LLC*, 135 FERC ¶ 61,019, at P 33 (2011); *Florida Gas Transmission Co., LLC*, 132 FERC ¶ 61,040, at P 35 & n.12 (2010); *Northwest Pipeline Corp.*, 98 FERC ¶ 61,352, at 62,499 (2002); *Mojave Pipeline Co.*, 69 FERC ¶ 61,244, at 61,925 (1994). *See also Dominion Cove Point LNG, LP*, 115 FERC ¶ 61,337, at P 132 (2006), *order on reh'g*, 118 FERC ¶ 61,007, at PP 120 & 122-23 (2007) (allowing Dominion Cove Point LNG to recalculate incremental rates using the rates of return ultimately approved in its pending rate case, as opposed to its proposed rates of return). If a pipeline's most recent general rate case involved a settlement that did not specify a rate of return or pre-tax return, the Commission's policy requires that incremental rates in the pipeline's certificate proceedings be calculated using the rate of return or pre-tax return from its most recent general rate case (or rate case settlement) in which a specified return component was used to calculate the approved rates. *See, e.g., Equitrans, L.P.*, 117 FERC ¶ 61,184, at P 38 (2006). This policy applies even if a pipeline calculated its proposed incremental rates for expansion capacity using a rate of return lower than the most recently approved specified rate of return. *Id.* (rejecting Equitrans' proposed use of 14.25 percent ROE component for incremental rates for mainline extension and requiring recalculation using the specified pre-tax rate of return of 15 percent that was approved in its rate case).

[61] *Transcontinental Gas Pipe Line Corp.*, 100 FERC ¶ 61,085 (2002). Transco has used the pre-tax return and certain other cost factors underlying the Docket No. RP01-245 Settlement rates, because the more recent Docket No. RP12-993 Agreement is a "black box" settlement, which does not specify most cost of service components,

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settlements in Docket Nos. RP12-993-000, *et al.*[62] and RP06-569-004, *et al.*[63] were both "black box" settlements that did not specify the rate of return or other cost-of-service components used to calculate the settlement rates, Transco calculated its proposed incremental rates in this certificate proceeding consistent with Commission policy by using the last Commission-approved specified pre-tax return of 15.34 percent from its prior rate proceeding in Docket No. RP01-245.

39. Further, in section 7 certificate proceedings the Commission reviews initial rates for service using proposed new pipeline capacity under the public convenience and necessity standard, which is a less rigorous standard than the just and reasonable standard under NGA sections 4 and 5.[64] The Commission develops the recourse rate for

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including rate of return.

[62] *Transcontinental Gas Pipe Line Co., LLC*, 144 FERC ¶ 63,029, at P 13 (2013) (certifying to the Commission an uncontested settlement in which, "[w]ith the exception of certain expressly designated items, the cost of service agreement was reached on a 'black box' basis"); *Transcontinental Gas Pipeline Co., LLC*, 145 FERC ¶ 61,205 (2013) (approving and accepting tariff records to implement rate case settlement).

[63] *Transcontinental Gas Pipe Line Corp.*, 122 FERC ¶ 61,213 (2008) (approving and accepting tariff records to implement rate case settlement); *Transcontinental Gas Pipe Line Co., LLC*, 147 FERC ¶ 61,102, at P 53 (2014) (explaining that settlement reached in Docket No. RP06-569 was a "black box" settlement that did not specify most cost of service components including rate of return).

[64] *Atlantic Refining Co. v. Public Serv. Comm'n of New York*, 360 U.S. 378 (1959) (*CATCO*). In *CATCO*, the Court contrasted the Commission's authority under sections 4 and 5 of the NGA to approve changes to existing rates using existing facilities and its authority under section 7 to approve initial rates for new services and services using new facilities. The court recognized "the inordinate delay" that can be associated with a full-evidentiary rate proceeding and concluded that was the reason why, unlike sections 4 and 5, section 7 does not require the Commission to make a determination that an applicant's proposed initial rates are or will be just and reasonable before the Commission certificates new facilities, expansion capacity, and/or services. *Id.* at 390. The Court stressed that in deciding under section 7(c) whether proposed new facilities or services are required by the public convenience and necessity, the Commission is required to "evaluate all factors bearing on the public interest," and an applicant's proposed initial rates are not "the only factor bearing on the public convenience and necessity." *Id.* at 391. Thus, as explained by the Court, "[t]he Congress, in § 7(e), has authorized the Commission to condition certificates in such manner as the public convenience and

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expansion capacity based on the pipeline's estimated cost of service. As discussed above, the State Commissions' protest included a discounted cash flow analysis for natural gas pipelines, which they contend reflects current market conditions and a median ROE of 10.95 percent. However, the Commission does not believe that conducting discounted cash flow analyses in individual certificate proceedings would be the most effective or efficient way for determining the appropriate ROEs for proposed pipeline expansions. While parties have the opportunity in section 4 rate proceedings to file and examine testimony with regard to the composition of the proxy group to use in the discounted cash flow analysis, the growth rates used in the analysis, and the pipeline's position within the zone of reasonableness with regard to risk, it would be difficult, if not impossible, to complete this type of analysis in section 7 certificate proceedings in a timely manner and attempting to do so would unnecessarily delay proposed projects with time sensitive in-service schedules. The Commission's current policy of calculating incremental rates for expansion capacity using the Commission-approved ROEs underlying pipelines' existing rates is an appropriate exercise of its discretion in section 7 certificate proceedings to approve initial rates that will "hold the line" until just and reasonable rates are adjudicated under section 4 or 5 of the NGA.

40. Here, Transco is required to file an NGA general section 4 rate case by August 31, 2018, pursuant to the comeback provision in Article 6 of the settlement in Docket No. RP12-993-000.[65] Parties in that future rate case will have an opportunity to review Transco's pre-tax return and other cost of service components and to specifically address issues of concern relating to the rate of return that should be used in calculating initial rates in Transco's future certificate proceedings.[66]

41. For the reasons discussed above, the Commission finds that it is appropriate to apply its general policy to calculate Transco's initial recourse rate in this proceeding and that parties raise in Transco's upcoming general rate case any issues and concerns they

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necessity may require when the Commission exercises authority under section 7," *id.*, and the Commission therefore has the discretion in section 7 certificate proceedings to approve initial rates that will "hold the line" and "ensure that the consuming public may be protected" while awaiting adjudication of just and reasonable rates under the more time-consuming ratemaking sections of the NGA. *Id.* at 392.

[65] *Transcontinental Gas Pipeline Co., LLC*, 144 FERC ¶ 63,029 at P 18.

[66] *See, e.g.*, *Eastern Shore Natural Gas Co.*, 138 FERC ¶ 61,050 (2012) (approving settlement that established rates on "black box" basis, but provided a specified pre-tax rate of return).

(continued…)

have regarding the rate of return or other cost of service components to be used in calculating Transco's recourse rates in subsequent certificate proceedings.

2. Initial Recourse Transportation Rate

42. Transco proposes an incremental recourse reservation charge of $0.77473/Dth and a commodity charge of zero. In support of the proposed initial rates, Transco submitted an incremental cost of service and rate-design study showing the derivation of the project recourse rate for the mainline based on the total first year cost of service of $480,719,972 divided by billing determinants of 1,700,002 Dth per day.[67] The proposed cost of service is based on Transco's pre-tax rate of return of 15.34 percent, as stated above, and Transco's system depreciation rates of 2.61 percent (for Transco's onshore transmission, including negative salvage) and 4.97 percent (for Transco's Solar turbines, as included in the Stipulation and Agreement in Docket Nos. RP12-993-000, *et al*).[68]

43. Section 284.7(e) of the Commission's regulations requiring the use of straight-fixed variable rate design prohibits the recovery of variable costs in the reservation charge.[69] Because Transco's application included $42,009,849 in Operation and Maintenance (O&M) expenses, which are classified as variable costs under the Commission's Uniform System of Accounts, in the reservation charge, Commission staff issued a data request on June 17, 2015, directing Transco to provide a breakdown of the O&M expenses by FERC account number and labor and non-labor costs for the new pipeline facilities, compression and measuring and regulating facilities. In response, Transco identified a total of $1,672,201 in non-labor O&M costs in Account Nos. 853 and 864.[70] Excluding the non-labor O&M costs, Transco stated its total first year cost of service is $479,047,771.[71]

44. In the data request, Commission staff also requested that Transco recalculate the incremental daily reservation charge to exclude the project's variable costs. In response, Transco recalculated the reservation charge to be $0.77203 per Dth and the incremental

[67] *See* Exhibit P of Transco's Application.

[68] *Transcontinental Gas Pipeline Co., LLC*, 145 FERC ¶ 61,205.

[69] 18 C.F.R. § 284.7(e) (2016).

[70] *See* Transco's June 23, 2015 Response to Data Request No. 1, Schedule No. 1.

[71] *See* Transco's June 23, 2015 Response to Data Request No. 2, Schedule No. 2.

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commodity charge to be $0.00152 per Dth (Zone 4), $0.00135 per Dth (Zone 5), and $0.00098 per Dth (Zone 6).[72]

45. Under the Certificate Policy Statement, there is a presumption that incremental rates should be charged for proposed expansion capacity if the incremental rate will exceed the maximum system-wide rate.[73] Because Transco's recalculated incremental reservation charge of $0.77203 per Dth is higher than the currently applicable Rate Schedule FT reservation charge,[74] we will require the use of the recalculated incremental base reservation charge of $0.77203 per Dth per day as the initial recourse reservation charge for firm service using the expansion capacity. Furthermore, Transco's estimated project commodity charge is lower than the currently applicable Rate Schedule FT commodity charge.[75] Therefore, we will require Transco to charge its currently applicable Rate Schedule FT commodity charge for Zones 4, 5 and 6 for this project.

46. Transco did not propose interruptible transportation rates. Consistent with Commission policy, Transco is directed to charge its currently effective system interruptible rates under Rate Schedule IT for any interruptible service rendered on the additional capacity made available as a result of the project.[76]

47. Transco states that the project shippers have elected to enter into negotiated rate agreements for their capacity. Transco must file either its negotiated rate agreements or tariff records setting forth the essential terms of the agreements in accordance with the

[72] *See id.*, Schedule Nos. 2 and 3.

[73] *See* Certificate Policy Statement, 88 FERC at 61,746.

[74] The current Zone 6-4/4-6 Rate Schedule FT maximum rate is $0.41155 per Dth. Transcontinental Gas Pipe Line Company, LLC, FERC NGA Gas Tariff, Fifth Revised Volume No. 1, Section 1.1.1, FT - Non-Incremental Rates, 14.0.0.

[75] The currently effective Rate Schedule FT commodity charges are: $0.01387 per Dth (Zone 4), $0.01020 per Dth (Zone 5), and $0.00596 per Dth (Zone 6). Transcontinental Gas Pipe Line Company, LLC, FERC NGA Gas Tariff, Fifth Revised Volume No. 1, Section 1.1.1, FT - Non-Incremental Rates, 14.0.0.

[76] *See, e.g., Dominion Carolina Gas Transmission, LLC*, 155 FERC ¶ 61,231, at P 22 (2016); *Texas Eastern Transmission, LP*, 139 FERC ¶ 61,138, at P 31 (2012).

Alternative Rate Policy Statement and the Commission's negotiated rate policies.[77] Such filing must be made at least 30 days, but not more than 60 days, before the proposed effective date for such rates.[78]

3. Reporting Incremental Costs

48. Consistent with the Certificate Policy Statement, the Commission directs Transco to keep separate books and accounting of costs attributable to the project. The books should be maintained with applicable cross-references, as required by section 154.309 of the Commission's regulations.[79] This information must be in sufficient detail so that the data can be identified in Statements G, I, and J in any future NGA section 4 or 5 rate case and the information must be provided consistent with Order No. 710.[80]

4. Fuel Retention and Electric Power Charges

49. Transco proposes to charge its applicable general system fuel retention and electric power charges for services using the project's expansion capacity. Transco also proposes to assess its system fuel, lost and unaccounted for retention charges under its existing Rate Schedule FT for the project. Based on a study that was designed to determine the impact of fuel consumption (compressor fuel plus the fuel equivalent of electricity consumed), Transco determined that the project would result in a 30.02 percent reduction in system fuel use attributable to existing shippers.[81] Based on the projected

[77] *Natural Gas Pipelines Negotiated Rate Policies and Practices; Modification of Negotiated Rate Policy*, 104 FERC ¶ 61,134 (2003), *order on reh'g and clarification*, 114 FERC ¶ 61,042, *reh'g dismissed and clarification denied*, 114 FERC ¶ 61,304 (2006).

[78] Pipelines are required to file any service agreement containing nonconforming provisions and to disclose and identify any transportation term or agreement in a precedent agreement that survives the execution of the service agreement. *See* 18 C.F.R. § 154.112(b) (2016).

[79] *Id.* § 154.309.

[80] *See Revisions to Forms, Statements, and Reporting Requirements for Natural Gas Pipelines*, Order No. 710, FERC Stats. & Regs. ¶ 31,267, at P 23 (2008).

[81] The study was based on ten representative days from 2014. The portion of Transco's system studied includes all facilities between Station 65 and Transco's Leidy Hub in western Pennsylvania, as well as the new pipeline to be constructed under the project. *See* Exhibit Z-1 of Transco's Application.

overall reduction in fuel use, the Commission approves Transco's proposal to charge its generally applicable system fuel retention and electric power rates.

5. Lease of the Central Penn Line

50. On February 14, 2014, Meade and Transco entered into three agreements concerning the ownership, operation, and lease of the Central Penn Line: a Construction and Ownership Agreement, a Lease Agreement, and an Operation and Maintenance Agreement. Under the Construction and Ownership Agreement, Transco will construct the Central Penn Line, and Meade and Transco will jointly fund the construction of the Central Penn Line facilities in proportion to their respective ownership interests. Specifically, Transco will hold a 41.18 percent undivided joint ownership interest in the Central Penn Line North and a 70.59 percent undivided joint ownership interest in Central Penn Line South. Meade will hold a 58.82 percent undivided joint ownership interest in the Central Penn Line North and a 29.41 percent undivided joint ownership interest in the Central Penn Line South. Transco states that Meade will be a passive owner. Meade is not currently an NGA jurisdictional entity and does not intend to become one as a result of the construction and operation of the Central Penn Line. Transco requests that the Commission find that Meade does not require a certificate in connection with the project and that the certificate authority be granted solely to Transco.

51. Under the Lease Agreement, Meade will lease its ownership interest in the Central Penn Line, including its interest in the pipeline capacity, to Transco for a 20-year primary term (beginning from the date of service on the project) at a fixed monthly lease charge of $7,964,908. At the termination of the Lease Agreement, Transco and Meade will be discharged from any further obligations under such agreement, including any obligation to provide (in the case of Meade) or to pay for (in the case of Transco) the lease of facilities, subject to the receipt of the necessary authorizations from the Commission.

52. As the sole applicant for the NGA section 7(c) certificate, Transco will operate and maintain the Central Penn Line during the lease term. Pursuant to the Lease Agreement, Transco will have full possessory and operational rights to the Central Penn Line and will have 100 percent of the capacity rights on the Central Penn Line.

53. Transco asserts that it will utilize the capacity rights under the Lease Agreement in conjunction with the capacity to be created by the other project facilities to provide transportation services under its tariff. Transco further asserts that during the proposed lease, all operating and maintenance expenses will be Transco's responsibility.

54. Consistent with Commission regulations, Transco proposes to record the lease as a capital lease in Account 101.1, Property under Capital Leases, and the capital lease obligation in Account 243, Obligations under Capital Leases – Current, and Account 227,

Obligations under Capital Leases – Noncurrent.[82] Transco affirms that the lease qualifies as a capital lease because the present value at the beginning of the lease term of the minimum lease payments exceeds 90 percent of the fair value of the leased property to the lessor at the inception of the lease, which is consistent with section 367.18 of the Commission's regulations.[83] Transco states that the costs and revenues associated with the project's leased facilities will be accounted for separately and segregated from its other system costs.

55. Historically, the Commission views lease arrangements differently from transportation services under rate contracts. The Commission views a lease of interstate pipeline capacity as an acquisition of a property interest that the lessee acquires in the capacity of the lessor's pipeline.[84] To enter into a lease agreement, the lessee generally is required to be a natural gas company under the NGA and required to obtain section 7(c) certificate authorization to acquire the capacity. Once acquired, the lessee in essence owns that capacity and the capacity is subject to the lessee's tariff. The leased capacity is allocated for use by the lessee's customers.

56. The Commission's practice has been to approve a lease if the Commissions finds that: (1) there are benefits from using a lease arrangement; (2) the lease payments are less than, or equal to, the lessor's firm transportation rates for comparable service over the terms of the lease on a net present value basis; and (3) the lease arrangement does not adversely affect existing customers.[85] We find that the proposed lease agreement between Transco and Meade satisfies these requirements. Therefore, we approve the capacity lease arrangement because it is required by public convenience and necessity.

57. First, the Commission has found that capacity leases in general have several potential benefits. Leases can promote efficient use of existing facilities, avoid construction of duplicative facilities, reduce the risk of overbuilding, reduce costs, and minimize environmental impacts.[86] In this case, the lease will reduce Transco's costs

[82] 18 C.F.R. § 367.19 (2016).

[83] *Id.* § 367.18.

[84] *Florida Southeast Connection, LLC,* 156 FERC ¶ 61,160 at P 12.

[85] *Islander East Pipeline Co., L.L.C.*, 100 FERC ¶ 61,276, at P 69 (2002).

[86] *See, e.g., Dominion Transmission, Inc.*, 104 FERC ¶ 61,267, at P 21 (2003); *Texas Gas Transmission, LLC*, 113 FERC ¶ 61,185, at P 9 (2005); *Islander East Pipeline Co., L.L.C.*, 100 FERC ¶ 61,276 at P 70.

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because the cost of leasing Meade's ownership interest is lower than the incremental cost of Transco's sole ownership of the Central Penn Line. Second, we find that Transco has demonstrated that the annual amount it would pay Meade under the lease is less than what it would cost if Transco constructed and owned the facilities being leased from Meade; thus, the lease arrangement will benefit project shippers. During the lease term, Transco will pay Meade a fixed lease payment of $7,964,908 per month for Meade's ownership interest in the Central Penn Line. The annualized amount of such lease charge is $95,578,896,[87] which is then compared to the estimated annual cost of service of $162,009,014, assuming Transco constructed and owned Meade's share of the Central Penn Line.[88] Since the annual amount to be paid under the lease is less than the comparable cost of service, approval of this lease agreement will reduce Transco's costs associated with the project by an estimated $66,430,118 per year.[89]

58. The State Commissions argue that Transco has not demonstrated that its annual lease payments will be less than the equivalent cost of service that would apply if Transco directly owned 100 percent of the facilities. The State Commissions assert that Transco's analysis of its annual lease payments is deficient because, while the project lease has a 20-year primary term, Exhibit N of Transco's application only analyzes one year of the lease. Therefore, the State Commissions contend that Transco's analysis does not take into account the impact of depreciation of the leased facilities on the cost of service. As the leased facilities depreciate over time, the cost of service should decrease due to the decrease in rate base. The State Commissions contend that by limiting its analysis to one year, Transco has failed to show that the lease payments over the life of the lease will be less than the equivalent cost of service that would apply if Transco directly owned the facilities.

59. In response, Transco states that its application compares the annual lease charges to an incremental annual cost of service that would apply if Transco constructed and owned 100 percent of the project facilities. Transco states that its analysis used the first year of the lease arrangement consistent with section 157.14(a)(19) of the Commission's regulations, which requires applicants to calculate its initial recourse rates for the project using a cost of service for the first calendar year of operation after the proposed facilities

[87] *See* Exhibit N of Transco's Application, Line 14.

[88] *See id.*, Line 13, reflecting an estimated incremental total cost of service to construct Meade's ownership share of the Central Penn Line.

[89] *See id*., Line 15.

(continued…)

are placed in service.[90] Transco therefore argues that when comparing Transco's annual lease payments under the lease arrangement to the estimated annual cost of service assuming Transco constructed and owned Meade's share of the corresponding project facilities, Transco appropriately used a first-year cost of service analysis.

60. Transco's analysis using the first year of the lease arrangement is consistent with section 157.14(a)(19) of the Commission's regulations, and our approval of the lease agreement is consistent with previous Commission orders in which the Commission approved the leasing of new capacity being constructed as part of the project based on the costs of that capacity.[91] The State Commissions are correct that, assuming Transco constructed and owned 100 percent of the facilities, its cost of service should decrease over time. But, as stated above, rates are based on a first year cost of service, and the pipeline is under no obligation to reduce those rates over time. Therefore, the lease arrangement provides lower rates and a benefit to shippers.

61. Third, we find that the lease arrangement will not adversely affect Transco's existing customers. Transco proposes an incremental recourse rate designed to recover the cost of service attributable to the project facilities, including the payments under the Lease Agreement. Therefore, existing shippers will not subsidize the lease arrangement. In addition, Transco will separately account for the costs and revenues associated with the leased facilities and segregate those costs and revenues from its other system costs during the lease term. Accordingly, the lease arrangement will not result in adverse effects to Transco's existing customers or on any other pipelines or its customers.

62. The State Commissions assert that the Commission's long-standing policy is that when examining proposals to abandon service, it weighs all relevant factors, but considers "continuity and stability of existing services . . . the primary considerations in assessing whether the public convenience and necessity permit an abandonment." They are concerned that the Lease Agreement could allow Transco to evade or weaken its obligations to continue service after the lease term ends. Accordingly, the State Commissions request that, in the event the Commission approves the lease arrangement, it should clarify that nothing therein prejudges any issues as to the status of the leased facilities, or the service provided on those facilities, at the end of the lease. Similarly, Geraldine Turner Nesbitt, a landowner affected by the project, is concerned whether the pipeline would be abandoned at the end of the lease term.

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[90] 18 C.F.R. § 157.14(a)(19)(ii)(A) (2016).

[91] *See, e.g., Tennessee Gas Pipeline Co., L.L.C.*, 150 FERC ¶ 61,160 (2015); *Constitution Pipeline Co.*, 149 FERC ¶ 61,199 (2014).

(continued…)

63. Transco asserts that it is not requesting pre-granted abandonment authority at the end of the lease term. Transco further asserts that while Meade is not obtaining a certificate in this proceeding, any certificate authority granted will attach to 100 percent of the project facilities and not just to Transco's ownership interest. Moreover, Transco also acknowledges that at the end of the lease term, if Transco intends to abandon service or the facilities, Transco must obtain the necessary abandonment authority under NGA section 7(b).[92] Interested parties would have ample opportunity to participate in a NGA section 7(b) proceeding for such abandonment.

64. The Commission clarifies that upon termination of the lease, Transco must continue to provide jurisdictional service on the Central Penn Line facilities until appropriate abandonment authorization is requested and granted under NGA section 7(b). Further, if Transco is authorized to abandon service, no other entity will be able to use the capacity for jurisdictional service prior to filing for and receiving the requisite certification authorizations.

C. Passive Ownership of the Proposed Facilities

65. Ms. Nesbitt and the Clean Air Council argue that because Meade, as a passive co-owner of the project, will not be a natural gas company subject to the Commission's jurisdiction, we would be unable to ensure the project will comply with the conditions of the certificate order. We disagree. The Commission does not certificate ownership under the NGA – mere ownership of facilities does not subject an entity to Commission's jurisdiction under the NGA.[93] Commission jurisdiction over the operator of facilities is sufficient to ensure the Commission's ability to exercise its regulatory responsibilities.[94] Here, Meade will lease its ownership interest in the project to Transco before the in-service date of the project. As a result, Transco will have full possessory rights for the project. Transco will also be the sole operator.[95] As the certificate holder, Transco will

[92] 15 U.S.C. ¶ 717f(b) (2012).

[93] *El Paso Natural Gas Co.*, 19 FPC 371 (1958); *Montana-Dakota Utilities Co.*, 8 FPC 409 (1949).

[94] *See generally Dome Pipeline Corp.*, 22 FERC ¶ 61,277 (1983); *El Paso Natural Gas Co.*, 47 FPC 1527, at 1532 (1972) ("It is essential that some entity be identified as the recipient of regulatory responsibility and the source of regulatory responsiveness").

[95] *See* Transco's Application at 8. The Clean Air Council incorrectly alleges that Meade will operate the pipeline. *See* Clean Air Council's June 27, 2016 Comments on the Draft EIS at 30.

(continued…)

be responsible for complying with the conditions of the order and the Commission will be able to exercise its regulatory responsibilities. If Transco intends to abandon jurisdictional facilities or services by transfer to Meade, Transco would be required to file an application with the Commission seeking such authorization under section 7(b) of the NGA and Meade would be required to file an application pursuant to section 7(c) to acquire and operate the jurisdictional facilities.

D. Eminent Domain

66. Clean Air Council argues that the Takings Clause of the U.S. Constitution[96] prohibits Transco from exercising eminent domain if the project only benefits private companies. In addition to demonstrating public convenience and necessity under the NGA, Clean Air Council contends that Transco must also demonstrate the project is for "public use" in order to exercise eminent domain. In response, Transco maintains that Congress, by enacting section 7(h) of the NGA,[97] concluded that the use of eminent domain to construct a pipeline to transport natural gas in interstate commerce is a public use and that a certificate of public convenience and necessity is the only prerequisite to obtain the right of eminent domain.

67. To satisfy the Takings Clause, the taking must serve a "public purpose."[98] The U.S. Supreme Court has "[w]ithout exception . . . defined that concept broadly, reflecting [the court's] longstanding policy of deference to the legislative judgments in this field."[99] In this case, Congress' intent was clearly articulated in the NGA: the transportation and sales of natural gas in interstate commerce for ultimate distribution to the public is in the public interest.[100] Once a natural gas company obtains a certificate of public convenience and necessity, it may exercise the right of eminent domain in a U.S. District Court or a state court. The power of eminent domain conferred by section 7(h) of the NGA is a necessary part the statutory scheme to regulate the transportation and sale of natural gas

[96] U.S. CONST. amend. V.

[97] 15 U.S.C. § 717f(h) (2012).

[98] *Kelo v. City of New London, Conn.*, 545 U.S. 469, 479-80 (2005) (explaining that the Court long ago adopted a broader and more natural interpretation of "public use" within the meaning of the Takings Clause as "public purpose") (citing *Fallbrook Irrigation Dist. v. Bradley*, 164 U.S. 112, 158-164 (1896)).

[99] *Kelo*, 545 U.S. at 480.

[100] 15 U.S.C. § 717(a) (2012).

in interstate commerce.[101] In regulating this area, Congress may delegate the power of eminent domain to a corporation, which would be subject to the regulation of the federal government.[102] We therefore are not persuaded by Clean Air Council's argument that the U.S. Constitution requires a holder of a certificate of public convenience and necessity to separately demonstrate "public use" or that the Constitution prohibits the use of eminent domain by private companies that have demonstrated public convenience and necessity.

E. Environmental Analysis

1. Pre-filing Review

68. On April 4, 2014, Commission staff granted Transco's request to use the pre-filing process in Docket No. PF14-8-000. As part of the pre-filing review, on July 18, 2014, the Commission issued a *Notice of Intent to Prepare an Environmental Impact Statement for the Planned Atlantic Sunrise Expansion Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings* (NOI). The NOI was published in the *Federal Register* on July 29, 2014,[103] and mailed to nearly 2,500 interested parties, including federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; affected property owners; other interested parties; and local libraries and newspapers. The NOI briefly described the project and the environmental review process, provided a preliminary list of issues identified by Commission staff, invited written comments on the environmental issues that should be addressed in the draft EIS, listed the date and location of four public scoping meetings[104] to be held in the project area, and established August 18, 2014, as the deadline for comments.

69. Ninety-three speakers provided oral comments on the Atlantic Sunrise Project at the scoping meetings. In addition to the comments received at the meetings, we received over 600 written comments from federal, state, and local agencies; elected officials; environmental and public interest groups; potentially affected landowners; and other

[101] *See Thatcher v. Tennessee Gas Transmission Co.*, 180 F.2d 644, 647 (5th Cir. 1950), *cert. denied*, 340 U.S. 829 (1950); *Williams v. Transcontinental Gas Pipe Line Corp.*, 89 F.Supp. 485, 487-88 (W.D.S.C. 1950).

[102] *See Thatcher*, 180 F.2d at 647.

[103] 79 Fed. Reg. 44,023 (2014).

[104] Commission staff held the public scoping meetings between August 4 and 7, 2014, in Millersville, Annville, Bloomsburg, and Dallas, Pennsylvania.

(continued…)

interested stakeholders regarding the project. These comments were placed into the public record for the project for consideration in the draft EIS.[105]

2. Application Review

70. Transco filed its project application on March 31, 2015. On October 22, 2015, Commission staff mailed a letter to landowners potentially affected by the path of several proposed project reroutes under evaluation. The letter was mailed to over 300 affected property owners, government officials, and other stakeholders. The letter briefly described the proposed alternative routes, invited newly affected landowners to participate in the environmental review process, and opened a special 30-day limited scoping period.

71. To satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA),[106] Commission staff evaluated the potential environmental impacts of the proposed project in an EIS. The U.S. Army Corps of Engineers (U.S. Army Corps) and the U.S. Department of Agriculture's Natural Resources Conservation Service (Conservation Service) participated as cooperating agencies in the preparation of the EIS. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposal.

72. Commission staff issued the draft EIS for the project on May 5, 2016, which addressed the issues raised during the scoping period and up to the point of publication. Notice of the draft EIS was published in the *Federal Register* on May 12, 2016, establishing a 45-day public comment period ending on June 27, 2016.[107] The draft EIS was mailed to the environmental mailing list for the project, including additional interested entities that were added since issuance of the NOI. Commission staff held four public comment meetings between June 13 and 16, 2016.[108] Approximately 203 speakers provided oral comments regarding the draft EIS at these meetings. We also received over 560 written comments from federal, state, and local agencies; Native American tribes; companies/organizations; and individuals in response to the draft EIS. In addition, we received over 900 nearly identical letters. The transcripts of the public comment

[105] Table 1.3-1 of the final EIS provides a detailed and comprehensive list of issues raised during scoping.

[106] 42 U.S.C. §§ 4321 *et seq.* (2012). *See also* 18 C.F.R. pt. 380 (2016) (Commission's regulations implementing NEPA).

[107] 81 Fed. Reg. 29,557 (2016).

[108] Commission staff held the public comment meetings in Lancaster, Annville, Bloomsburg, and Dallas, Pennsylvania.

meetings and all written comments on the draft EIS are part of the public record for the project.

73. On October 13, 2016, the Commission staff mailed a letter to landowners potentially affected by two alternative pipeline routes identified following the issuance of the draft EIS. The letter was mailed to 56 potentially affected property owners, government officials, and other stakeholders. The letter briefly described the proposed alternative routes, invited potentially affected landowners to participate in the environmental review process, and opened a special 30-day comment period. FERC staff received 25 comment letters from individuals regarding the proposed alternative.

74. On November 3, 2016, the Commission issued for comment a draft General Conformity Determination, which assessed the potential air quality impacts associated with construction of the project in accordance with NEPA, the Clean Air Act, and the Commission's regulations.[109] The Pennsylvania Department of Environmental Protection (PADEP), Clean Air Council, Lebanon Pipeline Awareness, Sierra Club Pennsylvania Chapter, Concerned Citizens of Lebanon County, Lancaster Against Pipelines, and Elise Kucirka Salahub filed timely comments on the draft General Conformity Determination. The final General Conformity Determination addressed all the comments received prior to the close of the comment period on December 5, 2016.[110]

75. On December 30, 2016, Commission staff issued the final EIS for the project which was published in the *Federal Register* on January 9, 2017.[111] The final EIS addresses timely comments received on the draft EIS.[112] The final EIS was mailed to the same parties as the draft EIS, as well as to newly identified landowners and any

[109] The draft General Conformity Determination is publically available at: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14391786.

[110] The final General Conformity Determination is publically available at: https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20170117-3039.

[111] 82 Fed. Reg. 2,344 (2017).

[112] Volume III of the final EIS includes responses to comments on the draft EIS received through the close of the comment period on June 27, 2016, and responses to additional comments received between June 28 and November 14, 2016, that raised new issues not previously identified prior to the close of the comment period. Any new issues raised after November 14, 2016, which were not previously identified, are addressed in this order.

(continued…)

additional parties that commented on the draft EIS.[113] The final EIS addresses geology; soils; water resources; wetlands; vegetation; wildlife and fisheries; special status species; land use, recreation, and visual resources; socioeconomics; cultural resources; air quality and noise; reliability and safety; cumulative impacts; and aboveground site alternatives and minor route variations incorporated into the project's design.

3. The EIS Process and Procedural Concerns

76. Several commenters, including the Accokeek, Mattawoman, Piscataway Creeks Community Council (Accokeek), requested that the Commission extend the draft EIS public comment period because Transco filed supplemental information about a route alternative on June 24, 2016, three days before the comment period closed on June 27, 2016. On October 20, 2016, Commission staff revised the environmental schedule, postponing the issuance of the final EIS from October 21, 2016 to December 30, 2016.[114] Nearly a hundred additional comments were filed and considered by staff during this period. Because Accokeek and other stakeholders had the opportunity to submit comments on the project during this additional period, we find their request to be moot.

77. Accokeek also requested public meetings be held in areas affected by Transco's route alternative, as identified in Transco's June 24, 2016 Supplemental Information filing. Our regulations and CEQ regulations do not require public meetings to be held for alternatives proposed after issuance of the draft EIS. The Commission accepts and gives full consideration to all written comments. To that end, Commission staff mailed notice on October 13, 2016, to all landowners potentially affected by the alternative, as well as government officials, and other stakeholders. The notice described the proposed alternative routes, invited participation, and opened a special 30-day limited scoping period. We received twenty-five comments in response to the notice, which are addressed in section 3.3.2 of the final EIS.

78. Accokeek requests that we deny Transco's request to treat site-specific information regarding threatened and endangered species as privileged information. It is not uncommon for information regarding the precise location of protected species to be afforded privileged treatment, in order to protect the species from illegal poaching and collecting. If the reason for Accokeek's request is to prevent Transco from withholding a comprehensive list of affected species, we find that the final EIS fully identifies and analyzes the project's potential effects on federally-listed, state-listed, and other special

[113] The distribution list is provided in Appendix A of the final EIS.

[114] *See* 81 Fed. Reg. 74,420 (2016) (Commission staff revised the environmental schedule because a General Conformity Determination was required).

(continued…)

status species.[115] To the extent Accokeek's concerns are broader, as a party to this proceeding, access to privileged, non-public filings is available pursuant to the procedures set forth in 18 C.F.R. § 388.112(b)(2).

4. Major Environmental Issues Addressed in the Final EIS

79. The final EIS concludes that the project will result in some adverse environmental impacts, but these impacts will be reduced to less-than-significant levels with the implementation of the mandatory mitigation measures, set forth in the 56 conditions in Appendix C of this order.[116] This determination is based on a review of the information provided by Transco, and in its application and in response to data requests; field investigations; scoping; literature research; alternatives analyses; and consultation with federal, state, and local agencies as well as Native American tribes and individual members of the public. Major issues of concern addressed in the final EIS are summarized below and include: karst terrain and abandoned mine lands; waterbodies and wetlands; vegetation, forested land, and wildlife; threatened, endangered, and other special status species; land use concerns; cultural resources; air quality; safety; cumulative impacts; and alternatives.

a. Geological Resources

i. Karst Terrain

80. Several commenters expressed concern regarding the potential for groundwater contamination and subsidence affecting the integrity of the pipeline in areas of karst terrain.

81. The final EIS determined that there are several areas along the Central Penn Line South pipeline route in Lancaster, Lebanon, and Columbia Counties, Pennsylvania; and within the workspace for existing Compressor Stations 190 and 145 in Howard County, Maryland, and Cleveland County, North Carolina, respectively, where a karst hazard may be present. Transco developed a draft Karst Investigation and Mitigation Plan, which includes mitigation measures to be employed in areas of karst terrain to minimize the risk of sinkhole formation.[117] The mitigation measures include designing the pipeline to maximize its intrinsic ability to span sinkholes, minimizing the extent and time that open-

[115] *See* section 4.7 of the Final EIS.

[116] *See* Final EIS at 5-1; 5-26 - 5-36. The final EIS contained 57 recommended conditions. Recommended Condition 35 in the final EIS is no longer necessary because the required information has since been filed.

[117] *See* Appendix J of the Final EIS.

cut trench excavations for pipeline installation are left open, reducing the potential for surface water run-on and ponding in open trenches by directing surface water runoff away from work areas and removing ponded water from open excavations as soon as practicable, directing stormwater runoff away from any known or exposed karst feature during construction, completing refueling activities away from any known or exposed karst feature, and regular monitoring during construction to observe for signs of potentially developing sinkhole features. In general, we find the draft plan will adequately mitigate potential adverse impacts from karst hazards. Accordingly, we require in Environmental Condition 22 that Transco file a final Karst Investigation and Mitigation Plan that includes and addresses the results of missing karst survey areas and any additional karst features identified through examination of the 1937 to 1942 aerial photography, 2014 Light Detection and Ranging imagery, and 1999 color infrared imagery.

82. In addition, to mitigate the risk of subsidence and groundwater contamination, Transco will implement the measures in its Abandoned Mine Investigation and Mitigation Plan, Karst Investigation and Mitigation Plan, and Spill Plan. We also require in Environmental Condition 25 that Transco develop a Well and Spring Monitoring Plan for the pre- and post-construction monitoring of well yield and water quality and identify any wells and springs within 150 feet of the construction workspace and, in areas of known karst terrain, of wells within 500 feet of the construction workspace and file that information prior to construction. We agree with the final EIS's conclusions that, with implementation Transco's mitigation measures, as well as its Abandoned Mine Investigation and Mitigation Plan, Karst Investigation and Mitigation Plan, and the other plans contained in its Environmental Construction Plan[118] (including the Spill Plan), impacts on groundwater resources will be adequately minimized.[119]

ii. Mine Fires

83. Several commenters expressed concern regarding the potential hazards of abandoned mines and underground mine fires. Transco completed an investigation of mine fires as part of its Abandoned Mine Investigation and Mitigation Plan. Transco's investigation was based on its consultations with the PADEP's Bureau of Abandoned Mine Reclamation; a study of active mine fires prepared for the PADEP; a review of aerial photography; ground reconnaissance to identify evidence of possible fires, such as

[118] Transco's Environmental Construction Plan incorporates measures adopted in the Commission's Upland Erosion Control, Revegetation and Maintenance Plan and Wetland and Waterbody Construction and Mitigation Procedures.

[119] Final EIS at 4-52.

(continued…)

smoke plumes, posted warning signs, burnt vegetation, visible flame, smoke, steam, and odor; and an evaluation of the occurrence of the No. 8 Coal Vein (source of the Glen Burn Luke Fidler Mine Fire) in relation to the planned pipeline.

84. The final EIS found the project would not cross any active mine fire.[120] We did identify six historic mine fires within three miles of the project, three of which are active.[121] The closest active mine fire (the Glen Burn Luke Fidler Mine Fire) is about 0.4 mile west of the project in Northumberland County, Pennsylvania.[122] There is no evidence, however, to suggest that this or any of the other mine fires are actively migrating.[123] However, in recognition of the safety and integrity concerns that mine fires could pose during operation of the project facilities, we require in Environmental Condition 23 that, before construction, Transco file with the Commission an Abandoned Mine Investigation and Mitigation Plan that identifies: (1) the depth and extent of coal seams that could pose a risk to the project facilities; and (2) mitigation measures that would be implemented to protect the integrity of the pipeline from underground mine fires during the lifetime operation of the project. If it is found that pipeline integrity and safety could be compromised anytime during the lifetime operation of the project due to the current and future predicted location of the mine fires, the plan should also provide for Transco proposing revisions to the pipeline route. We note the Commission has the ongoing authority during construction and through the life of the project to impose any additional mitigating measures to ensure the protection of all environmental resources during construction and operation of the project.[124]

85. We agree with the conclusion in the final EIS that the project's effect on geological resources and the potential for geological hazards will be minor.[125] With the implementation of Transco's mitigation measures as well as its Abandoned Mine Investigation and Mitigation Plan, Karst Investigation and Mitigation Plan, the other plans contained in its Environmental Construction Plan, as well as the environmental

[120] *Id.* at 4-25.

[121] *Id.* at 4-23 and 4-25.

[122] *Id.* at 4-23 - 4-24.

[123] *Id.* at 4-23.

[124] *See* Environmental Condition 2 of this order.

[125] Final EIS at 5-1 - 5-3.

(continued…)

conditions in Appendix C of this order, the impacts on geological resources will be adequately minimized.[126]

b. Waterbodies

86. We received a number of comments regarding potential effects on waterbodies during construction and operation of the project due to sedimentation, spills or leaks of hazardous materials, or the introduction of chemicals or biocides.

87. The project will cross 388 waterbodies.[127] Implementation of the mitigation measures outlined in Transco's Environmental Construction Plan and other project-specific mitigation plans will minimize the impacts associated with the withdrawal and discharge of water and impacts associated with open-cut waterbody crossings during construction and operation of the project. Construction-related effects associated with dry-ditch crossing method would be short term and would be minimized by several mitigation measures, such as installing temporary erosion controls and requiring bank stabilization.[128] In addition, Transco must obtain appropriate National Pollutant Discharge Elimination System discharge permits prior to conducting hydrostatic testing. Transco does not propose to add any chemicals or biocides to the test water. Accidental spills and leaks during construction and operations will be prevented or adequately minimized through implementation of Transco's Spill Plan for Oil and Hazardous Materials. Thus, we agree with the final EIS's conclusion that, with the implementation of the mitigation measures in Environmental Conditions 26 through 29, the project would not have adverse long-term impacts on surface water resources.[129]

c. Wetlands

88. Construction of the pipeline facilities associated with the project will affect a total of 46.4 acres of wetlands, including 11.3 acres of forested wetlands, 4.3 acres of scrub-shrub wetlands, and 30.8 acres of emergent wetlands.[130]

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[126] *Id.* at 5-3.

[127] *Id.* at 4-52.

[128] *Id.* at 4-67.

[129] *Id.* at 4-72.

[130] *Id.* at 4-75.

(continued…)

89. We received a number of comments regarding impacts on exceptional value wetlands as a result of construction and operation of the project. One hundred five of the wetlands crossed by the proposed pipelines in Pennsylvania are classified as exceptional value, with 32 of these containing a forest component.[131] Of these 32 wetlands with a forest component, 17 are the Hemlock/Mixed Hardwood Palustrine Forest Community type, which the Pennsylvania Department of Conservation and Natural Resources identified as a natural or special concern community. In total, construction will temporarily affect about 3.6 acres and operation will permanently affect about 1.8 acres of this community type. No exceptional/designated wetland communities were identified along the Virginia facilities.

90. In general, construction and operation-related impacts on wetlands will be mitigated by Transco's compliance with the conditions of the Clean Water Act sections 404 and 401 permits, administered by the U.S. Army Corps and PADEP, respectively, and by implementing the wetland protection and restoration measures contained in its Environmental Construction Plan. Transco will also conduct routine wetland monitoring of all wetlands affected by construction until revegetation is successful. Further, mitigation measures will be implemented to control invasive species.

91. Transco will minimize and compensate for effects on the Hemlock/Mixed Hardwood Palustrine Forest Community-type wetland in the same manner as for other forested wetlands. Specifically, Transco is developing its Permittee-Responsible Mitigation Plan to compensate for unavoidable forested wetland impacts by reestablishing, rehabilitating, enhancing, and preserving wetlands at off-site mitigation locations. We require in Environmental Condition 31 that Transco file its final Permittee-Responsible Mitigation Plan with the Commission prior to construction. The final EIS concludes that the construction and operation of the project would result in minor adverse and long-term effects on wetlands.[132] With implementation of the acceptable avoidance and minimization measures, as well as the environmental conditions in Appendix C of this order, we agree with the final EIS's conclusion that impacts on wetland resources, including exceptional value wetlands, will be appropriately mitigated and reduced to less than significant levels.[133]

[131] *Id.* at 4-74.

[132] *Id.* at 4-78.

[133] *Id.* at 4-78.

(continued…)

d. Vegetation, Forested Land, and Wildlife

92. The project will affect vegetation communities of special concern, including Hemlock/Mixed Hardwood Palustrine Forest Communities, the Safe Harbor East Woods – County Natural Heritage Inventory, and 45 interior forests. Transco routed the pipelines adjacent to existing rights-of-way when possible (43 percent of Central Penn Line North, 12 percent of Central Penn Line South, and 100 percent of Chapman and Unity Loops), to avoid and minimize effects on interior forest habitat.[134] After issuance of the draft EIS, Transco incorporated several additional minor reroutes that reduced the amount of interior forest crossed by 11.9 acres.[135] Nevertheless, the project will affect 262.6 acres of interior forest habitat during construction and 118.5 acres during operations.[136]

93. The U.S. Fish and Wildlife Service (FWS) provided recommendations to Transco regarding mitigation of forest impacts through avoidance and minimization measures to address migratory bird habitat loss. Transco is consulting with the FWS to develop a project-specific memorandum of understanding that will specify the voluntary conservation measures that will be provided to offset the removal of upland forest and indirect impacts on interior forest. We require in Environmental Condition 34 that, prior to construction, Transco file the memorandum of understanding with the FWS that specifies voluntary conservation measures that Transco will provide to offset the removal of upland forest and indirect impacts on interior forests. To further minimize impacts on forested areas (including interior forests) during and after construction of the project, Transco will implement the measures in its Environmental Construction Plan, Migratory Bird Plan, final Permittee-Responsible Mitigation Plan, and final Noxious and Invasive Plant Management Plan.

94. Several commenters expressed concerns regarding potential disease spread to forest industries, specifically tree farms, from the construction corridor. To minimize forest disease spread and noxious weed revegetation, we require in Environmental Condition 32 that, prior to construction, Transco file complete results of noxious weed surveys and a final Noxious and Invasive Plant Management Plan that includes mitigation measures to address forest disease spread from the construction corridor.

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[134] *Id.* at 4-85.

[135] *Id.* at 4-86.

[136] *Id.* at 4-83.

(continued…)

95. The final EIS concludes and we agree that, due to the prevalence of forested habitats within the project area, the eventual regrowth of the cleared areas outside of the permanent right-of-way, and Transco's avoidance measures during pipeline routing and alternatives consideration, impacts on vegetation, including forested areas, will be reduced to less-than-significant levels.[137] In addition, impacts on forested and non-forested vegetation types, as well as the introduction or spread of noxious weeds or invasive plant species, will be further mitigated through adherence to the measures described in Transco's Environmental Construction Plan, Permittee-Responsible Mitigation Plan, Transco's Noxious and Invasive Plant Management Plan, migratory bird provisions, the environmental conditions in Appendix C of this order, and other mitigation measures described above.[138]

96. We also concur with the final EIS's conclusion that the construction and operation of the project will not have a significant adverse effect on wildlife based on the presence of suitable adjacent habitat available for use and given Transco's impact avoidance, minimization, and mitigation measures as well as our recommendations.[139] In addition, Transco has or will minimize effects to the extent possible through adhering to its Environmental Construction Plan, routing the pipeline to minimize effects on sensitive areas; and reducing the construction right-of-way through wetlands and interior forests.

e. Threatened, Endangered, and Other Special Status Species

97. Based on input from the FWS, the draft EIS identified eight federally-listed species that potentially occur in the project area. The draft EIS later concluded that four of the species (the gray bat, dwarf wedgemussel, dwarf-flowered heartleaf, and harperella) would not be affected by construction and operation of the project.[140] The final EIS concludes, and we agree, that the project may affect but is not likely to adversely affect the federally listed Indiana bat, bog turtle, northern long-eared bat, and northeastern bulrush.[141] The final EIS recommended that Transco not begin construction until Commission staff receives written comments from the FWS regarding the proposed

[137] *Id.* at 4-90.

[138] *Id.* at 5-9.

[139] *Id.* at 5-10.

[140] Draft EIS at 4-105 (Table 4.7.2-1).

[141] Final EIS at 5-12.

(continued…)

action and completes formal consultation with the FWS, if required. Commission staff received a letter from the FWS on December 20, 2016 (while the final EIS was in production), confirming its concurrence with the determinations of effect for these eight federally-listed species. Therefore, consultation with FWS for the project under the Endangered Species Act[142] is complete, making it unnecessary to adopt the final EIS recommendation on this issue.

98. Although a number of other candidate, state-listed, or special-concern species[143] were identified as potentially present in the project area, none were detected during surveys. Accordingly, no adverse effects are expected given Transco's proposed mitigation measures. Based on implementation of these measures and the environmental conditions in Appendix C of this order, we agree with the final EIS's conclusion that impacts on special-status species will be adequately avoided or minimized.[144]

f. Land Use

99. Construction of the project will affect a total of 3,741.0 acres of land.[145] About 75 percent of this acreage will be utilized for the pipeline facilities, including the construction right-of-way (62 percent) and additional temporary workspace (13 percent). The remaining acreage affected during construction will be associated with contractor yards and staging areas (11 percent), new and modified aboveground facilities (8 percent), and access roads (6 percent). During operation, the new permanent pipeline right-of-way, aboveground facilities, and permanent access roads will newly encumber 1,235.4 acres of land.

100. A number of landowners expressed concerns regarding their ability to maintain organic certification of their farms because the project would cross their farms.

101. The final EIS states that the Central Penn Line would cross about 123 acres of organic farmland during construction and 43.7 acres would be affected by operations.[146] Only Pennsylvania farmland would be impacted. If accidental spilling of fuels,

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[142] 16 U.S.C. §§ 1531-1544 (2012).

[143] *See* Table 4.7.3-1 of the final EIS.

[144] Final EIS at 5-13.

[145] *Id.* at 4-131.

[146] *Id.* at 4-145.

(continued…)

lubricants, or other substances associated with the project were to occur on certified organic farmland, only those affected areas would be removed from organic certification.[147] The final EIS recommends, and we require in Environmental Condition 40, that prior to construction, Transco file an organic certification mitigation plan developed in consultation with Pennsylvania Certified Organic to ensure organic certification is maintained on the organic farms crossed by the project. Further, the mitigation plan will include a plan to address landowners' complaints about the loss of organic certification, which would include measures to facilitate reinstatement of certification or compensate landowners.[148]

102. The Pennsylvania Department of Conservation and Natural Resources expressed concerns regarding the project's potential impacts on Pennsylvania park property that was previously funded with Federal Land and Water Conservation Funds. The Pennsylvania Department of Conservation and Natural Resources states that any impacts to such land that will result in a change of use or transfer of rights from the Pennsylvania Department of Conservation and Natural Resources would constitute conversion, which must comply with the state's conversion policy. The project will cross several Pennsylvania parks.[149] Transco has worked with the Pennsylvania Department of Conservation and Natural Resources to identify suitable measures to minimize disturbances to the parks. Moreover, the final EIS recommends, and we require in Environmental Condition 41, that Transco file copies of correspondence with the Pennsylvania Department of Conservation and Natural Resources confirming all Pennsylvania Department of Conservation and Natural Resources -funded properties crossed by the project have been identified and any change in use or transfer of rights for the Pennsylvania Department of Conservation and Natural Resources -funded properties is in compliance with Pennsylvania Department of Conservation and Natural Resources' conversion policies. Transco will also submit site-specific crossing plans that would minimize the effects on the parks.

103. Several commenters expressed concerns regarding local and private conservation easements not previously identified, including Lancaster Farmland Trust and Lebanon Valley Conservancy easements. Transco provided an updated list of conservation easements in Pennsylvania crossed by the project in August 2016. This information was included in table 4.8.6-3 of the draft and final EIS. To ensure that all conservation easements have been identified prior to construction, we require in Environmental Condition 44 that Transco file with its Implementation Plan a revised table 4.8.6-3 that

[147] *Id.* (referring to the policy of Pennsylvania Certified Organic, an organic certifying organization).

[148] *Id.*

[149] *See id.* at 4-152 - 4-159.

includes any newly identified conservation easements and copies of correspondence documenting any mitigation measures developed in consultation with the administering agency. In addition, we require in Environmental Condition 43 that Transco notify the Conservation Service one week prior to the start of construction across Conservation Service-held conservation easements to facilitate Conservation Service monitoring of construction and restoration of disturbed areas within these easements.

104. In general, the final EIS concludes that the effects of the project on recreational and special interest areas occurring outside of forestland will be temporary and limited to the period of active construction, which typically lasts several weeks or months in any one area.[150] These effects will be minimized by implementing the measures in Transco's Environmental Construction Plan and other project-specific construction plans. In addition, Transco will continue to consult with the owners and managing agencies of recreation and special interest areas regarding the need for specific construction mitigation measures.

105. We agree with the final EIS's conclusion that, with adherence to Transco's proposed impact avoidance, minimization, and mitigation plans, and implementation of the environmental conditions in Appendix C of this order, the overall impacts on land use will be adequately minimized.[151]

g. Property Values, Mortgages, and Insurance

106. Several commenters expressed concerns regarding the potential effect of the project on property values, mortgages, and property insurance. The final EIS identifies six studies that conclude that the presence of a pipeline either has no effect or an insignificant effect on property values.[152] Accokeek submitted a comment on the draft EIS, challenging these studies' conclusions. To support its claim, Accokeek provides an analysis by Dr. Lynne Y. Lewis, the Chair of Economics at Bates College, that concludes that the project "can be expected to negatively impact property values in the short term and very likely in the long term as well."[153] Dr. Lewis argues that in the event of environmental damage caused by a pipeline (e.g., spills, ruptures, pollution, or explosions), property values and market prices near the source of the damage are

[150] *See id.* at 5-15.

[151] *Id.* at 5-17.

[152] *See id.* at 4-183.

[153] Accokeek's June 27, 2016 Comment on the Draft EIS at 5.

(continued…)

expected to decrease.[154] This argument does not support Accokeek's claim that the mere presence of a new pipeline facility will devalue property. In fact, the study also notes that home sales prices do not change (i.e., before and after pipeline installation) if pipelines, whether related or unrelated to the installed pipeline, operate safely and do not experience fatal explosions. Dr. Lewis also offers a study that concludes that homes near pipelines sell at a lower price because homebuyers evaluate environmental and health risks primarily based on emotions rather than risk analysis even if the pipeline poses a low risk, accident-free, and "non-sensory disamenity."[155] That study's finding that home buying decisions are based, at least in part, on subjective criteria does not discredit the studies cited in the final EIS. Accordingly, we conclude here, as we have in other cases, that the proposed project is not likely to significantly impact property values in the project area.[156]

107. Several commenters also expressed concern about mortgage companies re-categorizing properties based on proximity to pipelines or federally-insured mortgages being revoked due to proximity to pipelines. We have not been able to document any specific trends regarding adverse effects of pipelines on mortgages or the ability of landowners to obtain mortgages for similar projects. Therefore, we concur with the final EIS's conclusion and find that nothing in the record supports the claim that landowners would lose their mortgages or experience a re-categorization as a result of the project.[157]

108. Several landowners contend that their insurance policy holder would either cancel their homeowner's insurance due to the presence of a natural gas pipeline on their property or amend the policy to exclude coverage for incidents related to the pipeline. We have no insurance industry data to suggest that the project will adversely affect homeowners' insurance rates, the ability to acquire a new homeowner's insurance policy, or that insurance policies will be discontinued due to the presence of a natural gas pipeline on a property. The final EIS concludes that insurance underwriters do not

[154] *See id.* at 4-5.

[155] *See* Julia Freybote and Eric Fruits, *Perceived Environmental Risk, Media and Residential Sales Prices*, at 24-25, http://pages.jh.edu/jrer/papers/pdf/forth/accepted/Perceived%20Environmental%20Risk,%20Media%20and%20Residential%20Sales%20Prices.pdf.

[156] *See, e.g.*, *Central New York Oil & Gas Co, LLC*, 116 FERC ¶ 61,277, at P 44 (2006).

[157] *See* Final EIS at 4-183; *see also Algonquin Gas Transmission, LLC*, 150 FERC ¶ 61,163, at P 98 (2015).

(continued…)

consider the presence of a transmission pipeline when determining the cost and coverage of the property insurance.[158] In addition, Transco's insurance coverage extends to landowners from the start of the survey process through the life of the pipeline and will pay for damage caused by the construction and operation of the pipeline. However, to address any potential insurance-related issues, we are requiring in Environmental Condition 46 that Transco file reports describing any documented complaints from a homeowner that a homeowner's insurance policy was cancelled, voided, or amended due directly to the grant of the pipeline right-of-way or installation of the pipeline and/or that the premium for the homeowner's insurance increased materially and directly as a result of the grant of the pipeline right-of-way or installation of the pipeline, as well as how Transco has mitigated the impact. Based on the foregoing, we agree with the final EIS's conclusion that the project would not adversely affect homeowners' insurance rates, the ability to acquire a new homeowner's insurance policy, or that existing insurance policies would be discontinued due to the presence of a natural gas pipeline on the property.[159]

h. Cultural Resources

109. Transco identified 440 architectural resources and 149 archaeological sites within the area of direct impact for the proposed pipeline facilities in Pennsylvania. The Pennsylvania State Historic Preservation Office's (SHPO) preliminary review of the architectural resources recommended that 415 of the architectural resources be found ineligible and 24 be found eligible for the National Register of Historic Places (National Register). The Pennsylvania SHPO has not yet commented on the eligibility of the one remaining architectural resource site. Of the 24 architectural sites recommended as eligible, the Pennsylvania SHPO made a recommendation of "no adverse effect" for nine sites and a recommendation of "adverse effect" for two sites, namely the Nesbitt Estate Rural Historic District and the Pedrick Farm. The Pennsylvania SHPO has not yet made a recommendation for the other 13 eligible sites. Environmental Condition 47 provides that no construction or staging can occur until all cultural resources reports and avoidance and treatment plans, if appropriate, are reviewed by the SHPO and the Commission.

110. Of the 149 archaeological sites, the Pennsylvania SHPO approved the treatment plan for 3 sites, and considered that 134 sites are not eligible for the National Register and 5 sites will require additional testing for the National Register or will be avoided. Transco identified two additional sites as not eligible but the Pennsylvania SHPO has not provided comments on their eligibility. Four additional sites were not formally evaluated for their National Register eligibility because they will not be affected during construction. One site is listed on the National Register but will be avoided by horizontal directional drill. There are pending comments from the Virginia SHPO for

[158] Final EIS at 4-183 - 4-184.

[159] *Id.* at 4-184.

one archaeological resource that was recommended ineligible. As with respect to architectural resources, Environmental Condition 47 provides that no construction or staging can occur until the SHPO has commented on all the cultural resources surveys and avoidance and treatment plans, if appropriate.

111. Commission staff consulted, and Transco conducted outreach, with 21 federally-recognized tribes and three tribes not federally recognized, as well as several other non-governmental organizations, local historical societies, museums, historic preservation and heritage organizations, conservation districts, and other potential interested parties to provide them an opportunity to comment on the project. Several tribes and organizations requested additional consultation or information, and the Delaware Nation requested mitigation of sites that cannot be avoided by the project in Lancaster County, Pennsylvania. The Reading Company Technical and Historical Society requested that railroad structures associated with the Reading Railroad be preserved. Transco confirmed that railroad structures crossed by the project will be avoided through use of the bore-crossing method.

112. To ensure that our responsibilities under section 106 of the National Historic Preservation Act[160] are met, as indicated above we require in Environmental Condition 47 that Transco not begin construction until any additional required surveys are completed, survey reports and treatment plans (if necessary) have been reviewed by the appropriate parties, and the Director of the Office of Energy Projects provides written notification to proceed. With the inclusion of Environmental Condition 47 in this order, we agree with the final EIS's conclusions that completion of the studies and implementation of the impact avoidance, minimization, and other measures proposed by Transco, as well as the environmental conditions in Appendix C of this order, will ensure that any adverse effects on cultural resources and historic properties will be appropriately mitigated.[161]

i. Air Quality Impacts

113. General Conformity Determinations stem from section 176(c) of the Clean Air Act,[162] which requires a federal agency to demonstrate that a proposed action conforms to the applicable State Implementation Plan, a state's plan to attain the National Ambient Air Quality Standards (NAAQS) for nonattainment pollutants. A General Conformity Determination is required when the federal agency determines that an action will generate

[160] 54 U.S.C.A. §§ 300101 *et seq.* (West 2016)

[161] *See* Final EIS at 5-19.

[162] 42 U.S.C. § 7506(c) (2012).

(continued…)

emissions exceeding conformity threshold levels of pollutants in the nonattainment area to assess whether the federal action will conform to the State Implementation Plan. Because the project will be located in a nonattainment area, primarily in Lancaster County, Pennsylvania, Commission staff reviewed the criteria pollutant emissions expected to be generated during construction of the project and compared them to the General Conformity thresholds in section 93.153(b)(1) of the Environmental Protection Agency's (EPA) regulations.[163]

114. Based on Transco's September 2016 revised construction emission estimates, which compressed the construction schedule for the project to one year (2017), the nitrogen oxides (NO_X) emissions from project construction emissions in Lancaster County, Pennsylvania will exceed the General Conformity applicability threshold.[164] All other emissions generated during all years of construction will not exceed General Conformity applicability thresholds.

115. Commission staff developed a draft General Conformity Determination for the project and placed it in the record on November 3, 2016, for 30-day public notice. Transco has committed to using emission reduction credits to demonstrate conformity. On December 29, 2016, the PADEP informed the Commission that the use of credits is an acceptable method for demonstrating compliance with the Pennsylvania State Implementation Plan and that sufficient NO_X credits are available to offset the estimated

[163] 40 C.F.R. § 93.153(b)(1) (2016).

[164] Final EIS at 4-219.

2017 NO_X construction emissions for Lancaster County.[165] The PADEP process of approving any transfer of credits requires a 30-day public comment period. These credits, as indicated the January 13, 2017 final General Conformity Determination, would satisfy the Clean Air Act requirement for federal agencies to ensure that the action would be in conformance with the Pennsylvania State Implementation Plan. We are modifying Environmental Recommendation 49 in the final EIS and adopting Environmental Condition 48 to require Transco to provide final evidence of an enforceable credit transfer prior to construction within Lancaster County. Should the transfer not execute, or significant changes to the project require a reevaluation of General Conformity, Commission staff would undertake the reevaluation in accordance with the Clean Air Act General Conformity regulations.[166]

116. Air quality impacts associated with construction of the project will include emissions from fossil-fueled construction equipment and fugitive dust. Local emissions may be elevated, and nearby residents may notice elevated levels of fugitive dust, but these would not be significant. We agree with the final EIS's conclusion that, with implementation of Transco's proposed mitigation measures and the environmental conditions in Appendix C of this order, air quality impacts from construction activities, such as elevated dust levels near construction areas, will be temporary or short term, and will not result in a significant impact on local and regional air quality.[167]

117. Commission staff conducted a supplemental modeling of Compressor Stations 517, 520, and 190 to analyze potential impacts associated with the operation of the existing emission sources at these stations, along with the proposed new sources, including monitored background. Based on this analysis, the existing sources at Compressor Stations 190, 517, and 520 are shown to be in compliance with the NAAQS for all pollutants, with the exception of the one-hour nitrogen dioxide (NO_2) standard at Compressor Stations 517 and 520. Based on the modeling analysis, concentrations for one-hour NO_2 for existing sources at Compressor Stations 517 and 520 have the potential to exceed the NAAQS during some operating scenarios and meteorological conditions. However, project operations will not incrementally contribute to the potential exceedance of the one-hour NO_2 standard. Rather, the modeled exceedances are from existing equipment.[168]

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[165] *See* PADEP's December 29, 2016 Comment for the Draft General Conformity Determination at 1-2.

[166] 40 C.F.R. § 93.157 (2016).

[167] Final EIS at 4-221.

[168] *Id.* at 4-228.

118. To ensure that the operation of Compressor Stations 190, 517, and 520 do not result in a violation of the NAAQS, the final EIS recommends, and we require in Environmental Condition 51, that Transco continue to operate the air quality monitoring stations at Compressor Stations 190, 517, and 520 for a period of three years after the newly modified facilities begin operation. In the event that the air quality monitoring shows a violation of the NAAQS, Transco shall immediately contact the state air quality agency to report the violation and establish a plan of action to correct the violation in accordance with the terms of the facility air permit and applicable state law.

119. We agree with the final EIS's conclusion that, with the additional data provided, continued monitoring at the compressor stations, and implementation of the environmental conditions in Appendix C of this order, operational emissions will not have a significant impact on local or regional air quality.[169]

j. Safety

120. Numerous commenters questioned the general safety of the project. The final EIS states that the project facilities must be designed, constructed, operated, and maintained to meet or exceed the U.S. Department of Transportation's Minimum Federal Safety Standards[170] and other applicable federal and state regulations. These regulations include specifications for material selection and qualification; minimum design requirements; and protection of the pipeline from internal, external, and atmospheric corrosion.

121. Several commenters expressed concern about long-term pipeline maintenance and operations. The Commission has a Memorandum of Understanding on Natural Gas Transportation Facilities with the Department of Transportation, which has exclusive authority to promulgate federal safety standards used in the transportation of natural gas. These regulations are implemented by the Department of Transportation's Pipeline and Hazardous Material Safety Administration (PHMSA). Once a natural gas pipeline is constructed, PHMSA maintains oversight of safety during operations. The Department of Transportation rules require regular inspection and maintenance, including repairs as necessary, to ensure the pipeline has adequate strength to transport the natural gas safely.[171] Further, although regulations requiring remote control shut-off valves have not yet gone into effect and would apply to pipelines built in the future, Transco committed to the use of remote control shut-off valves for the proposed pipelines.

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[169] *Id.* at 5-20.

[170] *See* 49 C.F.R. pt. 192 (2016).

[171] *See* 49 C.F.R. pt. 192 subpt. O (2016).

122. Several commenters expressed concerns regarding potential effects of a pipeline rupture and natural gas ignition (the area of potential effect is sometimes referred to as the potential impact radius). While a pipeline rupture does not necessarily ignite, the Department of Transportation's regulations define high consequence areas where a gas pipeline accident could do considerable harm to people and their property and require an integrity management program to minimize the potential for an accident. Transco routed the pipeline to minimize risks to local residents and vulnerable locations/populations (e.g., hospitals, prisons, schools, daycare facilities, retirement or assisted-living facilities) and will follow federal safety standards for pipeline class locations based on population density. The Department of Transportation regulations are designed to ensure adequate safety measures are implemented to protect all populations.

123. Based on available data, we agree with the final EIS's conclusions that Transco's implementation of the measures provided in the final EIS would ensure compliance with the Department of Transportation regulations, which would minimize the risk of public harm related to the construction and operation of the project.[172]

k. Indirect Effects

124. Several commenters, including Oil Change International,[173] request that the final EIS include the greenhouse gas (GHG) emissions associated with the upstream production and downstream combustion of the natural gas to be transported by the projects. The commenters cite the CEQ's Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews issued on August 1, 2016 (CEQ Final Guidance),[174] noting that the CEQ Final Guidance includes end use fossil fuel combustion as an example of an indirect emission that should be considered.

[172] *See* Final EIS at 5-22 - 5-23; *see also EarthReports, Inc. v. FERC*, 828 F.3d 949, 958-59 (D.C. Cir. 2016) (reliance on the opinions and standards of relevant federal and state authorities, including the Department of Transportation, is a reasonable component of the Commission's review of safety considerations).

[173] Oil Change filed comments on behalf of the Sierra Club, Earthworks, Appalachian Voices, Chesapeake Climate Action, 350.org, Bold Alliance, Environmental Action, Blue Ridge Environmental Defense League, Protect Our Water, Heritage and Rights (Virginia & West Virginia), Friends of Water, Mountain Lakes Preservation Alliance, Sierra Club West Virginia, and Sierra Club Virginia.

[174] CEQ, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National

(continued…)

125. The CEQ Final Guidance recognizes this potential issue, recommending that the final guidance apply "to all new proposed agency actions when a NEPA review is initiated" and that "[a]gencies should exercise judgment when considering whether to apply this guidance to the extent practicable to an on-going NEPA process."[175] The CEQ Final Guidance also emphasizes that "this guidance is not a rule or regulation, and the recommendations it contains may not apply to a particular situation based upon the individual facts and circumstances," and "agencies should provide the public and decision makers with explanations of the basis for agency determinations."[176]

126. CEQ's regulations direct federal agencies to examine the indirect impacts of proposed actions.[177] Indirect impacts are defined as those "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable."[178] Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."[179] Accordingly, to determine whether an impact should be studied as an indirect impact, the Commission must determine whether it: (1) is caused by the proposed action; and (2) is reasonably foreseeable.

Environmental Policy Act Review (issued Aug. 1, 2016), https://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance.

[175] *Id*. at 33.

[176] *Id*. at 1-2.

[177] *See* 40 C.F.R. § 1508.25(c) (2016).

[178] *Id.* § 1508.8(b).

[179] *Id.*

127. With respect to causation, "NEPA requires 'a reasonably close causal relationship' between the environmental effect and the alleged cause"[180] in order "to make an agency responsible for a particular effect under NEPA."[181] As the Supreme Court explained, "a 'but for' causal relationship is insufficient [to establish cause for purposes of NEPA]."[182] Thus, "[s]ome effects that are 'caused by' a change in the physical environment in the sense of 'but for' causation," will not fall within NEPA if the causal chain is too attenuated.[183] Further, the Court has stated that "where an agency has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions, the agency cannot be considered a legally relevant 'cause' of the effect."[184]

128. An 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."[185] NEPA requires "reasonable forecasting," but an agency is not required "to engage in speculative

[180] *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 767 (2004) (quoting *Metro. Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 774 (1983)).

[181] *Pub. Citizen*, 541 U.S. at 767.

[182] *Id.; see also Sierra Club v. FERC*, 827 F.3d 36, 46 (D.C. Cir. 2016) (Freeport LNG) (FERC need not examine everything that could conceivably be a but-for cause of the project at issue); *Sierra Club v. FERC*, 827 F.3d 59, 68 (D.C. Cir. 2016) (Sabine Pass LNG) (FERC order authorizing construction of liquefied natural gas export facilities "are not the legally relevant cause" of increased production of natural gas).

[183] *Metro. Edison Co.*, 460 U.S. at 774.

[184] *Pub. Citizen*, 541 U.S. at 770; *see also* Freeport LNG, 827 F.3d at 47 (affirming that *Public Citizen* is explicit that FERC, in authorizing liquefied natural gas facilities, need not consider effects, including induced production, that could only occur after intervening action by DOE); Sabine Pass LNG, 827 F.3d at 68 (same); *EarthReports*, 828 F.3d at 956 (same).

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

analysis" or "to do the impractical, if not enough information is available to permit meaningful consideration."[186]

129. The Commission does not have jurisdiction over natural gas production. The potential impacts of natural gas production, with the exception of greenhouse gas emissions and climate change, would be on a local and regional level. Each locale includes unique conditions and environmental resources. Production activities are thus regulated at a state and local level. In addition, deep underground injection and disposal of wastewaters and liquids are subject to regulation by the EPA under the Safe Drinking Water Act. The EPA also regulates air emissions under the Clean Air Act. On public lands, federal agencies are responsible for the enforcement of regulations that apply to natural gas wells.

130. We have previously concluded in natural gas infrastructure proceedings, based on the specifics of the project being proposed in each proceeding, that the environmental effects resulting from natural gas production are generally neither sufficiently causally related to specific natural gas infrastructure projects nor are the potential impacts from gas production reasonably foreseeable such that the Commission could undertake a meaningful analysis that would aid our determination.[187] A causal relationship sufficient to warrant Commission analysis of the upstream production activity as an indirect impact would only exist if a proposed pipeline or Commission-jurisdictional infrastructure project would transport new production from a specified production area and such production would not occur in the absence of the proposed project facilities (i.e., there will be no other way to move the gas).[188] To date, the Commission has not been presented with a proposed pipeline project that the record shows will cause the predictable development of gas reserves. In fact, the opposite causal relationship is more

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[186] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1078 (9th Cir. 2011).

[187] *See, e.g.*, *Central New York Oil and Gas Co., LLC*, 137 FERC ¶ 61,121, at PP 81-101 (2011), *order on reh'g*, 138 FERC ¶ 61,104, at PP 33-49 (2012), *petition for review dismissed sub nom., Coal. for Responsible Growth v. FERC*, 485 Fed. Appx. 472, 474-75 (2d Cir. 2012) (unpublished opinion).

[188] *Cf. Sylvester v. U.S. Army Corps of Eng'rs*, 884 F.2d 394, 400 (9th Cir. 1989) (upholding the environmental review of a golf course that excluded the impacts of an adjoining resort complex project). *See also Morongo Band of Mission Indians v. FAA*, 161 F.3d 569, 580 (9th Cir. 1998) (concluding that increased air traffic resulting from airport plan was not an indirect, "growth-inducing" impact); *City of Carmel-by-the-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1162 (9th Cir. 1997) (acknowledging that existing development led to planned freeway, rather than the reverse, notwithstanding the project's potential to induce additional development).

likely, i.e., once production begins in an area, shippers or end users will support the development of a pipeline to move the produced gas.

131. Even accepting, *arguendo*, that a specific pipeline project will cause natural gas production, to date, we have found that the potential environmental impacts resulting from such production are not reasonably foreseeable. As we have explained, generally there is not sufficient information available to determine the origin of the gas that will be transported. It is the states, rather than the Commission, that have jurisdiction over the production of natural gas and thus would be most likely to have the information necessary to reasonably foresee future production. We are aware of no such forecasts by the states or any other entities, rendering the Commission unable to meaningfully predict production-related impacts, many of which are highly localized. Thus, even if the Commission knows the general source area of gas likely to be transported on a given pipeline, a meaningful analysis of production impacts would require more detailed information regarding the number, location, and timing of wells, roads, gathering lines, and other appurtenant facilities, as well as details about production methods, which can vary per producer and depending on the applicable regulations in the various states. Accordingly, to date, the impacts of natural gas production are not reasonably foreseeable because they are "so nebulous" that we "cannot forecast [their] likely effects" in the context of an environmental analysis of the impacts related to construction and modification of natural gas pipeline facilities.[189]

132. Nonetheless, we note that, although not required by NEPA, a number of federal agencies have examined the potential environmental issues associated with unconventional natural gas production in order to provide the public with a more complete understanding of the potential impacts. The DOE has concluded that such production, when conforming to regulatory requirements, implementing best management practices, and administering pollution prevention concepts, may have temporary, minor impacts to water resources.[190] The EPA has concluded that hydraulic fracturing can impact drinking water resources under some circumstances and identified conditions under which impacts from hydraulic fracturing activities can be more frequent

[189] *Habitat Educ. Ctr. v. U.S. Forest Serv.*, 609 F.3d 897, 902 (7th Cir. 2010) (agency need not discuss projects too speculative for meaningful discussion).

[190] U.S. DEP'T OF ENERGY, ADDENDUM TO ENVIRONMENTAL REVIEW DOCUMENTS CONCERNING EXPORTS OF NATURAL GAS FROM THE UNITED STATES (issued Aug. 2014) (DOE Addendum), http://energy.gov/sites/prod/files/2014/08/f18/Addendum.pdf.

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or severe.[191] With respect to air quality, the DOE found that natural gas development leads to both short- and long-term increases in local and regional air emissions.[192] It also found that such emissions may contribute to climate change.[193] But to the extent that natural gas production replaces the use of other carbon-based energy sources, DOE found that there may be a net positive impact in terms of climate change.[194]

i. Causation

133. The record in this proceeding does not demonstrate the requisite reasonably close causal relationship between the Atlantic Sunrise Project and the impacts of future natural gas production to necessitate further analysis. The fact that natural gas production and transportation facilities are all components of the general supply chain required to bring domestic natural gas to market is not in dispute. This does not mean, however, that the Commission's approval of this particular pipeline project will cause or induce the effect of additional or further shale gas production. The proposed project is responding to the need for transportation, not creating it.

134. Furthermore, arguments raised by commenters about the Atlantic Sunrise project inducing natural gas production are similar to the arguments that were raised and rejected by both the Commission and Second Circuit Court of Appeals in *Central New York Oil*

[191] *See* U.S. EPA, HYDRAULIC FRACTURING FOR OIL AND GAS: IMPACTS FROM THE HYDRAULIC FRACTURING WATER CYCLE ON DRINKING WATER RESOURCES IN THE UNITED STATES, at ES3-4 (issued Dec. 2016) (final report), http://ofmpub.epa.gov/eims/eimscomm.getfile?p_download_id=529930 (finding significant data gaps and uncertainties in the available data prevented EPA from calculating or estimating the national frequency of impacts on drinking water resources from activities in the hydraulic fracturing water cycle). *See also* Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16,128, 16,130 (Mar. 26, 2015) (Bureau of Land Management promulgated regulations for hydraulic fracturing on federal and Indian lands to "provide significant benefits to all Americans by avoiding potential damages to water quality, the environment, and public health").

[192] DOE Addendum at 32.

[193] *Id*. at 44

[194] *Id*.

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and Gas Co., LLC.[195] In that case, the Commission concluded, and the Second Circuit agreed, that under NEPA, Marcellus shale development activities are not sufficiently causally-related to the project to warrant in-depth consideration of the gas production impacts because, in part, Marcellus shale development activities were not "an essential predicate" for the project.[196]

135. Similarly here, the Commission has not found any evidence that future gas development is an essential predicate for the project. Moreover, whether or how much *induced* gas will travel through the project cannot be known given that a significant amount of unconventional natural gas production currently exists.[197] Commenters fail to identify any new production specifically associated with the proposed project.

136. As we have explained in other proceedings, a number of factors, such as domestic natural gas prices and production costs drive new drilling.[198] If the proposed project were not constructed, it is reasonable to assume that any new production spurred by such factors would reach intended markets through alternate pipelines or other modes of

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[195] *Central New York Oil and Gas Co., LLC*, 137 FERC ¶ 61,121); *order on reh'g*, 138 FERC ¶ 61,104; *pet. for review dismissed sub nom. Coal. for Responsible Growth v. FERC*, 485 Fed. App'x 472 (2d Cir. 2012).

[196] *Central New York*, 137 FERC ¶ 61,121 at P 91; *Coal. for Responsible Growth*, 485 F. App'x at 474 ("FERC reasonably concluded that the impacts of that [shale gas] development are not sufficiently causally-related to the project to warrant a more in-depth [NEPA] analysis").

[197] For example, in 2014, unconventional natural gas production in Pennsylvania was approximately 11.15 Bcf per day. Penn. Dep't of Envtl. Prot., *2014 Oil and Gas Annual Report* at 7 fig. (July 2015), http://www.portal.state.pa.us/portal/server.pt/community/annual_report/21786 (aggregate 2014 unconventional production divided by 365 days yields 11.15 billion cubic feet per day).

[198] *See e.g., Rockies Express Pipeline LLC*, 150 FERC ¶ 61,161, at P 39 (2015). *See also Sierra Club v. Clinton*, 746 F. Supp. 2d 1025, 1045 (D. Minn. 2010) (holding that the U.S. Department of State, in its environmental analysis for an oil pipeline permit, properly decided not to assess the transboundary impacts associated with oil production because, among other things, oil production is driven by oil prices, concerns surrounding the global supply of oil, market potential, and cost of production); *Florida Wildlife Fed'n v. Goldschmidt*, 506 F. Supp. 350, 375 (S.D. Fla. 1981) (ruling that an agency properly considered indirect impacts when market demand, not a highway, would induce development).

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transportation.[199] Again, any such production would take place pursuant to the regulatory authority of state and local governments.

ii. Reasonable Foreseeability

137. In addition, even if a causal relationship between our action here and additional production were presumed, the scope of the impacts from any such induced production in this case is not reasonably foreseeable. Knowing the identity of a producer of gas to be shipped on a pipeline, and the general area where that producer's existing wells are located, does not alter the fact that the number of and precise location of any additional wells cannot be identified in this proceeding. As we have explained previously, factors such as market prices and production costs, among others, drive new drilling.[200] These factors, combined with the immense size of the Marcellus and Utica shale formations and the highly localized impacts of production would result in general estimates. Thus, a broad analysis, based on generalized assumptions will not meaningfully assist the Commission in its decision making, e.g. evaluating potential alternatives. Accordingly, unless the Commission can ascertain specific factual information regarding the nature of the induced production, such induced production is not reasonably foreseeable.

138. We acknowledge that the CEQ Final Guidance includes the end-use combustion of coal as an example of an indirect emission from coal production. However, that example also notes that the indirect effects would vary with the circumstances of the proposed action. The final EIS explains that the upstream production and downstream combustion of gas is not causally connected because the production and end-use would occur with or without this project.[201] Therefore, the circumstances in this case do not warrant the inclusion of production or end-use as an indirect effect of the project. Although EPA disagrees with this justification, this explanation does meet the CEQ Final Guidance in considering specific project circumstances and explaining the basis for the analysis that was performed. Further, beyond a generic recommendation that we include upstream and end-use emission in our NEPA document, EPA provides no information to refute our justification that these emissions are not causally connected.

139. As noted above, upstream and downstream impacts of the type described by commenters do not meet the definition of indirect impacts. Therefore, they are not mandated as part of the Commission's NEPA review. However, to provide the public

[199] *Rockies Express*, 150 FERC ¶ 61,161 at P 39.

[200] *Dominion Transmission, Inc.*, 153 FERC ¶ 61,284 (2015).

[201] *See* Final EIS at 4-280 - 4-282.

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additional information and to inform our public convenience and necessity determination under section 7(e) of the NGA,[202] Commission staff, after reviewing publicly-available DOE and EPA methodologies, has prepared the following analyses regarding the potential impacts associated with unconventional gas production and downstream combustion of natural gas. As summarized below, these analyses provide only an upper-bound estimate of upstream and downstream effects. In addition, these estimates are generic in nature because no specific end uses have been identified and reflect a significant amount of uncertainty.

140. With respect to upstream impacts, Commission staff estimated the impacts associated with the production wells that would be required to provide 100 percent of the volume of natural gas to be transported by the Atlantic Sunrise Project, on an annual basis for GHGs. Commission staff also estimated land-use and water use within the Marcellus shale basin for the life of the project.[203] Commission staff estimated that approximately 1.48 acres of land is required for each natural gas well pad and associated infrastructure (i.e., road infrastructure, water impoundments, and pipelines).[204] Based upon the project volume and the expected estimated ultimate recovery of Marcellus shale wells,[205] we have estimated that between 3,600and 7,100wells would be required to provide the gas over the estimated 30-year lifespan of the project. Therefore, on a normalized basis,[206] these assumptions lead us to estimate an upper bound of an

[202] 15 U.S.C. § 717f(e) (2012).

[203] Commission staff assumed a 30-year life for the project, which is longer than the 15-year term of the precedent agreements and the 20-year term of the Lease Agreement. As a result, the production wells impacts were liberally estimated.

[204] U.S. DEP'T OF ENERGY, LIFE CYCLE ANALYSIS OF NATURAL GAS EXTRACTION AND POWER GENERATION (issued Aug. 30, 2016), at 22 (Table 3-6), https://www.netl.doe.gov/energy-analyses/temp/LifeCycleAnalysisofNaturalGas ExtractionandPowerGeneration_083016.pdf (2016 DOE Life Cycle Analysis).

[205] James Staub, The Growth of U.S. Natural Gas: An Uncertain Outlook for U.S. and World Supply, 2015 EIA Energy Conference (2015), http://www.eia.gov/conference/ 2015/pdf/presentations/staub.pdf; U.S. DEP'T OF ENERGY, ENVIRONMENTAL IMPACTS OF UNCONVENTIONAL NATURAL GAS DEVELOPMENT AND PRODUCTION (May 29, 2014), https://www.netl.doe.gov/ File%20Library/Research/OilGas/publications/ NG_Literature_Review3_Post.pdf (DOE Production Report).

[206] Thirty-year impacts averaged on a per year basis.

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additional 182 to 350 acres per year may be impacted by well drilling.[207] This estimate of the number of wells is imprecise and subject to a significant amount of uncertainty.

141. Commission staff also estimates the amount of water required for the drilling and development of these wells over the 30 year period using the same assumptions. Recent estimates[208] show that an average Marcellus shale well requires between 3.88 and 5.69 million gallons of water for drilling and well development, depending on whether the producer uses a recycling process in the well development. Therefore, the production of wells required to supply the project could require the normalized consumptive use of as much as 470 to 1.3 billion gallons of water per year over the 30 year life of the project.

142. The final EIS includes the direct GHG emissions from construction and operation of the project, mitigation measures to reduce GHG emissions, and climate change impacts in the project region, as well as generic downstream GHG emissions. The final EIS discusses the direct GHG impacts from construction and operation of the project and other projects that were considered in the Cumulative Impacts analysis. The final EIS includes a discussion of climate change impacts in the region, the regulatory structure for GHGs under the Clean Air Act, and the quantified GHG emissions from Atlantic Sunrise project construction (152,850 metric tons per year, CO2-equivalent [metric tpy CO_{2e}]) and operation (667,580 metric tpy CO_{2e}).[209] The final EIS does not include upstream emissions. However, Commission staff has conservatively estimated the upstream GHG emissions as having an upper bound of 1.4 million metric tpy CO_{2e} from extraction, 2.7 million metric tpy CO_{2e} from processing, and 1.2 million metric tpy CO_{2e} from the non-project pipelines (both upstream and midstream reversed flow pipelines).[210] Again, this is an upper-bound estimate that involves a significant amount of uncertainty.

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[207] 2016 DOE Life Cycle Analysis at 22 (Table 3-6). This DOE Analysis estimates the land-use fractions of the Appalachian Shale region to be 72.3 percent forested lands, 22.4 percent agricultural land, and 5.3 percent grass or open lands. 2016 DOE Life Cycle Analysis at 24, Table 3-8.

[208] DOE Production Report at 76 (Exhibit 4-1).

[209] These estimates include new project components, as well as flow reversal components.

[210] The upstream GHG emissions were estimated using DOE's Life Cycle Analysis of Natural Gas Extraction and Power Generation, issued on May 29, 2014, https://www.netl.doe.gov/energy-analyses/temp/NaturalGasandPowerLCAModel DocumentationNG%20Report_052914.pdf (2014 Life Cycle Analysis). Generally, Commission staff used the average leak and emission rates identified in the 2014 Life

(continued…)

143. With respect to downstream GHG emissions, Commission staff used an EPA-developed methodology to estimate the downstream GHG emissions from a project, assuming all of the gas to be transported is eventually combusted. As such, in response to EPA's comments, we conservatively estimated the GHG emissions from the end-use combustion of the natural gas to be transported by the project. If all 1.7 million Dth per day of natural gas were transported to combustion end uses, downstream end-use would result in the emission of about 32.9 million metric tpy of CO_{2e}.[211] We note that this CO_{2e} estimate represents an upper bound for the amount of end-use combustion that could result from the gas transported by this project. This is because some of the gas may displace fuels (i.e., fuel oil and coal) which could result in lower total CO_{2e} emissions. It may also displace gas that otherwise would be transported via different means, resulting in no change in CO_{2e} emissions. This estimate also assumes the maximum capacity is transported 365 days per year, which is rarely the case because many projects are designed for peak use. As such, it is unlikely that this total amount of GHG emissions would occur, and emissions are likely to be significantly lower than the above estimate.

144. On August 8, 2016, Oil Change International filed comments, consisting of one paragraph and an attached 32-page report, in 11 pipeline certificate proceedings, including the matter at hand. Oil Change International asserts that there should be a climate test for all natural gas infrastructure, that, in light of the CEQ Final Guidance, "the alignment of natural gas infrastructure permitting with national climate goals and plans should become a priority for FERC and other federal government agencies," and that the Commission should "conduct full Greenhouse Gas impact analysis as part of the NEPA process for all listed projects."[212] The report asserts generally that increased U.S. natural gas production in the Appalachian Basin is not consistent with safe climate goals, and that proposed pipeline projects will increase takeaway capacity from the basin and provide financial incentives for increased production.

145. The comments and the report provide no specific information about the Atlantic Sunrise Project (or any of the other listed projects). Accordingly, this material does not

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Cycle Analysis for each segment of extraction, processing, and transport. The method is outlined in Section 2 of the 2014 Life Cycle Analysis, and the background data used for the model is outlined in Section 3.1. Commission staff used the results identified in Tables 4.3, 4.4, and 4.5 to look at each segment and grossly estimate GHG emission. These estimates are conservative as Commission staff did not account for the new New Source Performance Standards oil and gas rules or other GHG mitigation. Additionally, staff made a conservative estimate of the length of non-jurisdictional pipeline prior to the gas reaching project components as well as the length of reversed flow pipelines.

[211] Final EIS at 4-318.

[212] Oil Change International August 8, 2016 Comments at 1.

assist us in our analysis of the project. As discussed above, we indeed do analyze the greenhouse gas impacts of the proposed project as part of our NEPA and NGA review.

146. As to the more global issues raised by Oil Change International, while the Commission does not utilize a specific "climate test," we do examine the impacts of the project before us, including impacts on climate change. Under NEPA, we are required to take a "hard look" at the environmental impacts of the proposed project and we have done so. To the extent that Oil Change International suggests an alignment of project permitting with national climate change goals, we note that it is for Congress, the Executive Branch, and agencies with jurisdiction over broad environmental issues to establish such goals; our role under the NGA is considerably more limited, and we have no authority to establish national environmental policy.

l. Cumulative Impacts

i. Climate Change

147. The EPA requests that we remove the comparison of the project's GHG emissions with state-wide GHG emission levels to provide a frame of reference. The EPA argues that although this type of comparison was included in the CEQ's draft guidance document,[213] it has been removed from the CEQ Final Guidance. Although this comparison was removed as a recommendation in the CEQ Final Guidance, it does not indicate that an EIS cannot include such information. We find that providing this frame of reference helps to better understand the magnitude of GHG emissions themselves compared to other pollutants. Further, the final EIS responds to the EPA's comment by explaining that while it compares project GHG emissions with state GHG emissions, the final EIS does not dismiss climate change impacts based on this comparison. Instead, the final EIS includes a discussion on climate change impacts in section 4.13.8.10 and identifies that the project will contribute GHG emissions.[214] We agree that the final EIS's discussion of climate change, including the final EIS's appendices, is adequate.

[213] CEQ, Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews (Dec. 2014), https://www.whitehouse.gov/sites/default/files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf.

[214] Final EIS at 4-316 - 4-319.

(continued…)

ii. Safety

148. Several comments were received regarding potential cumulative impacts on safety caused by the project and collocated pipelines that are unrelated to the project.[215] Based on the construction and design methods of pipelines collocated within a shared right-of-way and adherence to the Department of Transportation safety regulations, the final EIS concludes it is unlikely that one pipeline failure would cause the adjacent pipeline to also fail.[216] As previously described,[217] the project will be designed and constructed in accordance with or in exceedance of the Department of Transportation's Minimum Federal Safety Standards and to meet requirements established for protection of metallic facilities from external, internal, and atmospheric corrosion. We agree with the final EIS's conclusion that, with implementation of the mitigation measures adopted in Appendix C of the order, no cumulative impacts on safety and reliability are anticipated to occur as a result of the project.[218]

m. Alternatives

149. A number of commenters suggested that the contracted volumes of natural gas could be transported via existing pipeline systems. The final EIS concludes that no existing pipeline system in the vicinity of the project can meet the project's purpose without significant expansions, which would result in environmental impacts similar to or greater than the impacts of the proposed project.[219] We agree with these conclusions.

150. Commission staff evaluated the Transco System Alternative, which would avoid a greenfield pipeline alignment by siting the proposed facilities adjacent to Transco's existing Mainline and Leidy pipelines. The Transco System Alternative would be collocated with Transco's existing pipelines for about 91 percent of its length. The Transco System Alternative, however, would involve a significant expansion of the proposed project (it would require the construction of about 50 additional miles of pipeline)and would impact an additional 605 acres of land during construction. In

[215] Table 2.2.1-1 on pages 2-13 - 2-14 of the final EIS lists all the collocated pipelines.

[216] Final EIS at 4-320.

[217] *See supra* at PP 120-123.

[218] Final EIS at 4-320.

[219] *Id.*

(continued…)

addition, development of the Transco System Alternative would not be feasible in certain areas due to the significant amount of commercial, industrial, and residential development that has occurred adjacent to Transco's existing rights-of-way. The final EIS concludes, and we agree, that the Transco System Alternative will not be preferable to the project as proposed.[220]

151. Since pre-filing, Transco incorporated 132 route variations into the proposed route to avoid or reduce effects on environmental or other resources, resolve engineering or constructability issues, or address stakeholder concerns. This represents about a 50 percent change to Transco's original route design. Commission staff reviewed the route variations and agreed with Transco's conclusions regarding their incorporation into the proposed route. In response to Commission staff's recommendations in the draft EIS, Transco incorporated Central Penn Line North Alternative 5, Central Penn Line South Alternative 22, and minor realignments of Alternative 24C and the Neil Bushong Deviation into the proposed route to increase the distance of the pipeline from residential structures or to address other landowner concerns.

152. The final EIS evaluates five major route alternatives. The major route alternative that received the most stakeholder interest was the Western Central Penn Line South Alternative 3 (Alternative 3). Alternative 3 was identified by Patrick Kelsey to maximize collocation with existing rights-of-way. The environmental advantages of Alternative 3 are that it would increase the length of pipeline collocated with existing rights-of-way thereby reducing impacts on intact forest land. However, Alternative 3 would be three miles longer and cross 13 more waterbodies and two more wetlands than the corresponding segment of the proposed route. The final EIS concludes, and we agree, that the environmental advantages of Alternative 3 do not outweigh its additional environmental impacts and, therefore, is not preferable to the proposed route.[221]

153. The final EIS also evaluates 11 minor route alternatives along Central Penn Line North and 17 minor route alternatives along Central Penn Line South. To further address landowner concerns, the final EIS recommends, and we require in Environmental Conditions 13, 14, 16, 19, and 20, that Transco incorporate five additional minor route variations, each less than a mile in length, and one alternative valve site location (Environmental Condition 17). Transco identified the Conestoga River Alternative to avoid crossing a conservation easement along Central Penn Line South at milepost 12.3, where the proposed route crosses land subject to a Declaration of Restrictive Covenants for Conservation by PPL Holtwood, LLC to satisfy a condition of its U.S. Army Corps permit issued for construction and operation of the Holtwood Hydroelectric Expansion Project on the Susquehanna River. If Transco is unable to secure the necessary easement

[220] *Id.* at 5-25.

[221] *Id.* at 3-15.

on tract PA-LA-137 B.000 along the proposed route due to the restrictive covenant, Environmental Condition 18 requires Transco to incorporate the Conestoga River Alternative.

154. Several comments were received regarding Central Penn Line North Alternative 12 West. Central Penn Line North Alternative 12 West was identified by Ms. Nesbitt to avoid crossing her property and minimize impacts on cultural resources and interior forest. However, stakeholders located along this proposed alternative route identified concerns related to the specific alignment across their property, pipeline safety, and potential effects of the pipeline on property values and future development. The final EIS concludes that both the proposed route and Central Penn Line North Alternative 12 West have advantages and disadvantages, trading increased impacts in certain categories for less impacts in other categories. For example, Central Penn Line North Alternative 12 West would reduce the amount of forestland and forested wetland crossings; avoid the Perrins Marsh Natural Heritage Area; and reduce the crossing length of the Nesbitt Estate Rural Historic District. But it is longer than the proposed route, would affect more land during construction, and affect more landowners. To mitigate the effect on Ms. Nesbitt, Transco modified its original pipeline alignment across her property, following issuance of the draft EIS, to avoid bisecting her tract by following her eastern property boundary and to reduce the amount of forested wetlands impacted. Ultimately, an alternative that results in equal or minor advantages in terms of environmental impact would not compel us to shift the impacts from the current set of landowners to a new set of landowners.[222]

155. The final EIS states that the U.S. Army Corps was in the process of completing its public interest review of the proposed route and Central Penn Line North Alternative 12 West as part of its permitting requirements under section 404 of the Clean Water Act.[223] On December 20, 2016, the U.S. Army Corps issued a public notice requesting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties, which will be considered by the U.S. Army Corps to determine whether to issue, modify, condition or deny a permit for the project.[224] Because the U.S.

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[222] *See Vermonters for a Clean Env't, Inc. v. Madrid*, 73 F. Supp. 3d 417, 427 (D. Vt. 2014).

[223] Final EIS at 3-31.

[224] The public comment period ended on January 20, 2017, with additional site visits pending. Under the EPA's Clean Water Act section 404(b)(1) guidelines, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental

(continued…)

Army Corps has not completed its public interest review, including site visits and public comment reviews, the U.S. Army Corps may acquire new data and conclude that the environmental impacts of the proposed route outweigh its advantages.[225] In comparing impacts on different resources of the corresponding segment of the proposed route and Central Penn Line North Alternative 12 West, the final EIS concludes, and we agree, that the data available does not indicate that the alternative provides a significant environmental advantage over the proposed route.[226]

156. Over 400 comment letters were received that support the Central Penn Line South Alternative 24C. Alternative 24C was identified by Dr. Linda Quodomine to avoid crossing her existing equine veterinary clinic and pastures and to increase the distance of the pipeline from residences. The draft EIS recommended that Transco incorporate Alternative 24C into the proposed route. In its comments on the draft EIS, Transco identified a minor realignment to Alternative 24C to avoid a planned subdivision and improve the crossing location of Interstate 80,[227] but otherwise incorporated Alternative 24C as its proposed route. We agree with Transco's adoption of this revised route, identified in the final EIS as Alternative 24D, with minor modifications, as recommended in Environmental Condition 16.

157. Numerous comments regarding the Central Penn Line South Conestoga Alternative Route were received. During pre-filing, Transco's initial proposed alignment crossed Shenk's Ferry Wildflower Preserve and Tucquan Glen Nature Preserve. Through the pre-filing process, over 240 comment letters were filed expressing concern about impacts on these nature preserves. In response, Transco's application modified the proposed route to avoid these areas. Over 600 comments were filed on the draft EIS suggesting that the pipeline alignment be moved back to the pre-filing pipeline route (now called the Conestoga Alternative Route) to minimize impacts on private

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consequences. *See* 40 C.F.R. § 230.10(a) (2016).

[225] If the U.S. Army Corps were to find Central Penn Line North Alternative 12 West preferable, the final EIS finds this route would be environmentally acceptable and Transco would be required to file an amendment to request approval of Central Penn Line North Alternative 12 West.

[226] Final EIS at 3-33.

[227] The referenced realignment to Alternative 24C is identified as Alternative 24D (see final EIS at 3-49). An additional minor modification to 24D was recommended as Route Deviation M-0431. *See infra* PP 166-167 and Environmental Condition 16 in Appendix C of this order.

(continued…)

landowners. The Conestoga Alternative Route would be slightly shorter, but would cross more recreation areas/preserved lands and waterbodies than the corresponding segment of the proposed route. For this reason, the final EIS concludes, and we agree, that the Conestoga Alternative Route is not environmentally preferable to the proposed route.[228]

158. On November 21, 2016, after the close of the draft EIS comment period, David and Lucille Ruckle filed comments requesting evaluation of alternative alignments to Central Penn Line South Alternative 24D. The first alternative alignment would deviate from the proposed route at milepost M-0423 3.5 and proceed 1.3 miles north across primarily agriculture land between Thomas and Millville Roads before rejoining the proposed route at milepost 107.0. Our evaluation of this variation shows that Thomas and Millville Roads parallel Little Fishing Creek in this area and, due to residential development east of Thomas Road and steep slopes east of Millville Road and west of Thomas Road, we could not identify a practicable crossing location of Little Fishing Creek. For these reasons, we conclude that the alternative alignment is not preferable to the corresponding segment of the proposed route. The second alignment identified by the Ruckles would deviate from the proposed route at milepost M-0423 3.5 and proceed 0.2 mile north across agricultural land where it would turn and proceed 0.4 mile northeast across Little Fishing Creek and Mall Boulevard before rejoining the proposed route at milepost M-0423 4.1. Due to steep topography north of Mall Boulevard and the presence of Little Fishing Creek south of Mall Boulevard, we find that that the potential construction constraints would not make this alignment practicable and are, therefore, not recommending incorporation of either variation.

5. Comments on the Final EIS

a. Conestoga Petitioners

159. On January 4, 2017, the Conestoga Petitioners (Petitioners) filed a comment on the final EIS regarding the alternatives evaluation completed for the Conestoga Alternative Route. The Petitioners argue that information used in the alternatives analysis was inaccurate because it was not based on field data depicted on alignment sheets filed by Transco. As explained in section 3.0 of the final EIS, in analyzing the proposal and alternatives, Commission staff relied on information provided by Transco, aerial photographs, U.S. Geological Survey topographic maps and other publicly available information, input from cooperating and other agencies, public input from scoping, and site visits. To ensure that the comparisons are based on consistent data, Commission staff used these same desktop sources of information to compare the impacts of the proposed route and alternative routes.

[228] Final EIS at 3-57.

160. The Petitioners also contend that the final EIS inaccurately identifies Clark Run, a waterbody crossed by the Conestoga Alternative Route, as a scenic river. They state that the Pennsylvania Department of Conservation and Natural Resources only designates Tucquan Creek, a waterbody crossed by both the proposed route and the Conestoga Alternative Route, as a scenic river. The Petitioners are incorrect. Pennsylvania designates Clark Run as a scenic river from its headwaters at Mount Nebo, Pennsylvania, to its confluence with Tucquan Creek.[229]

161. The Petitioners also argue that because the Conestoga Alternative Route is one mile shorter than the proposed route, adopting the Conestoga Alternative Route would reduce construction emissions. While a shorter pipeline length may result in lower emissions during certain construction phases, the Conestoga Alternative Route would require an increased amount of forest clearing compared to the proposed route. Clearing forested vegetation requires more time and construction equipment compared to clearing vegetation on agricultural land, which is the dominant land use along the proposed route. Forest clearing will result in higher construction emissions during the clearing and grubbing phase of construction. Therefore, the Conestoga Alternative Route will unlikely result in lower construction emissions and could result in higher construction emissions compared to the proposed route.

b. Transco

162. In a letter dated January 13, 2017, Transco requested clarification of Commission staff's Environmental Recommendations 18, 20, and 42, which were included in section 5 of the final EIS.

163. Environmental Recommendation 18 in the final EIS recommends that, with its Implementation Plan, Transco file documentation that it has acquired the necessary easement on tract PA-LA-137_B.000. In the event that Transco is unsuccessful in acquiring this easement necessary for the construction of its proposed route, the Recommendation would require Transco to incorporate the Conestoga River Alternative into the proposed route. In its January 13, 2017 letter, Transco indicated that it is in the process of acquiring the necessary easement on tract PA-LA-137_B.000. However, Transco states it may not complete the acquisition of the easement prior to the filing of its Implementation Plan. As a result, Transco is requesting it be allowed to provide documentation that it has acquired the easement necessary for construction of its proposed route after the filing of its implementation plan, but prior to construction. Transco also indicated that it will file information related to the Conestoga River Alternative with its Implementation Plan if it intends to incorporate this alternative into the proposed route. In order to allow additional time for Transco to secure the necessary

[229] Penn. Dep't of Conservation and Nat. Res., Scenic Rivers, http://www.dcnr.state.pa.us/brc/conservation/rivers/scenicrivers/tucquancreek/index.htm.

easement across PA-LA-137_B.000, Environmental Recommendation 18 is revised in Environmental Condition 18 of this order to allow Transco to file the documentation that it has acquired the necessary easement prior to construction.

164. Environmental Recommendation 20 in the final EIS recommends that, prior to construction, Transco shall file with the Secretary a revised alignment sheet that adjusts the construction workspace associated with Route Deviation M-0209 to abut the western property boundary of Reeves F. Goehring, III. In its January 13, 2017 letter, Transco stated that adjusting the workspace to abut Mr. Goehring's property line will impact a gully and require constructing on side-sloping topography. As a result, Transco indicted that it will reduce the construction right-of-way width to 75 feet and relocate additional temporary extra workspace to agricultural land located south of Mr. Goehring's property to minimize forest clearing impacts. In response to Transco's filing, Mr. Goehring submitted comments on January 13, 2017 indicating that Transco's modifications will not be acceptable to him and requests that Transco comply with our environmental recommendation to adjust the construction workspace to abut his western property boundary. In order to address the concerns of Mr. Goehring, Environmental Recommendation 20 is revised in Environmental Condition 20 of this order to require Transco to further assess the pipeline alignment and workspace requirements in coordination with Mr. Goehring and file with the Commission, for the review and written approval by the Director of Office of Energy Projects, revised alignment sheets and documentation of its landowner consultation regarding the crossing of Mr. Goehring's property.

165. Environmental Recommendation 42 in the final EIS requires that Transco file copies of correspondence with the Pennsylvania Department of Conservation and Natural Resources confirming all Pennsylvania Department of Conservation and Natural Resources -funded properties crossed by the project have been identified and any change in use or transfer of rights for the Pennsylvania Department of Conservation and Natural Resources -funded properties is in compliance with PADCNR's conversion policies. In its January 13, 2017 letter, Transco requested confirmation that this recommendation will only apply to properties funded with federal Land and Water Conservation Funds. We received comments on the draft EIS from the Pennsylvania Department of Conservation and Natural Resources regarding its policies regarding conversion of property interest acquired with state or federal grants (e.g., Federal Land and Water Conservation Funds, Keystone Recreation, Park and Conservation Funds, and Snowmobile/All-terrain Vehicle Funds). Environmental Recommendation 42 applies to any Pennsylvania Department of Conservation and Natural Resources -funded property. We include Environmental Recommendation 42 as Environmental Condition 42 in Appendix C of this order.

c. Kenneth Shannon

166. On November 14, 2016, Transco filed Route Deviation M-0431 to avoid a new residence being constructed by Kenneth Shannon. On November 16, 2016, Mr. Shannon

filed a comment, recommending that Route Deviation M-0431 be incorporated into the proposed route. On November 21, 2016, Transco filed a revised alignment of Route Deviation M-0431 to avoid affecting another new landowner. In the final EIS, we recommended that Transco incorporate Route Deviation M-0431 that was filed on November 21, 2016. On January 17, 2017, Mr. Shannon identified concerns with the alignment of Route Deviation M-0431 and requested that Transco adopt the alignment of Route Deviation M-0431 that was filed on November 14, 2016 to increase the distance separating the pipeline from his new residence. In order to address the concerns of Mr. Shannon, Environmental Recommendation 16 is revised in Environmental Condition 16 of this order to recommend Transco further assess this route variation in coordination with Mr. Shannon and file with the Commission, for the review and written approval by the Director of OEP, revised alignment sheets and documentation of its landowner consultation regarding the crossing of Mr. Shannon's property.

d. Justin and Susan Cappiello

167. On January 19, 2017, Justin and Susan Cappiello (Cappiellos) filed a comment on the final EIS, clarifying their concerns about the effects of the current pipeline alignment on an Amish family residing on their property. In comments on the draft EIS, the Cappiellos expressed concern that noise levels at the Amish residence (identified as noise sensitive area 1, which is the closest noise sensitive area to the horizontal directional drill entry site on figure 4.11.2-7 in the EIS) will exceed the day-night sound level (L_{dn}) threshold of 55 decibels on the A-weighted scale (dBA) at the residence or will negatively affect the farm animals kept on the property and that, according to the Cappiellos, the family will not be able to temporarily relocate due to the number of family members and farm animals present. The current ambient sound level at the Amish residence is 41.4 dBA L_{dn}. Transco proposes to drill during the day time. However, when Transco pulls back the drill (an action which is not a significant noise source), it may occur at night at certain sites because the pull-back process cannot be interrupted. With implementation of the additional noise mitigation measures proposed by Transco at the Conestoga horizontal directional drill entry site, the anticipated sound level at the Amish residence during horizontal directional drill activities is estimated to be 52.9 dBA L_{dn}, which is below the 55 dBA L_{dn} threshold. Once drilling activities are complete, the ambient sound level at the Amish residence will return to 41.4 dBA L_{dn}. Transco will notify the owners of the properties at the nearby noise sensitive areas in advance of planned nighttime construction activities, advising them that noise-generating equipment may be operated during nighttime hours. Because mitigated noise levels attributable to horizontal directional drills are anticipated to be below the FERC-sound criterion at any noise sensitive areas, overnight construction, if necessary, is not expected to create significant impacts on surrounding noise sensitive areas. If the noise levels cannot be reduced to target levels, Transco has committed to providing temporary housing or equivalent monetary compensation to the occupants of affected noise sensitive areas in the project area until the construction activities are completed.

168. To further ensure that noise levels are adequately reduced at noise sensitive areas, we are requiring in Environmental Condition 53 that Transco file in its weekly construction status reports the noise measurements from the nearest noise sensitive area for the Central Penn Line North Susquehanna River horizontal directional drill-entry site and the Central Penn Line South Conestoga River horizontal directional drill- entry and exit sites, obtained at the start of drilling operations; any noise mitigation that Transco implemented at the start of drilling operations; and any additional mitigation measures that Transco will implement if the initial noise measurements exceed an L_{dn} of 55 dBA at the nearest noise sensitive area. Due to the noise mitigation measures that Transco will implement and with implementation of Environmental Condition 53, the final EIS concludes, and we agree, that the noise levels at the Amish residence will not exceed the 55-dBA L_{dn} threshold or cause adverse effects on the farm animals kept on the property.[230]

e. Cecilia Daubert

169. On January 20, 2017, Cecilia Daubert filed a comment on the final EIS regarding an abandoned landfill located near Central Penn Line South milepost 66.8 and asked whether Transco will follow the mitigation measures in its Unanticipated Discovery of Contamination Plan. We fully expect Transco to implement the measures in the Unanticipated Discovery of Contamination Plan and applicable state and federal solid waste management regulations if contaminated soils are encountered during construction, as described in the final EIS.[231] In addition, an environmental compliance manager and environmental inspectors, hired by and reporting to Transco, will have overall responsibility for quality assurance and compliance with mitigation measures, other applicable regulatory requirements, and company specifications. Furthermore, Transco has committed to funding a FERC third-party compliance monitoring program during the construction phase of the project. Under this program, a contractor is selected by, managed by, and reports solely to the Commission staff to provide environmental compliance monitoring services.

170. In addition, Ms. Daubert expressed concern that Transco will not give nearby residents adequate notification of construction activities. Environmental Condition 7 of this order requires Transco to provide updated weekly status reports with the Commission, including the construction status of each spread, work planned for the following reporting period, any schedule changes for stream crossings or work in other environmentally sensitive areas, and a description of any landowner/resident complaints that may relate to compliance with the requirements of this order, and the measures taken to satisfy their concerns. In addition, Environmental Condition 9 of this order requires

[230] Final EIS at 4-250.

[231] *See* sections 2.3.1.5, 4.2.2.6, and 4.8.7 of the final EIS.

Transco to develop and implement an environmental complaint resolution procedure. The procedure shall provide landowners with clear and simple directions for identifying and resolving their environmental mitigation problems/concerns during construction and restoration of the right-of-way.

171. Ms. Daubert also recommended that Transco complete water well testing prior to and after construction. Environmental Condition 25 of this order requires Transco to file a Well and Spring Monitoring Plan for the pre- and post-construction monitoring of well yield and water quality of wells within 150 feet of the construction workspace and, in areas of known karst terrain, of wells within 500 feet of the construction workspace.

6. Environmental Analysis Conclusion

172. We have reviewed the information and analysis contained in the final EIS regarding the potential environmental effects of the Atlantic Sunrise Project. Based on our consideration of this information and the discussion above, we agree with the conclusions presented in the final EIS and find that the project, if constructed and operated as described in the application and the final EIS, is an environmentally acceptable action. We are accepting all but one of the environmental recommendations in the final EIS and are including them as conditions in Appendix C to this order.[232]

173. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or

[232] Recommended Condition 35 in the final EIS is not included in Appendix C of this order because the required information has since been filed.

local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.[233]

VI. Conclusion

174. The Commission on its own motion received and made part of the record in this proceeding all evidence, including the application, as supplemented, and exhibits thereto, and all comments submitted, and upon consideration of the record,

The Commission orders:

(A) A certificate of public convenience and necessity is issued to Transco, authorizing it to construct and operate the proposed Atlantic Sunrise Project, as described and conditioned herein, and as more fully described in the application as supplemented.

(B) A certificate of public convenience and necessity is issued under section 7(c) of the NGA authorizing Transco to lease from Meade, as described more fully in the body of this order and in the application.

(C) The certificate authority issued in Ordering Paragraph (A) is conditioned on:

(1) Transco's proposed Atlantic Sunrise Project being constructed and made available for service within 3 years of the date of this order, pursuant to section 157.20(b) of the Commission's regulations;

(2) Transco's compliance with all applicable Commission regulations, particularly the general terms and conditions set forth in Parts 154, 157, and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the Commission's regulations;

(3) Transco's compliance with the environmental conditions listed in Appendix C to this order; and

[233] *See* 15 U.S.C. § 717r(d) (state or federal agency's failure to act on a permit considered to be inconsistent with Federal law); *see also Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 310 (1988) (state regulation that interferes with FERC's regulatory authority over the transportation of natural gas is preempted) and *Dominion Transmission, Inc. v. Summers,* 723 F.3d 238, 245 (D.C. Cir. 2013) (noting that state and local regulation is preempted by the NGA to the extent it conflicts with federal regulation, or would delay the construction and operation of facilities approved by the Commission).

(4) Transco's execution of firm contracts for volumes and service terms equivalent to those in its precedent agreements, prior to the commencement of construction.

(D) Transco is required to maintain separate accounting and reporting for the lease facilities, including separate accounting of the fuel costs due to compression, as explained in the body of this order, in a manner to comply with the requirements of section 154.309 of the Commission's regulations.

(E) Transco's initial incremental reservation charge under Rate Schedule FT as recalculated for the project to reflect the removal of variable costs is approved, as discussed above.

(F) Transco is required to charge its generally applicable Rate Schedule FT Zones 4, 5 and 6, commodity charge as part of its initial recourse rate.

(G) Transco's request for use of system fuel retention and electric power rates is approved.

(H) Transco shall notify the Commission's environmental staff by telephone, e-mail, and/or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Transco. Transco shall file written confirmation of such notification with the Secretary of the Commission (Secretary) within 24 hours.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

Appendix A

List of Timely Intervenors

Accokeek, Mattawoman, Piscataway Creeks Communities Council, Inc.

Alabama Gas Corporation

Daryl L. Alger

Allegheny Defense Project

Township of Annville, Pennsylvania

Atmos Energy Marketing LLC

Henry M. Berger

Johan E. Berger

Lorrie and Bill Bernoski

Thomas Byron

Cabot Oil & Gas Corporation

Calpine Energy Services, L.P.

Chevron USA Inc.

Chief Oil & Gas LLC

Clean Air Council

Dennis M. College

Columbia Gas of Virginia, Inc.

Conestoga Community Group

ConocoPhillips Company

Consolidated Edison Company of New York, Inc.

Delaware Riverkeeper Network

Megan Detter

John and Linda Dietrichson

Duke Energy Carolinas, LLC

Duke Energy Florida, Inc.

Duke Energy Progress, Inc.

Ralph Duquette

Exelon Corporation

Florida Power & Light Company

Eileen Gibson

Reaves F. Goehring, III

John Timothy Gross

John E. Ground

John W. and Andrea L. Harrell

Linda Hartung

Dennis Hauenstein

James and Rachel Helper

Gale D. Hess

Stephen and Dorothea Hoffman

Carolyn Hostetter

Cara Longacre Hurst

Kevin L. Hurst

Inflection Energy LLC

Nancy E. Jeffries

Glenda Johnson

Kimberly Kann

Donna Kilgore

Walter and Robyn Kochan

Scott E. Kriner

Deirdre Lally

Lancaster County Conservancy

Lancaster Farmland Trust

Jeffrey Landis

Lebanon Pipeline Awareness

Lebanon Valley College

Lebanon Valley Conservancy

Laura Levy

Richard Lind

Robert H. Lowing

Lutheran Camping Corporation of Central Pennsylvania

Lycoming County Landowners (consisting of 21 landowners: Mary Wolf, Mike Wolf, Joseph L. Carey, Ellen R. Carey, Christine Heim, Joe Heim, Dennis Gilbert, Harold Kropp, Colette Kropp, Stephen Cutter, Margaret Cutter, Gloria Henne, Howard Henne,

Russell Reitz, Shirley Purkiss, Walter D. Kilburn, Pat Dangle, Dave Dangle, Karen Lisi, Tony Lisi, Matt Henderson, and Vicki Henderson)

Robin Maguire

Martic SOUL Inc.

MFS, Inc.

Carol Mohr

Municipal Gas Authority of Georgia (consisting of the following municipalities: Bowman, Buford, Commerce, Covington, Elberton, Hartwell, Lawrenceville, Madison, Monroe, Royston, Social Circle, Sugar Hill, Toccoa, and Winder; Tri-County Natural Gas Company (consisting of Crawfordville, Greenboro and Union Point); the East Central Alabama Gas District, Alabama; the towns of Wadley and Rockford, Alabama; the Utilities Board of the City of Roanoke, Alabama; Wedowee Water, Sewer & Gas Board, Wedowee, Alabama; and the Maplesville Waterworks and Gas Board, Maplesville, Alabama).

National Fuel Gas Distribution Corporation

National Grid Gas Delivery Companies

Native Preserve and Lands Council

New Jersey Natural Gas Company

John Dewitt Nicholson

NJR Energy Services Company

Sharon K. Olt

Casey Pegg

Philadelphia Gas Works

Piedmont Natural Gas Company, Inc.

Ann K. Pinca

Pipeline Safety Coalition

Jane Popko

PSEG Energy Resources & Trade LLC

Public Service Company of North Carolina

Quittapahilla Watershed Association

Linda Quodomine

Range Resources-Appalachia, LLC

Edward S. Ritz

Elise Kucirka Salahub

John Salahub

Seneca Resources Corporation

Sequent Energy Management, L.P.

William M. Smith

Fred Snyder

Michelle Spitko

South Carolina Electric & Gas Company

South Londonderry Township

John R. Swanson

SWN Energy Services Company, LLC

Eva M. Telesco

Transco Municipal Group (consisting of Alabama cities of Alexander City and Sylacauga; the South Carolina Commissions of Public Works of Greenwood, Greer, and Laurens; the South Carolina cities of Fountain Inn and Union; the Patriots Energy

Groups (consisting of the Natural Gas Authorities of Chester, Lancaster, and York Counties, South Carolina), and the North Carolina cities of Bessemer City, Greenville, Kings Mountain, Lexington, Monroe, Rocky Mount, Shelby, and Wilson)

UGI Distribution Companies (consisting of UGI Utilities, Inc. and UGI Penn Natural Gas, Inc.)

Washington Gas Light Company

Joan Weaber

WGL Midstream, Inc.

Dale A. Wilkie

Sondra J. Wolferman

Eric Younkers

John Zerbe III and Patti Zerbe

Appendix B

List of Untimely Intervenors

Atlanta Gas Light Company

David N. Bomgardner and Sharon J. Bomgardner

Luke Bunting and Leslie Bunting, jointly

Susan Cappiello and Justin Cappiello

Concerned Landowners Along the Atlantic Sunrise and Energy Justice Network, jointly

County of Lebanon, Pennsylvania

Gary and Michelle Erb

David and Tracy Ferrick

Friends of Nelson

Eileen Gibson

Heartwood

Stephen Hoffman

Lancaster Against Pipelines

Rex Mohr

Geraldine Turner Nesbitt

Pivotal Utility Holdings, Inc.

Linda Quodomine

Follin Smith

Southern Company Services, Inc. (As agent for Alabama Power Company, Georgia Power Company, Gulf Power Company, Mississippi Power Company, and Southern

Power Company)

Sierra Club

South Annville Township Supervisors

Virginia Natural Gas, Inc.

Wild Virginia

Appendix C

Environmental Conditions

As recommended in the EA, this authorization includes the following conditions:

As recommended in the final environmental impact statement (EIS) and otherwise amended herein, this authorization includes the following conditions. The section number in parentheses at the end of a condition corresponds to the section number in which the measure and related resource impact analysis appears in the final EIS.

1. Transco shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EIS, unless modified by the order. Transco must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);

    b. justify each modification relative to site-specific conditions;

    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and

    d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification**.

2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the Atlantic Sunrise Project. This authority shall allow:

    a. the modification of conditions of the order; and

    b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction (and operation).

3. **Prior to any construction**, Transco shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors (EI), and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs before becoming involved with construction and restoration activities.

4. The authorized facility location(s) shall be as shown in the EIS, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Transco shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by this order. All requests for modifications of environmental conditions of this order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

   Transco's exercise of eminent domain authority granted under the Natural Gas Act (NGA) section 7(h) in any condemnation proceedings related to this order must be consistent with these authorized facilities and locations. Transco's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Transco shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area**.

   This requirement does not apply to extra workspace allowed by Transco's Upland Erosion Control, Revegetation, and Maintenance Plan and/or minor field realignments per landowner needs and requirements that do not affect other landowners or sensitive environmental areas such as wetlands.

   Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

   a. implementation of cultural resources mitigation measures;

   b. implementation of endangered, threatened, or special concern species mitigation measures;

   c. recommendations by state regulatory authorities; and

   d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of the certificate and before construction begins**, Transco shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. Transco must file revisions to the plan as schedules change. The plan shall identify:

   a. how Transco will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EIS, and required by this order;

   b. how Transco will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;

   c. the number of EIs assigned per spread, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;

   d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;

   e. the location and dates of the environmental compliance training and instructions Transco will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);

   f. the company personnel (if known) and specific portion of Transco's organization having responsibility for compliance;

   g. the procedures (including use of contract penalties) Transco will follow if noncompliance occurs; and

   h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:

      i. the completion of all required surveys and reports;
      ii. the environmental compliance training of on-site personnel;
      iii. the start of construction; and
      iv. the start and completion of restoration.

7. Transco shall employ a team of EIs (i.e., two or more or as may be established by the Director of OEP) per construction spread. The EI(s) shall be:

   a. responsible for monitoring and ensuring compliance with all mitigation measures required by this order and other grants, permits, certificates, or other authorizing documents;

   b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;

   c. empowered to order correction of acts that violate the environmental conditions of this order, and any other authorizing document;

   d. a full-time position, separate from all other activity inspectors;

   e. responsible for documenting compliance with the environmental conditions of this order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and

   f. responsible for maintaining status reports.

8. **Beginning with the filing of its Implementation Plan**, Transco shall file updated status reports with the Secretary, with copies provided to the appropriate Pennsylvania Department of Environmental Protection (PADEP) representative, on a weekly basis until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

   a. an update on Transco's efforts to obtain the necessary federal and state authorizations;

   b. the construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;

   c. a listing of all problems encountered and each instance of noncompliance observed by the EIs during the reporting period (both for the conditions imposed by the Federal Energy Regulatory Commission [FERC or Commission] and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);

   d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;

   e. the effectiveness of all corrective actions implemented;

f. a description of any landowner/resident complaints that may relate to compliance with the requirements of this order, and the measures taken to satisfy their concerns; and

g. copies of any correspondence received by Transco from other federal, state, or local permitting agencies concerning instances of noncompliance, and Transco's response.

9. Transco shall develop and implement an environmental complaint resolution procedure. The procedure shall provide landowners with clear and simple directions for identifying and resolving their environmental mitigation problems/concerns during construction of the project and restoration of the right-of-way. **Prior to construction**, Transco shall mail the complaint procedures to each landowner whose property would be crossed by the project.

a. In its letter to affected landowners, Transco shall:

i. provide a local contact that the landowners should call first with their concerns; the letter should indicate how soon a landowner should expect a response;

ii. instruct the landowners that if they are not satisfied with the response, they should call Transco's Hotline; the letter should indicate how soon to expect a response; and

iii. instruct the landowners that if they are still not satisfied with the response from Transco's Hotline, they should contact the Commission's Landowner Helpline at 877-337-2237 or at LandownerHelp@ferc.gov.

b. In addition, Transco shall include in its weekly status report a copy of a table that contains the following information for each problem/concern:

i. the identity of the caller and date of the call;

ii. the location by milepost and identification number from the authorized alignment sheet(s) of the affected property;

iii. a description of the problem/concern; and

iv. an explanation of how and when the problem was resolved, will be resolved, or why it has not been resolved.

10. **Prior to receiving written authorization from the Director of OEP to commence construction of any project facilities**, Transco shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

11. Transco must receive written authorization from the Director of OEP **before placing the project into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas affected by the project are proceeding satisfactorily.

12. **Within 30 days of placing the authorized facilities in service**, Transco shall file an affirmative statement with the Secretary, certified by a senior company official:

    a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or

    b. identifying which of the certificate conditions Transco has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

13. **Prior to construction**, Transco shall file with the Secretary a revised alignment sheet that incorporates the Kochan Preferred Alternative 1 between mileposts (MP) M-0142 0.1 and M-0142 0.4 into the proposed route. (*Section 3.*3.2)

14. **Prior to construction**, Transco shall file with the Secretary a revised alignment sheet that incorporates the Byron Reroute along Central Penn Line (CPL) North between MPs 23.3 and 24.1 into the proposed route. *(Section 3.3.2)*

15. **Prior to construction across the Byron property**, Transco shall develop and file with the Secretary, for review and written approval by the Director of OEP, a schedule for construction and restoration activities on the Byron property that minimizes conflict with the planned public use of the property. Transco shall develop the restoration activities in consultation with the Byrons. *(Section 3.3.2)*

16. **Prior to construction**, Transco shall further assess the pipeline alignment and workspace requirements in coordination with Mr. Shannon and file with the Secretary, for the review and written approval by the Director of OEP, revised alignment sheets and documentation of its landowner consultation regarding the crossing of Mr. Shannon's property associated with the revised Route Deviation M-0431 between MPs M-0423 2.8 and M-0423 3.0. *(Section 3.3.2)*

17. **Prior to construction**, Transco shall file with the Secretary a revised alignment sheet that incorporates the Option A, B, or C valve site location for Alternative 24D. *(Section 3.3.2)*

18. **Prior to construction**, Transco shall file documentation that it has acquired the necessary easement on tract PA-LA-137_B.000 along the proposed route. In the event that Transco is unsuccessful in acquiring the necessary easement, Transco

shall incorporate the Conestoga River Alternative into the proposed route. *(Section 3.3.2)*

19. **Prior to construction**, Transco shall file with the Secretary a revised alignment sheet that incorporates the Sharon and Russel Olt Option 2 Alternative between MPs 66.9 and M-0196 0.2 into the proposed route. *(Section 3.3.2)*

20. **Prior to construction**, Transco shall further assess the pipeline alignment and workspace requirements in coordination with Mr. Goehring and file with the Secretary, for the review and written approval by the Director of OEP, revised alignment sheets and documentation of its landowner consultation regarding the crossing of Mr. Goehring's property associated with Route Deviation M-0209. *(Section 3.3.3)*

21. **With its Implementation Plan**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a final Abandoned Mine Investigation and Mitigation Plan. The final plan shall include the results of all abandoned mine land investigations, the results of secondary investigations to further characterize potential mine-related features, and site-specific mitigation and monitoring measures Transco will implement when crossing abandoned mine lands, including measures to manage and dispose of contaminated groundwater. *(Section 4.1.7)*

22. **With its Implementation Plan**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a final Karst Investigation and Mitigation Plan. The final plan shall include results of missing karst survey areas and any additional karst features identified through examination of the 1937 to 1942 aerial photography, 2014 Light Detection and Ranging (LiDAR) imagery, and 1999 color infrared imagery. *(Section 4.1.7)*

23. **With its Implementation Plan**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, an Abandoned Mine Investigation and Mitigation Plan that:

    a. identifies methods and surveys completed to define the locations of existing mine fires near the project and the depth and extent of coal seams that could pose a risk to the project facilities;

    b. identifies any mitigation measures that Transco will implement to protect the integrity of the pipeline from underground mine fires during the lifetime operation of the project; and

    c. provides for revisions to the pipeline route if it is found that pipeline integrity could be compromised anytime during the lifetime operation of

the project due to the current and future predicted location of the mine fires. *(Section 4.1.7)*

24. **Prior to construction**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a revised table 4.3.1-2 that includes an updated list of water wells and springs within 150 feet of construction workspaces based on completed surveys. This table shall indicate any water wells and springs that are within 500 feet of construction workspaces in areas of known karst. *(Section 4.3.1.4)*

25. **Prior to construction**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a Well and Spring Monitoring Plan for the pre- and post-construction monitoring of well yield and water quality of wells within 150 feet of the construction workspace and, in areas of known karst terrain, of wells within 500 feet of the construction workspace. **Within 30 days of placing the project facilities in service**, Transco shall file with the Secretary a report describing any complaints it received regarding water well yield or quality, the results of any water quality or yield testing performed, and how each complaint was resolved. *(Section 4.3.1.7)*

26. **Prior to construction**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a notification plan developed in consultation with surface water intake operators. The notification plan shall identify the specific points of contact and procedures that Transco will implement in the event of an inadvertent release of hazardous materials within 3 miles upstream of a surface water intake or within Zone A source water protection areas. *(Section 4.3.2.6)*

27. **Prior to construction**, Transco shall file with the Secretary, and provide to other applicable agencies, a schedule identifying when trenching or blasting will occur within each waterbody greater than 10 feet wide, or within any coldwater fishery. Transco shall revise the schedule as necessary to provide **at least 14 days advance notice**. Changes within this last 14-day period must provide for **at least 48 hours advance notice**. *(Section 4.3.2.6)*

28. **In the event that the horizontal directional drill of the Central Penn Line North Susquehanna River, Central Penn Line South Susquehanna River, Conestoga River, or Interstate 80 (I-80)/Little Fishing Creek fails,** Transco shall file with the Secretary, for review and written approval by the Director of OEP, final site-specific crossing plans concurrent with its application to the U.S. Army Corps of Engineers for an alternative crossing method. These plans shall include scaled drawings identifying all areas that will be disturbed by construction and a description of the mitigation measures Transco will implement to minimize effects on water quality and recreational boating. In addition, a scour analysis

shall be conducted for each crossing and filed concurrently with the site-specific crossing plan. *(Section 4.3.2.6)*

29. **With its Implementation Plan**, Transco shall file with the Secretary additional justification for the additional temporary workspace associated with the waterbodies identified in bold in table K-5 in appendix K of the EIS. *(Section 4.3.2.6)*

30. **With its Implementation Plan**, Transco shall file with the Secretary additional justification for the additional temporary workspace associated with the wetlands identified in bold in table L-2 in appendix L of the EIS. *(Section 4.4.5)*

31. **Prior to construction**, Transco shall file with the Secretary a final copy of the Permittee-Responsible Mitigation Plan, including any comments and required approvals from the U.S. Army Corps of Engineers and the PADEP. The plan shall designate wetland seed mixes to be used and which agency recommended them. *(Section 4.4.6)*

32. **Prior to construction**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, complete results of noxious weed surveys and a final Noxious and Invasive Plant Management Plan. The final Noxious and Invasive Plant Management Plan shall be revised to include mitigation measures to prevent forest disease spread from the construction corridor. *(Section 4.5.4)*

33. **Prior to construction of project facilities in Pennsylvania**, Transco shall file with the Secretary all documentation of its correspondence with the Pennsylvania Game Commission and the Pennsylvania Department of Conservation and Natural Resources and any avoidance or mitigation measures developed with these agencies regarding the State Game Land and Sproul State Forest crossings. *(Section 4.6.1.2)*

34. **With its Implementation Plan**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, its memorandum of understanding with the U.S. Fish and Wildlife Service (FWS) regarding the voluntary conservation measures that Transco will provide to offset the removal of upland forest and indirect impacts on interior forests. *(Section 4.6.1.3)*

35. **With its Implementation Plan**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a complete set of site-specific residential construction plans for all project facilities. For all residences located within 10 feet of the construction work area, the plans shall be revised to either: (1) modify the construction work area so that it is not closer than 10 feet to a residence, or (2) provide site-specific justification, including documentation of

landowner or resident concurrence with the plan, for the use of any construction workspace within 10 feet of a residence. *(Section 4.8.3.1)*

36. **Prior to construction across the commercial property at 1010 Susquehannock Drive near Central Penn Line South MPs 2.0 and 2.1**, Transco shall file with the Secretary, for review and approval by the Director of OEP, a site-specific plan for minimizing impacts on the commercial structures, stormwater management facilities, and planned future warehouse expansion on the property, including documentation of consultation with the owner. *(Section 4.8.3.1)*

37. **Prior to construction across the Justin and Susan Cappiello property**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a site-specific plan for minimizing construction impacts on the Cappiello's newly constructed barn including documentation of consultation with the landowner. *(Section 4.8.3.1)*

38. **With its Implementation Plan**, Transco shall file with the Secretary the final results of consultations with the landowner/developer of the Eastern Land and Resources Corporation commercial and residential development, including any project modifications or mitigation measures Transco will implement to minimize impacts on the Eastern Land and Resources Corporation development. *(Section 4.8.3.2)*

39. **Prior to construction across the McCallum property**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a plan to minimize impacts on the market garden and previously unidentified greenhouse structure. *(Section 4.8.4)*

40. **Prior to construction**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, an organic certification mitigation plan developed in consultation with Pennsylvania Certified Organic to ensure organic certification is maintained on the organic farms crossed by the project. The plan shall include:

    a. specific mitigation measures to be implemented to maintain certification during and after construction of the project;

    b. a plan for addressing complaints from landowners regarding loss of certification during and after construction, including measures to facilitate reinstatement of certification or to compensate the landowner if certification is lost or canceled; and

    c. copies of consultations with Pennsylvania Certified Organic. *(Section 4.8.4.1)*

41. **With its Implementation Plan**, Transco shall file copies of correspondence with the Pennsylvania Department of Conservation and Natural Resources confirming all Pennsylvania Department of Conservation and Natural Resources -funded properties crossed by the project have been identified and any change in use or transfer of rights for the Pennsylvania Department of Conservation and Natural Resources -funded properties is in compliance with Pennsylvania Department of Conservation and Natural Resources' conversion policies. *(Section 4.8.6.1)*

42. **With its Implementation Plan**, Transco shall file with the Secretary final 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. The site-specific crossing plans shall include, as applicable:

    a. site-specific timing restrictions;

    b. proposed closure details and notifications (e.g., reroutes, signage, public notices);

    c. specific safety measures; and/or

    d. other mitigation Transco will implement to minimize effects on the recreation areas and their users during construction and operation of the project.

    In addition, the site-specific crossing plan for State Game Land 206 shall include specific safety measures Transco will implement during work activities in the vicinity of the on-site shooting range. *(Section 4.8.6.1)*

43. Transco shall notify the U.S. Department of Agriculture's Natural Resources Conservation Service (Conservation Service) **at least 1 week prior to the start of construction activities within each** Conservation Service **-held easement** to facilitate Conservation Service monitoring of construction and restoration of disturbed areas within the Conservation Service -held easements. The Conservation Service notifications shall be documented in Transco's **weekly** status reports. *(Section 4.8.6.2)*

44. **With its Implementation Plan**, Transco shall file with the Secretary a revised table 4.8.6-3 that includes any newly identified conservation easements including copies of correspondence documenting any mitigation measures Transco will implement based on its consultation with the administering agency or agencies. *(Section 4.8.6.2)*

45. **Prior to construction**, Transco shall file with the Secretary copies of the Aids to Navigation Plans, approved by the Pennsylvania Fish and Boat Commission, for each of the waterbody crossings listed in table 4.8.6-4. *(Section 4.8.6.3)*

46. Transco shall file with the Secretary reports describing any documented complaints from a homeowner that a homeowner's insurance policy was cancelled, voided, or amended due directly to the grant of the pipeline right-of-way or installation of the pipeline and/or that the premium for the homeowner's insurance increased materially and directly as a result of the grant of the pipeline right-of-way or installation of the pipeline. The reports shall also identify how Transco has mitigated the impact. **During construction**, these reports shall be included in Transco's **weekly** status reports (see recommendation 8) and in **quarterly** reports for a **2-year period** following in-service of the project. *(Section 4.9.6)*

47. Transco shall not begin construction of facilities in Pennsylvania or use of staging, storage, or temporary work areas and new or to-be-improved access roads **until**:

    a. Transco completes the remaining cultural resources surveys and files with the Secretary all remaining cultural resources survey and evaluation reports, any necessary avoidance or treatment plans that outline measures to avoid, reduce, and/or mitigate, effects on historic properties, and the Pennsylvania State Historic Preservation Office's comments on the reports and plans;

    b. Transco completes the remaining geomorphological investigation of the west bank of Swatara Creek and files the report with the Secretary;

    c. the Advisory Council of Historic Preservation is provided an opportunity to comment on the undertaking if historic properties would be adversely affected; and

    d. the Commission staff reviews and the Director of OEP approves all cultural resources survey reports and plans, and notifies Transco in writing that treatment plans/mitigation measures may be implemented or construction may proceed.

    All material filed with the Secretary containing **location, character, and ownership information** about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: "**CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE.**" *(Section 4.10.5)*

48. **Prior to construction in Lancaster County**, Transco shall file with the Secretary final evidence of an enforceable transfer of oxides of nitrogen (NO_x) emission reduction credits to offset the estimated 2017 NO_x construction emissions for Lancaster County, Pennsylvania that exceed General Conformity thresholds. Transco must notify Commission staff if the transfer does not execute or significant changes to the project require a reevaluation of General Conformity. *(Section 4.11.1.2)*

49. **Prior to construction**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, a Construction Emission Plan identifying how Transco would track its construction schedule for each component of the project within the Lebanon County $PM_{2.5}$[234] Nonattainment Area and ensure that construction emissions of NO_X would remain below the General Conformity applicability threshold. If a change in the construction schedule or Project results in emissions of NO_X greater than the General Conformity applicability threshold of 100 tons per year, Transco shall provide and document all mitigation measures it will implement to comply with the General Conformity regulations at 40 C.F.R. § 93.158. *(Section 4.11.1.2)*

50. Transco shall review the Northeast Diesel Collaborative's recommendations for reducing diesel emissions from new on- and off-road construction equipment and indicate **in the project's Implementation Plan** what measures it would implement. *(Section 4.11.1.3)*

51. Transco shall continue to operate the existing air quality monitors at Compressor Stations 517, 520, and 190 for carbon dioxide (CO_2), nitrogen dioxide (NO_2), inhalable particulate matter with an aerodynamic diameter less than or equal to10 microns (PM_{10}) and 2.5 microns ($PM_{2.5}$), and sulfur dioxide (SO_2) **for a period of 3 years after the newly modified facilities begin operation**. Transco shall file **quarterly** air quality monitoring reports with the Secretary. In the event that the air quality monitoring shows a violation of the National Ambient Air Quality Standards, Transco shall immediately contact the state air quality agency to report the violation and establish a plan of action to correct the violation in accordance with the terms of the facility air permit and applicable state law. *(Section 4.11.1.3)*

52. **Prior to construction at the Central Penn Line South I-80/Little Fishing Creek horizontal directional drill at milepost M-0423 3.3**, Transco shall file with the Secretary, for review and written approval by the Director of OEP, the results of the noise impact assessment for the nearest noise-sensitive areas within a 0.5-mile radius of the horizontal directional drill- entry and exit points. If the results of the noise impact assessment indicate that the estimated noise attributable to horizontal directional drill-equipment operations would exceed FERC's day-night sound level (L_{dn}) criterion of 55 decibels on the A-weighted scale (dBA) at any of the noise-sensitive areas, Transco shall provide additional information on the mitigation measures, such as sound barriers, that will be implemented to reduce noise levels below 55 dBA. *(Section 4.11.2.2)*

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[234] $PM_{2.5}$ stands for inhalable particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

53. Transco shall file **in its weekly construction status reports** the following information for the Central Penn Line North Susquehanna River horizontal directional drill-entry site and the Central Penn Line South Conestoga River horizontal directional drill-entry and exit sites:

    a. the noise measurements from the nearest noise-sensitive area for the Central Penn Line North Susquehanna River horizontal directional drill-entry site and the Central Penn Line South Conestoga River horizontal directional drill-entry and exit sites, obtained at the start of drilling operations;

    b. any noise mitigation that Transco implemented at the start of drilling operations; and

    c. any additional mitigation measures that Transco will implement if the initial noise measurements exceed an L_{dn} of 55 dBA at the nearest noise-sensitive area. *(Section 4.11.2.3)*

54. Transco shall file a noise survey with the Secretary **no later than 60 days** after placing the authorized units at Compressor Stations 517 and 190 in service. If a full load condition noise survey is not possible, Transco shall provide an interim survey at the maximum possible horsepower load and provide the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at Compressor Stations 517 and 190 under interim or full horsepower load conditions exceeds an L_{dn} of 55 dBA at any nearby noise-sensitive areas, Transco shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Transco shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. *(Section 4.11.2.3)*

55. Transco shall conduct a noise survey at Compressor Station 520 to verify that the noise from all the equipment operated at full capacity does not exceed the previously existing noise levels that are at or above an L_{dn} of 55 dBA at the nearby noise-sensitive areas. The results of this noise survey shall be filed with the Secretary **no later than 60 days** after placing the modified units in service. If any of these noise levels are exceeded, Transco shall, **within 1 year** of the in-service date, implement additional noise control measures to reduce the operating noise level at the noise-sensitive areas to at or below the previously existing noise level. Transco shall confirm compliance with this requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. *(Section 4.11.2.3)*

56. Transco shall file a noise survey with the Secretary **no later than 60 days** after placing Compressor Stations 605 and 610 in service. If a full load condition noise

survey is not possible, Transco shall provide an interim survey at the maximum possible horsepower load and provide the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at Compressor Stations 605 and 610 under interim or full horsepower load conditions exceeds an L_{dn} of 55 dBA at any nearby noise-sensitive areas, Transco shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Transco shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. *(Section 4.11.2.3)*