158 FERC ¶ 61,110
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Tennessee Gas Pipeline Company, L.L.C. Docket No. CP16-4-000

ORDER ISSUING CERTIFICATE

(Issued February 2, 2017)

1. On October 9, 2015, Tennessee Gas Pipeline Company, L.L.C. (Tennessee) filed an application pursuant to 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 pipeline facilities located in Wayne and Pike Counties, Pennsylvania (Orion Project). As discussed below, the Commission will grant the requested authorizations, subject to conditions.

I. Background and Proposal

2. Tennessee, a Delaware limited liability company, is a natural gas company, as defined by section 2(6) of the NGA, engaged in the transportation and storage of natural gas in interstate commerce subject to the Commission's jurisdiction.[3] Tennessee owns and operates an approximately 12,000-mile pipeline system, which extends northeast from Texas, Louisiana, and the Gulf of Mexico through Arkansas, Mississippi, Alabama, Tennessee, Kentucky, West Virginia, Ohio, Pennsylvania, New York, New Jersey, Massachusetts, New Hampshire, Rhode Island, and Connecticut. Tennessee's 300 Line consists of 16-, 24-, and 30-inch-diameter pipelines and extends from Mercer County, Pennsylvania, through New Jersey, New York, and Connecticut to its terminus in Hamden County, Massachusetts.

[1] 15 U.S.C. § 717f(c) (2012).

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

[3] 15 U.S.C. § 717a(6) (2012).

3. Tennessee requests authority to construct and operate approximately 12.9 miles of pipeline loop, as well as appurtenant and auxiliary facilities, on its 300 Line in Pennsylvania. Specifically, Tennessee proposes to: (1) construct approximately 8.23 miles of new 36-inch-diameter pipeline loop in Wayne and Pike Counties (Loop 322); (2) construct approximately 4.68 miles of new 36-inch-diameter pipeline loop in Pike County (Loop 323); (3) modify an existing compressor unit at Compressor Station 323 in Pike County; and (4) construct and operate a pig launcher, crossover facilities, and connections for Loop 322 with its existing 300 Lines. The Orion Project will enable Tennessee to provide up to 135,000 dekatherms per day (Dth/d) of additional firm transportation service on the 300 Line from a receipt point with Williams Field Services Company, LLC (Meter No. 47768) in Susquehanna County, Pennsylvania, to a delivery point at the existing interconnection with Columbia Gas Transmission, LLC (Meter No. 420245) in Pike County. Tennessee asserts that the 300 Line is currently fully subscribed where the project is proposed and that the project is necessary to satisfy demand for transportation in the constrained area.

4. Tennessee held a binding open season for the project from January 30 to February 20, 2015. Prior to the open season, Tennessee entered into precedent agreements with South Jersey Gas Company (South Jersey Gas) and South Jersey Resources Group LLC (South Jersey Resources) for 78,000 and 39,000 Dth/d of firm transportation service, respectively. During the open season, Tennessee entered into a precedent agreement with Cabot Oil & Gas Corporation (Cabot) for 18,000 Dth/d of firm transportation service. South Jersey Gas and South Jersey Resources were granted anchor shipper status because they committed to a contract term of 15 years for at least 39,000 Dth/d of firm transportation service and elected to pay a negotiated rate. Cabot is not an anchor shipper because its bid did not satisfy the transportation threshold of 39,000 Dth/d. Tennessee also held a reverse open season, but it did not receive any bids for turn back capacity.

5. Tennessee estimates the cost of the project to be approximately $143,549,615. Tennessee states that the project will be financed from funds on hand, revolving credit agreements, or funds obtained through short-term financing agreements which will be rolled into permanent financing. It has proposed an incremental recourse rate for firm transportation service, as described below. Tennessee also states that the contractual anchor shipper status would provide benefits to the two anchor shippers, which are discussed as non-conforming provisions below.

II. Procedural Matters

A. Notice, Interventions, and Comments

6. Notice of Tennessee's application was published in the *Federal Register* on November 2, 2015, with comments due on November 16, 2015.[4] Appendix A of this order identifies all parties that filed motions to intervene. Timely, unopposed motions to intervene are granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure.[5]

7. Margaret Babbitt, Christine Foland, Andrew Jones, Alicia Lewis, Alexander Lotorto, Charles SanClementi, Jr., and Sierra Club each filed untimely motions to intervene.[6] On July 29, 2016, Tennessee filed a motion opposing Sierra Club's untimely motion to intervene. The Commission will grant the untimely motions to intervene.[7]

8. On November 16, 2015, the Tennessee Customer Group filed a protest to Tennessee's application.[8] On November 24, 2015 and January 21, 2016, Tennessee filed answers to Tennessee Customer Group's protest. Although the Commission's Rules of Practice and Procedure do not permit answers to protests, our rules also provide that we may waive this provision for good cause shown.[9] We will accept Tennessee's answers here because they have provided information that assisted us in our decision-making.

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[4] 80 Fed. Reg. 67,395 (2015).

[5] 18 C.F.R. § 385.214 (2016).

[6] Sierra Club's motion to intervene simultaneously sought intervenor status in Tennessee's Susquehanna West (Docket No. CP15-148-000) and Triad Expansion (Docket No. CP15-520-000) proceedings. The Commission granted Sierra Club's motions to intervene in the other two proceedings. *Tennessee Gas Pipeline Co., L.L.C.*, 156 FERC ¶ 61,156, at P 11 (2016) (Susquehanna West) and *Tennessee Gas Pipeline Co., L.L.C.*, 157 FERC ¶ 61,254 at Ordering Para. (J) (2016) (Triad Expansion).

[7] *See* 18 C.F.R. § 385.214(d) (2016).

[8] The Tennessee Customer Group is comprised of 24 of Tennessee's firm customers, which are listed in Appendix A.

[9] Rule 213(a)(2) of the Commission's Rules of Practice and Procedure prohibits the filing of answers to protests. 18 C.F.R. § 385.213(a)(2) (2016).

9. Several motions to intervene included comments. The Allegheny Defense Project (Allegheny) and Damascus Citizens for Sustainability, Inc. (Damascus Citizens) request that the Commission analyze the indirect effects of natural gas pipelines on natural gas extraction and analyze this project with Tennessee's Susquehanna West and Triad Expansion Projects in one environmental document to avoid segmentation.[10] Delaware Riverkeeper Network (Delaware Riverkeeper) contends that the Commission should examine impacts on the Delaware River and wetlands along the project route and perform a cumulative impacts and segmentation analysis. Sierra Club requests that the Commission analyze the direct, indirect, and cumulative impacts associated with the upstream extraction of natural gas and the downstream distribution and combustion of natural gas, as well as impacts on recreational, visual, and socioeconomic resources. Other motions to intervene commented on the potential impacts the project would have on water quality from the disposal of hydrostatic test water, nearby property values, and riverways, as well as safety-related concerns. These comments are addressed in the Environmental Assessment (EA).

10. The Tennessee Customer Group's protest claims that Tennessee failed to explain why its system fuel and electric compression costs rates should be charged for the Orion Project. We will address the Tennessee Customer Group's protest in the rate section of this order.

B. Request for Hearing and Consolidation

11. On August 22, 2015, Allegheny, Appalachian Mountain Advocates (Appalachian), Damascus Citizens, Delaware Riverkeeper, and Sierra Club jointly requested that the Commission hold a formal hearing for this project.[11]

12. Although our regulations provide for a hearing, neither section 7 of the NGA nor our regulations require that such a hearing be a trial-type evidentiary hearing. When, as is usually the case, the written record provides a sufficient basis for resolving the relevant

[10] On January 21, 2016, Tennessee filed an answer to Allegheny's and Damascus Citizens' comments.

[11] Appalachian did not file a motion to intervene in this proceeding. Thus, it is not a party. Sierra Club also filed a request for a formal hearing in its untimely motion to intervene.

issues, it is our practice to provide for a paper hearing.[12] That is the case here. We have reviewed the requests for a hearing and conclude that all issues of material fact relating to Tennessee's proposal are capable of being resolved on the basis of the written record. Accordingly, we will deny the requests for a formal hearing.

13. The August 22, 2015 filing also requests that the Commission consolidate this proceeding with Tennessee's proposals in the Susquehanna West and the Triad Expansion proceedings. The Commission consolidates matters only if a hearing is required to resolve common issues of law and fact, and consolidation will ultimately result in greater administrative efficiency.[13] We find that these projects do not share common issues of fact, as discussed below,[14] and administrative efficiency will not result from consolidating these three certificate proceedings in view of the fact that the issues raised in the motion to consolidate are addressed in this order without the need for an evidentiary hearing. Further, we have already addressed the issues raised in the Susquehanna West and Triad Expansion orders, without the need for evidentiary hearings.[15] Thus, we will deny the motion to consolidate.

III. Discussion

14. 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.[16]

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[12] *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, the courts have repeatedly recognized that even where there are disputed issues "[the Commission] need not conduct such [an evidentiary] hearing if they may be adequately resolved on the written record." *Moreau v. FERC*, 982 F.2d 556, 568 (D.C. Cir. 1993). *See also Environmental Action v. FERC*, 996 F.2d 401, 413 (D.C. Cir. 1993); *Alabama Power Co. v. FERC*, 993 F.2d 1557, 1565 (D.C. Cir. 1993).

[13] *Midcontinent Express Pipeline LLC*, 124 FERC ¶ 61,089, at P 27 (2008).

[14] *See infra* P 78-79 (discussing the independent nature of these three projects).

[15] Susquehanna West, 156 FERC ¶ 61,156 at PP 15-16; Triad Expansion, 157 FERC ¶ 61,254 at PP 13-14.

[16] 15 U.S.C. § 717f(c), (e) (2012).

A. Application of the Certificate Policy Statement

15. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new pipeline construction.[17] 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 pipeline 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.

16. Under this policy, the threshold requirement for existing pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from its 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 route of the new pipeline. 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 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.

17. Tennessee's proposal satisfies the threshold requirement that it financially support the project without relying on subsidization from its existing customers. Tennessee's proposed incremental base reservation rate is based on the cost of service associated with the Orion Project recovered over the incremental project capacity. The proposed incremental rate is designed to recover the full cost of the expansion and, as discussed below, is higher than the applicable system rate. Thus, we find that Tennessee's existing shippers will not subsidize the expansion project.

18. The proposed project will not degrade service to existing customers. In addition, there will be no adverse impact on any other pipelines in the region or their captive

[17] *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*).

customers, because the proposal is not intended to replace service on other pipelines. Further, no pipeline company or their captive customers have protested the application.

19. We also find that Tennessee's proposed project will have minimal impacts on landowners and surrounding communities. Tennessee states that, to the extent practicable, it will construct the proposed facilities using existing rights-of-way and previously disturbed property or using land adjacent to the existing rights-of-way.[18] Approximately 74.9 percent of the Orion Project's pipeline rights-of-way will overlap with Tennessee's existing pipeline rights-of-way, 24.6 percent will be adjacent to Tennessee's or existing transmission line rights-of-way, and only 0.5 percent will be located outside of or not adjacent to existing rights-of-way.[19] Tennessee also states that it will acquire rights-of-way by negotiation, where possible, to minimize its use of eminent domain.[20]

20. The proposed project will enable Tennessee to provide 135,000 Dth/d of additional transportation service on a firm basis to customers that signed precedent agreements for the total capacity of the project. Based on the benefits the project will provide in making additional firm transportation service available to the shippers which have subscribed all of the capacity of the project and the minimal adverse effect on existing customers, other pipelines and their captive customers, and landowners and surrounding communities, we find, consistent with the Certificate Policy Statement and NGA section 7(c), that the public convenience and necessity requires approval of Tennessee's proposal, as conditioned in this order.

B. Rates

1. Recourse Rates

21. Tennessee proposes an initial incremental recourse rate under Rate Schedule FT-A for firm project service. The proposed incremental recourse rate consists of: (1) a monthly reservation charge of $16.5208 per Dth; (2) a daily commodity charge of $0.0000 per Dth; (3) applicable demand and commodity surcharges; and (4) applicable fuel, lost and unaccounted-for charges, and electric power cost charges.

22. Tennessee proposed monthly reservation charge of $16.5208 per Dth is calculated by dividing the first year cost of service of $26,764,000 by the total annual capacity

[18] Application at 30.

[19] Application Resource Report 8 at 8-8 to 8-9.

[20] Application at 30-31.

of 1,620,000 Dth (135,000 Dth/d multiplied by 12 months). Tennessee states that its proposed cost of service reflects the income tax rates and capital structure approved in Tennessee's rate case settlement in Docket No. RP95-112-000[21] and reaffirmed in Tennessee's most recent rate settlement in 2015 in Docket No. RP15-990-000.[22] In addition, Tennessee states it used a straight line depreciation rate of 3.33 percent, based on an estimated useful life of the project facilities of 30 years.

23. Tennessee proposes to charge the applicable general system rate under Rate Schedule IT for any interruptible service rendered as a result of the new capacity available from the project facilities.

24. We have reviewed Tennessee's proposed cost of service, incremental recourse reservation charge, and rate for interruptible service and find that they are reasonable. Tennessee's existing customers will not be subsidizing the project because the proposed incremental monthly reservation charge of $16.5208 per Dth is higher than the generally applicable Rate Schedule FT-A reservation charge of $5.2598 per Dth for transportation from Zone 4 to Zone 4.[23] The Commission accepts Tennessee's proposed incremental rate and directs Tennessee to file tariff records that are consistent with the *pro forma* tariff records, subject to conditions as discussed below, between 30 and 60 days prior to the date the project facilities go into service.

25. Tennessee has proposed a daily commodity charge of $0.0000 per Dth, which is less than the generally applicable commodity charge for transportation from Zone 4 to Zone 4 of $0.0454 per Dth.[24] The proposed Orion Project is part of Tennessee's mainline. Commission policy requires that where an incremental rate is lower than the system rate, the system rate should be used for providing service. Therefore, to ensure that existing shippers on the mainline do not subsidize the project, Tennessee must revise

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[21] *Tennessee Gas Pipeline Co.*, 94 FERC ¶ 61,117 (2001); *Tennessee Gas Pipeline Co.*, 77 FERC ¶ 61,083 (1996), *reh'g denied*, 78 FERC ¶ 61,069 (1997).

[22] *Tennessee Gas Pipeline Co., L.L.C.*, 152 FERC ¶ 61,009 (2015). In Docket No. RP15-990-000, Tennessee filed a settlement in lieu of an NGA general section 4 rate case. The settlement was approved by the Commission and became effective November 1, 2015. Under the terms of that settlement, parties agreed to continue the use of the Docket Nos. RP95-112-000 and RP11-1566 variables.

[23] Tennessee Gas Pipeline Company, L.L.C., FERC NGA Gas Tariff, TGP Tariffs, Sheet No. 14, FT-A Rates - Firm Transportation, 9.0.0.

[24] Tennessee Gas Pipeline Company, L.L.C., FERC NGA Gas Tariff, TGP Tariffs, Sheet No. 15, FT-A Rates - Firm Transportation, 12.0.0.

its proposed incremental commodity charge to reflect its generally applicable commodity charge for Zone 4 to Zone 4 transportation.

2. Reporting Incremental Costs and Revenues

26. To ensure that costs are properly allocated between Tennessee's existing shippers and the incremental services proposed in this proceeding, we will require Tennessee to keep separate books and accounting of costs and revenues attributable to the incremental services and capacity created by the project. The books should be maintained with applicable cross-references, as required by section 154.309 of the Commission's regulations.[25] 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.[26]

3. Fuel

27. Tennessee proposes to charge its generally applicable system-wide fuel and loss retention percentages and electric power rates under Rate Schedule FT-A.

28. The Tennessee Customer Group protested Tennessee's proposal, stating that Tennessee had failed to provide sufficient information to show that fuel and electric compression costs would not result in increases in system rates.[27] On November 24, 2015, Tennessee filed a response, demonstrating that use of its system fuel rate for the proposed Zone 4 to Zone 4 capacity path is appropriate, because the project will have the effect of reducing fuel use on its system by approximately 55 Dth/d, which in turn will have the effect of reducing the general system fuel rate to the benefit of all general system shippers. Thus, we will approve Tennessee's request to charge its general system fuel rate for service on the project facilities.

4. Negotiated Rates

29. The Orion Project shippers have agreed to pay negotiated rates. Tennessee must file either the negotiated rate agreements or tariff records setting forth the essential terms

[25] 18 C.F.R. § 154.309 (2016).

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

[27] Tennessee Customer Group November 11, 2015 Protest at 2.

of the agreements in accordance with the Alternative Rate Policy Statement[28] and the Commission's negotiated rate policies.[29] This filing must be made not less than 30 days, but not more than 60 days, before the proposed effective date for such rates.

5. Non-Conforming Provisions

30. In Exhibit I of the application, Tennessee provides copies of the Firm Transportation Agreements (FTAs) to be executed by the project shippers. Tennessee states the proposed FTAs contain provisions that deviate from its *pro forma* Rate Schedule FT-A transportation service agreement. The differences reflect the primary contractual benefits provided to the project shippers in exchange for agreeing to provide contractual support for the project. Tennessee asserts that the differences do not constitute material deviations from the *pro forma* service agreement and are not unduly discriminatory. Tennessee requests the Commission make an upfront determination here, approving each identified non-conforming provision.[30] The differences between the *pro forma* and the FTAs are as follows:

1. The FTAs each contain "whereas" clauses, which describe the precedent agreement and the specific transaction between Tennessee and the project shippers, while the *pro forma* service agreement does not.

2. Article II (Sections 2.1 and 2.2) of the FTAs address regulatory authorization of the project facilities and the commencement date of the FTAs, which is tied to the commencement date of the project

[28] *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines; Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076, *order granting clarification*, 74 FERC ¶ 61,194, *reh'g and clarification denied*, 75 FERC ¶ 61,024, *reh'g denied*, 75 FERC ¶ 61,066 (1996), *petition for review denied sub nom. Burlington Resources Oil & Gas Co. v. FERC*, 172 F.3d 918 (D.C. Cir. 1998) (Alternative Rate Policy Statement).

[29] *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).

[30] Tennessee also identified as non-conforming the creditworthiness provisions contained in Article XVI to the FTAs. Tennessee redacted these provisions from the public version of the FTAs, and is not seeking an upfront determination from the Commission in the certificate order.

facilities. Article II of the *pro forma* service agreement does not contain this regulatory authorization or commencement date language.

3. Article IV of the FTAs indicates that Tennessee will construct the project facilities to provide transportation service for the project shippers. However, Article IV of the *pro forma* service agreement contemplates that the facilities necessary to provide the transportation service for the shipper are already in place.

4. Sections 6.1, 11.1(a), and 12.1 of the FTAs have been modified, as compared to the *pro forma* service agreement, to reflect the commencement date for the project. These provisions in the FTAs reflect the fact that Tennessee must construct the project facilities in order to provide service to the project shippers.

31. Tennessee states that the "Other Provisions" portion of Exhibit A to the FTAs includes an extension right that gives the project shippers a contractual right to extend the 15-year primary term of their firm transportation service agreements for an additional 5-year term at the same negotiated rates applicable during the primary term. Tennessee asserts that this provision is not a material deviation from its *pro forma* service agreement, since Article XXXVI of the General Terms and Conditions of its tariff permits Tennessee to negotiate extension rights with a shipper in Exhibit A to a shipper's gas transportation agreement. Tennessee requests an upfront determination from the Commission that even if the extension right provision could be construed to constitute a material deviation from its *pro forma* service agreement, the extension right provision is not unduly discriminatory.

32. We find that the incorporation of non-conforming provisions in the shippers' service agreements constitute material deviations from Tennessee's *pro forma* service agreement. However, in other proceedings, we have found that non-conforming provisions may be necessary to reflect the unique circumstances involved with the construction of new infrastructure and to provide the needed security to ensure the viability of a project.[31] We find that the provisions identified by Tennessee above, as well as the extension right, are non-conforming, but they are permissible because they do

[31] *See, e.g., Tennessee Gas Pipeline Co.*, 144 FERC ¶ 61,219 (2013); *Midcontinent Express Pipeline LLC*, 124 FERC ¶ 61,089 (2008).

not present a risk of undue discrimination, do not affect the operational conditions of providing service, and do not result in any customer receiving a different quality of service.[32]

33. Not less than 30 days, but not more than 60 days, before providing service to a project shipper under a non-conforming agreement, Tennessee must file an executed copy of the non-conforming agreement disclosing and reflecting all non-conforming language as part of Tennessee's tariff and a tariff record identifying these agreements as non-conforming agreements consistent with section 154.112 of the Commission's regulations.[33] This required disclosure should include any such transportation provision or agreement detailed in a precedent agreement that survives the execution of the service agreement.[34]

C. Engineering Analysis

34. On September 22, 2016, Delaware Riverkeeper filed comments, which included a report by Richard B. Kuprewicz of Accufacts Inc. that reviewed non-public Critical Energy Infrastructure Information (CEII) material, including the flow diagrams in Exhibit G to Tennessee's application. Mr. Kuprewicz alleges that Tennessee violated its own recommended maximum design velocity of 40 feet per second (fps). Specifically, Mr. Kuprewicz points to a statement made by Tennessee in Resource Report 10 in Docket No. CP11-161-000 indicating that "[i]ncreasing the gas velocity significantly above Tennessee's recommended design velocity could cause erosion damage in the pipe."[35] Mr. Kuprewicz asserts that he calculated actual gas velocities and found that the

[32] *See, e.g., Gulf South Pipeline Co., LP*, 115 FERC ¶ 61,123, at P 6 (2006); *Gulf South Pipeline Co., LP*, 98 FERC ¶ 61,318, at P 4 (2002).

[33] 18 C.F.R. § 154.112 (2016).

[34] A Commission ruling on non-conforming provisions in a certificate proceeding does not waive any future review of such provisions when the executed copy of the non-conforming agreements and a tariff record identifying the agreements as non-conforming are filed with the Commission consistent with section 154.112 of the Commission's regulations. *See Tennessee Gas Pipeline Co., L.L.C.*, 150 FERC ¶ 61,160, at P 44 (2015).

[35] Tennessee Gas Pipeline Co., Application, Resource Report 10 at 10-7, Docket No. CP11-161-000 (filed Mar. 31, 2011).

pipeline segment in the base case (i.e., without the expansion) has gas velocities exceeding Tennessee's recommended actual gas velocity limitation of 40 fps.[36]

35. On October 28, 2016, Tennessee filed an answer to Delaware Riverkeeper's assertions, claiming that Mr. Kuprewicz took its statement in the Resource Report in Docket No. CP11-161-000 out of context. Tennessee asserts that its conclusion that velocities exceeding 40 fps could compromise pipeline safety related to a pipeline alternative that was rejected.[37] Tennessee also states that its hydraulic models of the Orion Project show that the highest segment velocity calculated along the project path to be 42 fps.

36. The Commission has reviewed all the information provided by Tennessee regarding the project's gas flow velocities and analyzed Tennessee's flow diagrams and hydraulic models for both the project's existing and proposed operating conditions. Based upon our review, we find that Tennessee has properly designed its pipeline system to accommodate the proposed new service, while maintaining its existing service obligations. Further, we have evaluated Tennessee's hydraulic studies and verified that the velocity never exceeds 42 fps, with or without the proposed facilities.[38]

37. Mr. Kuprewicz claims that the 36-inch-diameter pipeline loop is oversized for the proposed capacity increase of 135,000 Dth/d, asserting that the pipeline can be reduced from a 36-inch-diameter to a 16-inch-diameter pipeline. Mr. Kuprewicz speculates that Tennessee is proposing a pipeline of larger diameter than necessary in anticipation of future expansion projects.

38. Tennessee answers that, in order to maintain the same suction pressure at the next downstream compressor station, it would need to install 42.5 miles of 16-inch-diameter pipeline, as opposed to the 12.91 miles of 36-inch-diameter pipeline proposed herein. Tennessee states that this would result in approximately three times the land impacts and an approximately 50 percent increase in costs.

39. We agree with Tennessee's assessment. The 36-inch-diameter pipeline loop will not enable Tennessee to provide more than the requested 135,000 Dth/d of firm service

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[36] Mr. Kuperwicz defines the pipeline segment as between compressor stations 321 and 325.

[37] *Tennessee Gas Pipeline Co., L.L.C.*, 139 FERC ¶ 61,161, at PP 86, 104 (2012).

[38] We note that the U.S. Department of Transportation's Pipeline and Hazardous Material Safety Administration does not specify any velocity requirements for natural gas pipelines.

unless it constructs additional facilities not proposed here. Thus, we reject Mr. Kuprewicz's speculation that Tennessee is proposing a larger diameter pipeline than necessary for the Orion Project in anticipation of future expansion projects.

40. Delaware Riverkeeper also requests that the Commission provide answers to nine engineering-specific questions.[39] The information requested by Delaware Riverkeeper is considered CEII or Privileged Information. Thus, the Commission cannot release that information in the EA or this order. If Delaware Riverkeeper desires this information, it can submit a request, conforming to our regulations, for access to CEII information.[40]

D. Environmental Analysis

41. On November 23, 2015, the Commission issued a *Notice of Intent to Prepare an Environmental Assessment* (NOI). On December 3, 2015, the Commission issued a supplemental NOI extending the scoping period to allow all potential stakeholders adequate time to submit comments.[41] The NOI and supplemental NOI were published in the Federal Register on December 1, and December 9, 2015, respectively, and mailed to interested parties including: federal, state, and local officials; agency representatives; environmental and public interest groups; Native American tribes; local libraries and newspapers; and affected property owners.[42]

42. We received comments in response to the NOI and supplemental NOI from the National Park Service and several individuals regarding environmental issues. We also received comments from Allegheny, Damascus Citizens, Delaware Riverkeeper, Sierra Club and in the motions to intervene filed by several individuals.

43. The comments concerned the project's potential impact on water resources, wetlands, vegetation, wildlife, fisheries, threatened and endangered species, land use and recreation, air quality, noise, and cultural resources, cumulative impacts, and reliability and safety. The comments also regarded project need, the scope of alternatives that should be addressed, and segmentation of the environmental review.

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[39] Delaware Riverkeeper September 22, 2016 comments at 30.

[40] 18 C.F.R. §§ 388.112, 388.113 (2016). We note that Delaware Riverkeeper requested and obtained certain CEII information related to these matters from the Commission, but now seeks further information regarding Tennessee's system.

[41] The Supplemental NOI included an updated mailing list to correct for omissions found after issuance of the NOI.

[42] 80 Fed. Reg. 75,094 (2015); 80 Fed. Reg. 76,464 (2015).

44. We also received requests that we prepare an Environmental Impact Statement (EIS) for the project or a combined EIS with other approved, proposed, and reasonably foreseeable Tennessee projects on the 300 Line, including the Susquehanna West and Triad Expansion Projects.

45. To satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA),[43] our staff prepared an EA for the Orion Project. The EA addresses geology, soils, water resources, wetlands, vegetation, fisheries, wildlife, threatened and endangered species, land use, recreation, visual resources, cultural resources, air quality, noise, safety, cumulative impacts, and alternatives. All substantive comments received in response to the NOI and supplemental NOI were addressed in the EA.

46. The EA was issued for a 30-day comment period and placed into the public record on August 23, 2016.[44] The Commission received combined comments on the EA from Allegheny, Damascus Citizens, and Sierra Club (collectively the Conservation Groups); Delaware Riverkeeper; Delaware River Basin Commission; National Park Service; and the Pennsylvania Department of Environmental Protection (PADEP). These comments are further discussed below and primarily concern project need and alternatives; segmentation of connected, cumulative, and similar actions; cumulative impacts; impacts on surface waters, wetlands, and waterbodies, wildlife, forested lands, operational safety; and the need for an EIS or programmatic EIS. In addition, the Conservation Groups requested that the Commission extend the public comment period and hold a public hearing on the EA prepared for the project. In addition, Tennessee provided clarifications to the EA and comments in response to the Conservation Groups' and Delaware Riverkeeper's filings.

47. The Delaware River Basin Commission states that the project will not be subject to its review and approval because the project does not meet the threshold requirement required for its review.[45] The Delaware River Basin Commission's correspondence does not change any of the permits or authorizations identified in the EA, nor does it alter any of the conclusions in the EA.[46]

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[43] 42 U.S.C. §§ 4321–4370f (2012).

[44] 81 Fed. Reg. 59,208 (2016).

[45] *See* Delware River Basin Commission September 8, 2016 Comments at 2-3.

[46] EA at 16.

1. Need for an Environmental Impact Statement and Extension of the Public Comment Period

48. Delaware Riverkeeper asserts that an EIS should be prepared for the project, citing impacts on forested resources, groundwater wells, wetlands, waterbodies, and wildlife habitat. Delaware Riverkeeper further requests an extension of the public comment period on the EA for an additional 60 days because the public comment period occurred during "peak summer vacation time," and that we hold meetings for the public to comment on the EA.

49. Under NEPA, agencies must prepare an EIS for major federal actions that may significantly impact the environment.[47] However, if an agency determines that a federal action is not likely to have significant adverse effects, it may prepare an EA for compliance with NEPA.[48] In addition, the Council on Environmental Quality's (CEQ) regulations implementing NEPA state that one of the purposes of an EA is to determine whether an EIS is required.[49] Thus, based on the Commission's experience with NEPA implementation for pipeline projects, the Commission's environmental staff determines upfront whether to prepare an EIS or an EA for each new proposed project, pursuant to the Commission's regulations.[50] An initial decision to prepare an EA for a given project may be changed to an EIS if, during the NEPA review, significant impacts are found.[51]

50. While CEQ regulations do not define "significant," they do explain that whether an impact is "significant" depends on both "context" and "intensity."[52] Context means that the "significance of an action must be analyzed in several contexts," including "the

[47] 42 U.S.C. § 4332(2)(C) (2012); 40 C.F.R. § 1502.4 (2016).

[48] 40 C.F.R. § 1501.3-1501.4 (2016). An EA is meant to be a "concise public document . . . that serves to . . . [b]riefly provide sufficient evidence and analysis for determining whether to prepare an [EIS] or finding of no significant impact." 40 C.F.R. § 1508.9(a) (2016). Pursuant to the Commission's regulations, if an EA is prepared first, "[d]epending on the outcome of the environmental assessment, an [EIS] may or may not be prepared." 18 C.F.R. § 380.6(b) (2016).

[49] 40 C.F.R. § 1501.4(c) (2016).

[50] *See* 18 C.F.R § 380.6(b) (2016).

[51] *Id.* § 380.5.

[52] 40 C.F.R. § 1508.27 (2016).

affected region, the affected interest, and the locality."[53] Intensity is determined by considering the unique characteristics of the geographic area, the degree to which the effects are highly controversial or highly uncertain or unknown, the degree to which the action may establish a precedent for future actions, whether the action is related to other actions with insignificant but cumulatively significant impacts, and the degree to which the action may adversely affect threatened and endangered species.[54]

51. Here, Commission staff determined that the Orion Project, as presented in its application and subsequent filings in response to staff's environmental information requests, would not fall under the "major" category for which an EIS is automatically prepared. The EA confirms Commission staff's initial determination, concluding that approval of the project would not constitute a major federal action significantly affecting the quality of the human environment, if the mitigation measures recommended in the EA were implemented.[55] The EA addresses impacts on forested resources;[56] impacts on groundwater wells, wetlands, and waterbodies;[57] and impacts on wildlife habitat.[58] We affirm the EA's findings for Tennessee's Orion Project and reject Delaware Riverkeeper's assertion that an EIS is required.

52. CEQ regulations do not require a public comment period or a public meeting for an EA.[59] In this proceeding, we established a scoping period in advance of the EA and provided a designated comment period following issuance of the EA. In addition, all directly affected landowners were initially contacted by Tennessee after Tennessee filed its application, as required by Commission regulation.[60] The NOI, supplemental NOI, and notice of the EA were provided to all directly affected landowners, parties to this proceeding, and individuals on the environmental mailing list. The Commission accepts comments both electronically via eComment and eFiling, as well as via paper copy

[53] *Id.* § 1508.24(a).

[54] *Id.* § 1508.24(b).

[55] EA at 94.

[56] *Id.* at 34.

[57] *Id.* at 26.

[58] *Id.* at 37.

[59] 40 C.F.R. § 1506.6 (2016).

[60] 18 C.F.R. §157.6(d) (2016).

submissions. Thus, we find that the 30-day public comment period was sufficient to allow the public to review and comment on the EA and do not find the need to extend the comment period or hold public meetings.[61]

2. Programmatic Environmental Impact Statement

53. CEQ regulations do not require broad or "programmatic" NEPA reviews. CEQ has stated, however, that such a review may be appropriate where an agency: (1) is adopting official policy; (2) is adopting a formal plan; (3) is adopting an agency program; or (4) is proceeding with multiple projects that are temporally and spatially connected.[62] The Supreme Court has held that a NEPA review covering an entire region (that is, a programmatic review) is required only "if there has been a report or recommendation on a proposal for major federal action" with respect to this region.[63] Moreover, there is no requirement for a programmatic EIS where the agency cannot identify the projects that may be sited within a region because individual permit applications will be filed at a later time.[64]

54. We have explained in other proceedings that there is no Commission plan, policy, or program for the development of natural gas infrastructure.[65] Rather, the Commission acts on individual applications filed by entities proposing to construct interstate natural gas pipelines. Under NGA section 7, the Commission is obligated to authorize a project if it finds that the construction and operation of the proposed facilities "is or will be required by the present or future public convenience and necessity."[66] What is required by NEPA, and what the Commission provides, is a thorough examination of the potential

[61] We note that Delaware Riverkeeper submitted three filings during the public comment period.

[62] *See* Memorandum from CEQ to Heads of Federal Departments and Agencies, *Effective Use of Programmatic NEPA Reviews* at 13-15 (Dec. 18, 2014) (citing 40 C.F.R. § 1508.18(b) (2016)) (CEQ 2014 Programmatic Guidance).

[63] *Kleppe v. Sierra Club*, 427 U.S. 390 (1976) (*Kleppe*) (holding that a broad-based environmental document is not required regarding decisions by federal agencies to allow future private activity within a region).

[64] *See Piedmont Envtl. Council v. FERC*, 558 F.3d 304, 316-17 (4th Cir. 2009).

[65] *See, e.g., National Fuel Gas Supply Corp.*, 154 FERC ¶ 61,180, at P 13 (2016); *Texas Eastern Transmission, LP*, 149 FERC ¶ 61,259, at PP 38-47 (2014).

[66] 15 U.S.C. § 717f(e) (2012).

impacts of specific projects. As to projects that have a clear physical, functional, and temporal nexus such that they are connected or cumulative actions,[67] the Commission will prepare a multi-project environmental document.[68]

55. The Conservation Groups state that the Commission needs to prepare a programmatic EIS to examine the effects of natural gas infrastructure projects and extraction activities in the Appalachian Basin. They provide a map of proposed jurisdictional greenfield pipeline projects throughout the Appalachian Basin to illustrate that the Commission is aware of a regional natural gas infrastructure buildout.

56. The Conservation Groups contend that the Commission cannot ignore such an analysis just because future projects are not certain and finds support from CEQ's 2014 Programmatic Guidance, which suggests that a programmatic NEPA review can help to "identify[] broad mitigation and conservation measures that can be applied to subsequently tiered reviews."[69] Specifically, the Conservation Groups argue that the CEQ 2014 Programmatic Guidance recommends a programmatic EIS when "several energy development programs proposed in the same region of the country . . . [have] similar proposed methods of implementation and similar best practice and mitigation measures that can be analyzed in the same document."[70] The Conservation Groups point to a programmatic EIS developed by the U.S. Department of Energy and U.S. Bureau of Land Management to consider the environmental impacts of solar energy development in six southwestern states for further support.[71] In total, the Conservation Groups state that

[67] 40 C.F.R. § 1508.25(a)(1)-(2) (2016) (defining connected and cumulative actions).

[68] *See, e.g.*, EA for the Monroe to Cornwell Project and the Utica Access Project, Docket Nos. CP15-7-000 and CP15-87-000 (filed Aug. 19, 2015); Final Multi-Project Environmental Impact Statement for Hydropower Licenses: Susquehanna River Hydroelectric Projects, Project Nos. 1888-030, 2355-018, and 405-106 (filed Mar. 11, 2015).

[69] Conservation Groups September 22, 2016 comments at 44 (citing CEQ 2014 Programmatic Guidance at 10).

[70] *Id.* at 44-45 (citing CEQ 2014 Programmatic Guidance at 11).

[71] *Id.* at 46.

the Commission should examine natural gas infrastructure projects in a programmatic EIS to employ a more "thoughtful and broad-based approach to planning future development."[72]

57. Delaware Riverkeeper contends that the Commission needs to prepare a corridor-wide programmatic EIS to evaluate the projects that have been and could be proposed along Tennessee's system.[73]

58. The fact that a number of individual pipeline companies have planned or proposed infrastructure projects to increase capacity to transport natural gas throughout the Appalachian Basin and elsewhere in the country does not establish, as the Conservation Groups allege, that the Commission is engaged in regional development or planning.[74] Rather, this information confirms that pipeline projects to transport natural gas are initiated solely by private industry. As we have noted previously, a programmatic EIS is not required to evaluate the regional development of a resource by private industry if the development is not part of, or responsive to, a federal plan or program in that region.[75]

59. The Commission's certification decisions regarding pending and future natural gas pipeline facilities are only in response to proposals by private industry, and the Commission has no way to accurately predict the scale, timing, and location of projects, much less the type of facilities that will be proposed.[76] In these circumstances, the

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[72] *Id.* at 43, 47 (quoting CEQ 2014 Programmatic Guidance at 35).

[73] Delaware Riverkeeper September 22, 2016 Comments at 6.

[74] *See, e.g.*, *Sierra Club v. FERC*, 827 F.3d 36, 50 (D.C. Cir. 2016) (rejecting claim that NEPA requires the Commission to undertake a nationwide analysis of all applications for liquefied natural gas export facilities); *cf. Myersville Citizens for a Rural Cmty., Inc. v. FERC*, 783 F.3d 1301, 1326-27 (D.C. Cir. 2015) (*Myersville*) (upholding the Commission's determination that, although a Dominion Transmission Inc.-owned pipeline project's excess capacity may be used to move gas to the Cove Point terminal for export, the projects are "unrelated" for purposes of NEPA).

[75] *See, e.g.*, *Kleppe*, 427 U.S. at 401-02.

[76] Lack of jurisdiction over an action does not necessarily preclude an agency from considering the potential impacts. However, as explained in the cumulative impacts section of this order, it reinforces our finding because states, and not the Commission, have jurisdiction over natural gas production and associated development (including siting and permitting of natural gas extraction), the location, scale, timing, and potential impacts from such development are even more speculative.

Commission's longstanding practice is to conduct project-specific environmental reviews for each proposed project, or a number of proposed projects if they are interdependent or otherwise interrelated or connected. Here, there is nothing unique or different about the Orion Project – a discrete project – that would necessitate a programmatic EIS.

60. In sum, CEQ states that a programmatic EIS can "add value and efficiency to the decision-making process when they inform the scope of decisions," "facilitate decisions on agency actions that precede site- or project-specific decisions and actions," or "provide information and analyses that can be incorporated by reference in future NEPA reviews."[77] The Commission does not believe these benefits can be realized by a programmatic review of natural gas infrastructure projects because the projects subject to our jurisdiction do not share sufficient elements in common to narrow future alternatives or expedite the current detailed assessment of each particular project. Thus, we find a programmatic EIS is neither required nor useful under the circumstances here.

3. Project Need and Alternative Analysis

61. The Conservation Groups and Delaware Riverkeeper each comment that the statement of need provided in the EA is inadequate and too narrowly defined. They assert that the Commission does not determine the project's purpose and need during the NEPA process. Rather, they claim that the Commission determines the purpose and need of the project in the certificate order, which renders the project need and alternatives analysis of NEPA fruitless. The Conservation Groups and Delaware Riverkeeper argue that the Commission purposefully developed a narrow scope of analysis for the alternatives in order to choose Tennessee's proposal and exclude all other possible alternatives. Delaware Riverkeeper also states that Tennessee could construct its project elsewhere along the 300 Line and, as a result, asserts that the Commission did not choose the least environmentally damaging alternative.

62. CEQ regulations require that an EA must provide a brief discussion of the need for the proposal.[78] Courts have upheld federal agencies' use of applicants' identified project purpose and need as the basis for evaluating alternatives.[79] Where an agency is asked to sanction a specific plan, the agency should take into account the needs and goals of the

[77] CEQ 2014 Programmatic Guidance at 13.

[78] *See* 40 C.F.R. § 1508.9(b) (2016); *see also id.* § 1502.13 (the purpose and need statement in an EIS "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed actions.").

[79] *See, e.g.*, *City of Grapevine v. U.S. Dep't of Transp.*, 17 F.3d 1502, 1506 (D.C. Cir. 1994).

parties involved in the application.[80] We acknowledge that a project's purpose and need should not be so narrowly defined as to preclude consideration of what may actually be reasonable alternatives.[81] But an agency need only consider alternatives that will bring about the ends of the proposed action, and the evaluation is shaped by the application at issue and by the function that the agency plays in the decisional process.[82]

63. NEPA also requires the Commission to identify and analyze reasonable alternatives during its review of a proposed action.[83] NEPA does not define what constitutes a "reasonable alternative;" however, CEQ provides that "a reasonable range of alternatives depends on the nature of the proposal and the facts in each case."[84] The Commission is not required to consider alternatives that are not consistent with the purpose and need of a proposed project.[85]

64. In accordance with NEPA and Commission policy, Commission staff evaluated the project purpose and need for the proposal before the Commission. The EA relied on Tennessee's stated purpose and need for the Orion Project – to provide 135,000 Dth/d of firm natural gas transportation service on the 300 Line with specific receipt and delivery points that the project shippers requested. The NGA, noting one narrow exception, does not give the Commission authority to direct the development of the gas industry's

[80] *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991) (*Busey*).

[81] *Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1085 (9th Cir. 2013); *Simmons v. U.S. Army Corps of Eng'rs*, 120 F.3d 664, 669 (7th Cir. 1997); *Busey*, 938 F.2d at 198-99.

[82] *Busey*, 938 F.2d at 195.

[83] *See* 42 U.S.C. § 4332(2)(C) (2012); 40 C.F.R. §§ 1502.1, 1502.14, 1502.16 (2016); *see also Minisink Residents for Environmental Preservation and Safety v. FERC*, 762 F.3d 97, 102 (2014).

[84] *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, 46 Fed. Reg. 18,026, 18,027 (1981).

[85] *See, e.g., Pacific Coast Fed'n of Fishermen's Ass'ns v. Blank*, 693 F.3d 1084, 1100 (9th Cir. 2012).

infrastructure either on a broad regional basis or in the design of specific projects.[86] We respond when an application is presented to us, and in each application the applicant determines the parameters of the project. The Commission's certificate application process permits scrutiny of the proposed project, and the resulting certificate will also come to reflect public and government input on safety and security, impacts on cultural and environmental resources, and engineering and design of the pipeline.[87] The Commission can decline to authorize the proposed project if, and only if, a balance of all the circumstances weighs against certification.[88] Congress did not confer authority onto the Commission to plan and direct activities by private industry to satisfy the demand for natural gas.

65. Commission staff also evaluated alternatives to the Orion Project to determine whether they would be reasonable and environmentally preferable to the proposed project while meeting the project's stated objective.[89] The EA considers the no-action alternative, system alternatives, and alternative river crossing methods.[90] The EA provides an alternatives analysis commensurate with the scope of the Orion Project. We affirm the conclusion in the EA that no reasonable alternative would result in significantly less environmental impacts and accomplish the project's objective.

66. While Delaware Riverkeeper presents general alternatives that would potentially result in less impact, Tennessee's application and its response to Delaware Riverkeeper's comments provide further evidence that the Orion Project could not be satisfied by relying on other transportation systems or looping, compression, and route alternatives along Tennessee's own system.[91] As discussed above, the engineering alternatives proposed by Delaware Riverkeeper (e.g., using a 16-inch-diameter pipe rather than the

[86] NGA section 7(a) provides that the Commission may direct a natural gas company to extend or improve its transportation facilities to service local distribution companies or the public immediately adjacent to the transportation facilities. 15 U.S.C. § 717f(a) (2012). We note, however, that the Commission has never taken action pursuant to this provision of the NGA.

[87] *Texas Eastern Transmission, LP*, 141 FERC ¶ 61,043, at P 25 (2012).

[88] *E.g.*, *Fed. Power Comm'n v. Transcont'l Gas Pipe Line Corp.*, 365 U.S. 1, 17 (1961); *Jordan Cove Energy Project, L.P.*, 154 FERC ¶ 61,190, PP 28-42 (2016).

[89] EA at 89-93.

[90] *Id.*

[91] Application Resource Report 10.

proposed 36-inch diameter pipe) would require a substantially longer pipeline (42.5 miles compared to 12.9 miles) and corresponding additional acreage disturbance. Commission staff estimated that 42.5 miles of 16-inch-diameter pipe would impact about 386 acres of land; while Tennessee's proposed 12.9 miles of 36-inch-diameter pipe would impact about 172 acres of land.[92] The disparity in acres of land impacted is likely even greater than estimated for a 16-inch-diameter pipe because the calculation does not include impacts from extra workspaces, staging areas, or access roads, which would be more numerous for a pipeline three times as long as Tennessee's proposed 36-inch-diameter pipeline.

4. Clarifications to the EA

67. Tennessee provided minor clarifications on various statements made in the EA. Tennessee clarifies that the minimum depth of cover for the pipeline is 24 and 36 inches in rock and soil, respectively.[93] It clarifies the acreages of affected agricultural, forested, and open land; an additional coldwater fishery waterbody crossing; the dates of tree clearing in areas of potential Indiana bat and northern long-eared bat habitat; the number of road crossings performed by either conventional bore or open cut; and minor typographical errors. Tennessee notes that the Orion Project includes modifications to an odorant facility at Compressor Station 323.[94] It further states that the Rock Branch School and Cricket Hill Golf Course are located outside of the construction right-of-way, but within 0.25 mile of the project. Last, Tennessee states that approximately 2.4 miles of the pipeline will cross through the Upper Delaware Scenic River Important Bird Area, rather than the 1.4 miles identified in the EA. These clarifications do not change the EA's analysis.

68. Tennessee also comments on discrepancies in the percent of soils affected by the Orion Project in regards to highly erodible soils, prime farmland, and soils prone to compaction. These apparent discrepancies are based on different methods utilized to calculate the total acreages of each soil characteristic by our staff and Tennessee.

[92] The calculations assume a 75-foot-wide construction right-of-way for a 16-inch-diameter pipe and a 110-foot-wide construction right-of-way for Tennessee's 36-inch-diameter pipe, and do not include extra workspaces.

[93] EA at 11.

[94] *Id.* at 2.

Soils information included in the EA was based on National Resources Conservation Service Soil Survey Geographic Database soils data.[95]

69. Tennessee requests adoption of the U.S. Fish and Wildlife Service-approved summer tree felling contingency plan in the event that not all tree felling can be completed/conducted during the October 15 through March 31 tree clearing window. We approve this request and have added Environmental Condition 17 in the appendix to this order to ensure that Commission staff is notified in the event that summer tree clearing is required.

70. Tennessee further clarifies that the construction workspace in three wetlands (W11b, W20a, and W30a) would require widths greater than 75 feet due to local soil conditions. We have reviewed each of these locations and the site-specific justifications provided by Tennessee and find them to be acceptable.

71. Tennessee requests that the open-cut (wet) crossing method be added to the waterbody crossing summary and throughout applicable sections of the EA as a contingency crossing method for the Lackawaxen River. The EA identifies that Tennessee may need to implement the open-cut crossing method if it is unable to implement the cofferdam crossing method (dry) at the time of the Lackawaxen River crossing.[96] Potential impacts associated with alternative crossing methods were analyzed in the EA as well.[97] We approve Tennessee's proposed cofferdam crossing method. Should Tennessee determine that an open-cut crossing is necessary, it will need to file for all regulatory approvals, including applicable permits from the U.S. Army Corps of Engineers (Corps) and National Park Service. Tennessee will also need to request authorization from the Commission for such a change, following our established procedures for evaluating and processing variance requests.[98]

72. Tennessee comments that impacts on wetlands and mitigation plantings have been addressed through the state and federal permitting process to this point and have not involved landowners. Thus, Tennessee asserts that recommendation 11 in the EA

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[95] *Id.* at table B.1-1. (In the footnotes to the table, the EA describes the methodologies to calculate the impacted soils associated with temporary and permanent workspaces proposed by Tennessee).

[96] *Id.* at 30.

[97] *Id.* at 93.

[98] Appendix B, Environmental Condition 5 requires Tennessee to inform the Commission of any changes to its route.

(appended in Appendix B, Environmental Condition 11, to this order) should not require correspondence with the Delaware Highlands Conservancy. The intent of this condition is for Tennessee to inform the Commission of correspondence related to this issue between Tennessee and the landowner, the Delaware Highlands Conservancy, and the Corps when appropriate. Thus, we will not modify staff's recommendation 11.

73. Tennessee requests that the Commission modify recommendation 12 in the EA (appended in Appendix B, Environmental Condition 12, to this order) regarding restoration of American chestnut trees located within the temporary construction right-of-way to allow for coordination with the landowner and the American Chestnut Foundation regarding appropriate restoration measures.[99] Tennessee also requests that the Commission modify recommendation 15 in the EA (appended in Appendix B, Environmental Condition 15, to this order) regarding tree clearing activities on properties currently enrolled in the Clean and Green Program.[100] We find that the recommendation in the EA regarding chestnut plantings allows sufficient flexibility to ensure that these plantings are restored in a manner that is feasible and agreed upon by the landowner. Similarly, the recommendation in the EA regarding tree clearing allows sufficient flexibility to ensure that the tree clearing activities on Clean and Green properties (or those eligible for the program) are minimized to the extent practicable, while ensuring that affected landowners are compensated in the event that Tennessee is not able to avoid disqualifying a property from the program. Thus, we will not modify recommendations 12 and 15 in the EA.

5. Segmentation

74. CEQ regulations require the Commission to include "connected actions," cumulative actions," and "similar actions" in its NEPA analyses.[101] "An agency impermissibly 'segments' NEPA review when it divides connected, cumulative, or similar federal actions into separate projects and thereby fails to address the true scope and impact of the activities that should be under consideration."[102] Connected actions

[99] EA at 36.

[100] *Id.* at 56.

[101] 40 C.F.R. § 1508.25(a)(1)-(3) (2016).

[102] *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304, 1313 (D.C. Cir. 2014) (*Delaware Riverkeeper Network*). Unlike for connected and cumulative actions, for similar actions an agency has some discretion about combining the environmental review for multiple projects. *E.g.*, *Earth Island Inst. v. U.S. Forest Serv.*, 351 F.3d 1291, 1305-1306 (9th Cir. 2003).

include actions that meet one of the following three criteria: (i) automatically trigger other actions, which may require environmental impact statements; (ii) cannot or will not proceed unless other actions are taken previously or simultaneously; and (iii) are interdependent parts of a larger action and depend on the larger action for their justification.[103]

75. In evaluating whether multiple actions are, in fact, connected actions, courts have employed a "substantial independent utility" test, which the Commission finds useful for determining whether the three criteria for a connected action are met. The test asks "whether one project will serve a significant purpose even if a second related project is not built."[104] For proposals that connect to or build upon an existing infrastructure network, this standard distinguishes between those proposals that are separately useful from those that are not. While the analogy between the two is not apt in many regards, similar to a highway network, "it is inherent in the very concept of" the interstate pipeline grid "that each segment will facilitate movement in many others; if such mutual benefits compelled aggregation, no project could be said to enjoy independent utility."[105]

76. In *Delaware Riverkeeper Network*, the court ruled that individual pipeline proposals were interdependent parts of a larger action where four pipeline projects, when taken together, would result in "a single pipeline" that was "linear and physically interdependent" and where those projects were financially interdependent.[106] The court put a particular emphasis on the four projects' timing, noting that when the Commission reviewed one of the four projects, the other projects were either under construction or pending before the Commission.[107] In a later case, the same court indicated that in considering a pipeline application, the Commission need not jointly consider projects that are unrelated and do not depend on each other for their justification.[108]

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[103] 40 C.F.R. § 1508.25(a)(1) (2016).

[104] *Coalition on Sensible Transp., Inc. v. Dole*, 826 F.2d 60, 69 (D.C. Cir. 1987); *see also O'Reilly v. U.S. Army Corps of Eng'rs*, 477 F.3d 225, 237 (5th Cir. 2007) (defining independent utility as whether one project "can stand alone without requiring construction of the other [projects] either in terms of the facilities required or of profitability.").

[105] *Coalition on Sensible Transp., Inc. v. Dole*, 826 F.2d at 69.

[106] *Delaware Riverkeeper Network*, 753 F.3d at 1314.

[107] *Id.*

[108] *See Myersville*, 783 F.3d at 1326.

77. The Conservation Groups and the Delaware Riverkeeper argue that the Commission improperly segmented the NEPA review by failing to analyze the Orion Project and Tennessee's approved Susquehanna West and Triad Expansion Projects in a single NEPA document as connected, similar, and cumulative actions. The Commission issued certificates for the Susquehanna West and Triad Expansion Projects on September 6, and December 30, 2016, respectively.[109] We conclude, as discussed below, that these projects do not trigger other actions, can each proceed on their own, and are not part of a larger action because the facilities are geographically separate, serve separate transportation paths with unique receipt and delivery points, and independent long-term financing.

78. Though each project will construct or modify facilities along the 127-mile-long 300 Line, the facilities will be geographically separate with different transportation paths and shippers. As noted above, the Orion Project facilities include approximately 8.23 miles of new 36-inch-diameter pipeline loop in Wayne and Pike Counties and approximately 4.68 miles of new 36-inch-diameter pipeline loop, as well as modifications to an existing compressor unit at Compressor Station 323 in Pike County, and will enable Tennessee to provide 135,000 Dth/d of firm west-to-east transportation service as subscribed by South Jersey Gas, South Jersey, and Cabot. By contrast, the Triad Expansion Project facilities, to be located roughly 25 miles west of the Orion Project facilities, include approximately 7.0 miles of new 36-inch-diameter pipeline loop and non-compression modifications to Compressor Station 321, entirely in Susquehanna County, Pennsylvania, and will enable Tennessee to provide 180,000 Dth/d of west-to-east firm natural gas transportation service subscribed by Lackawanna Energy Center, LLC. The Susquehanna West facilities, to be located approximately 50 miles west of the Orion Project facilities, include approximately 8.1 miles of 36-inch-diameter pipeline loop in Tioga and Bradford Counties, Pennsylvania, with associated modifications to Compressor Station 315 in Tioga County and Compressor Stations 317 and 319 in Bradford County, and will enable Tennessee to provide 145,000 Dth/d of additional east-to-west firm natural gas transportation service, subscribed by a single shipper, Statoil.

79. Each of the aforementioned Tennessee projects is functionally independent from one another. The Orion Project does not require nor does it trigger the construction or operation of the Susquehanna West or Triad Expansion Projects.[110] The same holds true for each of the other two projects: the Susquehanna West or Triad Expansion Projects do not require or trigger the construction of the Orion Project. As explained in the EA, each project's expansion service follows a unique, discrete transportation path with different

[109] Susquehanna West, 156 FERC ¶ 61,156; Triad Expansion 157 FERC ¶ 61,254.

[110] *See* 40 C.F.R. § 1508.25(a)(1)(i), (ii) (2016).

receipt and delivery points for each project.[111] Last, there is no record evidence that the three projects are financially interdependent.[112] Given the above, the Triad Expansion, Susquehanna West, and Orion Projects are not connected actions as defined by section 1508.25(a)(1) of the CEQ regulations.

80. Similar actions have "similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography."[113] An agency "may wish to analyze these actions in the same impact statement," but is not required to do so.[114] The Commission may consider similar actions in the same environmental analysis if it finds that it is the "best way to assess adequately the combined impacts of [the] similar actions."[115]

81. Impacts associated with the Susquehanna West and Triad Expansion Projects, while similar in timing, are geographically distinct from the Orion Project. Construction associated with each project would occur in different counties. The Orion Project facilities are located east of the nearest Susquehanna West and Triad Expansion Projects

[111] EA at 6 (providing a map of the projects' physical facilities and contract paths). The Orion Project will receive gas at the Gibson delivery meter in Susquehanna County for west-to-east delivery to the Milford delivery meter in Pike County. The Triad Expansion Project will receive gas at the Korban receipt meter for west-to-east delivery to the Uniondale delivery meter, both in Susquehanna County. The Susquehanna West Project will receive gas at the Shoemaker Dehydration receipt meter in Susquehanna County for east-to-west delivery to the Rose Lake delivery meter in Potter County. A small portion of the upstream contract path of the Orion Project overlaps with the downstream contract path of the Triad Expansion Project. However, the facilities associated with the two projects do not overlap, nor do they rely on the other project facilities to provide service.

[112] Unlike in *Delaware Riverkeeper Network*, here, there is no evidence that any of these three expansion projects will allow for the subsequent expansion projects to be achieved at a much lower cost. *See Delaware Riverkeeper Network*, 753 F.3d at 1316.

[113] 40 C.F.R. § 1508.25(a)(3) (2016) (defining similar actions).

[114] *Id.*; *see also Grunewald v. Jarvis*, 776 F.3d 893, 905 (D.C. Cir. 2015) (noting that even when an EIS addresses one of a series of closely related proposals, the decision whether to prepare a programmatic impact statement is committed to the agency's discretion to reject the claim that NEPA required the Park Service to consider two related management plans in a single EIS).

[115] *Id.*

facilities by approximately 50 and 25 miles, respectively. The new pipeline loops will primarily be installed within Tennessee's existing right-of-way with the exception of 1.4 miles of Loop 322, which will be located adjacent to an existing electric transmission line right-of-way.[116] The path for the Susquehanna West Project has both receipt and delivery points that are located to the west of both the Triad Expansion and the Orion Projects on the 300 Line. The Susquehanna West Project has a distinct flow path that is not shared by either the Triad Expansion or the Orion Projects, and therefore it will have no operational impact on either project. The Triad Expansion and the Orion Projects do share a small portion of the same transportation path on Tennessee's 300 Line system; however, the overlap is minimal and the receipt and delivery points have no interaction or interrelationship with each other. As a result, both projects, the Triad Expansion Project and the Orion Project, are functionally independent and could provide the requested service without negatively impacting the service for both sets of shippers.[117] For these reasons, we conclude that analyzing these three projects in the same NEPA document is neither necessary nor the best way to assess their combined impacts or reasonable alternatives.

82. Cumulative actions are those "which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement."[118] The EA for the Orion Project included both the Susquehanna West and the Triad Expansion Projects in its investigation of potential cumulative impacts, as discussed in further detail below.[119] Given the nature and location of the three projects'

[116] Application Resource Report 8 at 8-7.

[117] *See supra* P 79 n.111(discussing the receipt and delivery points along Tennessee system).

[118] 40 C.F.R. § 1508.25(a)(2) (2016).

[119] EA at 76-77.

facilities as discussed above and in the EA, we conclude that the three projects are not cumulative actions because they lack the potential to produce cumulatively significant impacts.

83. Delaware Riverkeeper also argues that the EA fails to satisfy the factors established in *Taxpayers Watchdog, Inc. v. Stanley*, namely whether the project has logical termini, substantial independent utility, and does not foreclose the opportunity to consider alternatives.[120] Delaware Riverkeeper claims that the Orion Project lacks independent utility because it could not function properly without the Susquehanna West or Triad Expansion Projects. In addition, it argues that the Commission is mistaken when it states that projects have independent utility if they are designed to serve different customers at different points in time.[121] Delaware Riverkeeper further claims that the Commission has essentially foreclosed the alternative of leaving the 300 Line not fully looped by eliminating the "no build" alternative. Delaware Riverkeeper states that Tennessee will try to fill in the portions of the 300 Line that do not have a third loop.

84. As we explained above and contrary to Delaware Riverkeeper's engineering report, the facilities associated with the Orion Project are necessary to deliver the contracted-for-quantities of gas. With respect to the logical termini factor, the placement and termini of pipeline looping is logical, as it is based on the dictates of the engineering and hydraulics necessary to add capacity to an existing system sufficient to transport the contracted for volumes of natural gas between designated receipt and delivery points. However, unlike a metro rail system, which was the infrastructure under consideration in *Taxpayer Watchdog*, the logical termini of pipeline expansion loops are not necessarily coterminous with the contracted receipt and delivery points (or what would be the stations in the case of a rail system). The termini of this project were based on the engineering and hydraulics necessary to add capacity to Tennessee's existing system. Tennessee's Orion, Susquehanna West, and Triad Projects comport with the *Taxpayer Watchdog* independent utility test because, as discussed above, each project would proceed irrespective of the others. The Commission's separate consideration of the Susquehanna West, Triad Expansion, and Orion Projects did not foreclose our opportunity to consider alternatives. The EA for the Orion Project did, in fact, consider several alternatives, including the "no action" alternative. Further, Delaware Riverkeeper's assertion that Tennessee will loop the entire 300 Line is conjecture and, at this point in time, no such proposal is pending before the Commission.

[120] 819 F.2d 294, 298 (D.C. Cir. 1987) (*Taxpayers Watchdog*).

[121] Delaware Riverkeeper September 22, 2016 Comments at 22-24.

6. Cumulative Impacts

85. CEQ defines cumulative impacts as "the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."[122] The requirement that an impact must be "reasonably foreseeable" to be considered in a NEPA analysis applies to both indirect and cumulative impacts.

86. The "determination of the extent and effect of [cumulative impacts], and particularly identification of the geographic area within which they may occur, is a task assigned to the special competency of the appropriate agencies."[123] CEQ has explained that "it is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful."[124] Further, a cumulative impact analysis need only include "such information as appears to be reasonably necessary under the circumstances for evaluation of the project rather than to be so all-encompassing in scope that the task of preparing it would become either fruitless or well-nigh impossible."[125] An agency's analysis should be proportional to the magnitude of the environmental impacts of a proposed action; actions that will have no significant direct and indirect impacts usually require only a limited cumulative impacts analysis.[126]

87. As we have explained, consistent with CEQ guidance, in order to determine the scope of a cumulative impacts analysis for each project, Commission staff establishes the geographic scope of resources that may be affected both by a proposed project and by

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[122] 40 C.F.R. § 1508.7 (2016).

[123] *Kleppe*, 427 U.S. at 413.

[124] CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act* at 8 (January 1997) (1997 CEQ Guidance), http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-ConsidCumulEffects.pdf.

[125] *Natural Res. Def. Council, Inc. v. Callaway*, 524 F.2d 79, 88 (2d Cir. 1975) (*Gallaway*).

[126] *See* CEQ, *Memorandum on Guidance on Consideration of Past Actions in Cumulative Effects Analysis* at 2-3 (June 24, 2005) (2005 CEQ Guidance), http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-PastActsCumulEffects.pdf.

other past, present, and reasonably foreseeable future actions.[127] While the scope of our cumulative impacts analysis will vary from case to case, depending on the facts presented, we have concluded that where the Commission lacks meaningful information about potential future natural gas production within the geographic scope of a project-affected resource, then production-related impacts are not sufficiently reasonably foreseeable so as to be included in a cumulative impacts analysis.[128]

88. The Conservation Groups and Delaware Riverkeeper contend that the EA fails to take a hard look at the cumulative impacts associated with the Susquehanna West and Triad Expansion Projects, other Tennessee 300 Line projects, and natural gas development. The Conservation Groups further state that the EA did not adequately assess cumulative impacts on vegetation and wildlife, land use and recreation, water resources and fisheries, and wetlands.

89. In considering cumulative impacts, CEQ advises that an agency first identify the significant cumulative effects associated with a proposed action.[129] The agency should then establish the geographic scope for analysis.[130] Next, the agency should establish the time frame for analysis, equal to the timespan of a proposed project's direct and indirect impacts.[131] Finally, the agency should identify other actions that potentially affect the same resources, ecosystems, and human communities that are affected by the proposed

[127] *See, e.g., Columbia Gas Transmission, LLC*, 149 FERC ¶ 61,255, at P 113 (2014).

[128] *Id.* P 120.

[129] 1997 CEQ Guidance at 11.

[130] *Id.*

[131] *Id.*

action.[132] As noted above, CEQ advises that an agency should relate the scope of its analysis to the magnitude of the environmental impacts of the proposed action.[133]

90. The cumulative effects analysis in the EA comports with the CEQ guidance.[134] The EA identifies a resource-specific geographic scope of analysis for each resource area that would be impacted by the project: geology and soils; water resources, wetlands, and fisheries; vegetation and wildlife; land use and recreation; visual; traffic and transportation; cultural resources; air quality; and noise.[135] The project's impacts on resources would be minimal, temporary, and contained within or adjacent to the temporary construction right-of-way or additional temporary workspaces. As such, we find that Commission staff selected proportionate geographic scopes of analysis for each resource area where potential cumulative impacts might occur.[136] Actions located outside of the defined geographic boundaries do not have a potential to contribute cumulatively to the impact of the project before us because such actions and any impacts are too distant from the Orion Project. The EA identifies the Susquehanna West and Triad Expansion Projects as potential projects for inclusion in the cumulative impact analysis and finds that these two projects are located outside the geographic scope of analysis for the Orion Project.[137] Thus, the EA determines that no cumulative impacts would result from the Orion, Susquehanna West, and Triad Expansion Projects, as there would be no impact on the same resources by these projects.

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[132] *Id.*

[133] *See* 2005 CEQ Guidance at 2-3, n.89, which notes that agencies have substantial discretion in determining the appropriate level of their cumulative impact assessments and that agencies should relate the scope of their analyses to the magnitude of the environmental impacts of the proposed action. Further, the Supreme Court held that determining the extent and effect of cumulative impacts, "and particularly identification of the geographic area within which they occur, is a task assigned to the special competency of the agenc[y]," and is overturned only if arbitrary and capricious. *See Kleppe*, 427 U.S. at 414-15.

[134] EA at 72-88. We also note that the 1997 Guidance states that the "applicable geographic scope needs to be defined case by case." 1997 CEQ Guidance at 15.

[135] *Id.* at 73.

[136] The EA provides these resource-specific geographic areas in Table B.8-1. *Id.* at 73.

[137] *Id.* at 77.

91. The Conservation Groups argue that the EA's geographic scope of analysis for cumulative impacts is too restrictive, especially for forested lands (0.5 mile radius), land use and recreation (5-mile radius), and water, wetlands, and fisheries resources (U.S. Geologic Survey's Hydrologic Unit Code 12 (HUC-12) watershed).[138] The Conservation Groups provide no further explanation as to why the geographic scope for cumulative impacts in the EA is inadequate, other than to cite to past construction violations by Tennessee.[139]

92. The EA identifies a geographic scope of analysis of 0.5 mile from the pipeline for aboveground facilities for potential impacts on vegetation and wildlife, which included impacts on forested land. As identified in the EA, the project will result in a small amount of additional forest clearing; however, because the clearing will occur primarily adjacent to the existing Tennessee 300 Line system, the project will not cumulatively contribute to impacts associated with habitat fragmentation.[140]

93. The EA determines that the project will have only minimal impacts on land use, recreation, and visual resources, because the project involves minimal aboveground components and is a looping pipeline located adjacent to an existing pipeline system. The primary recreation resource affected by the Orion Project is the Lackawaxen River. Tennessee will cross the river using a cofferdam (dry) method. This method would dam the immediate trench area – approximately half of the river at a time – and will allow for continual on-water recreational activity during construction, although some activities could be constrained. However, following construction, the entire width of the Lackawaxen River would be available for on-water recreation, and recreational activity would return to preconstruction conditions. As other projects are not proposed within the area during the same time period, and for the aforementioned reasons, cumulative effects on recreation are not expected.

94. The EA identifies the geographic scope of analysis for fisheries, water, and wetland resources as the HUC-12 watershed boundary. The EA determines that impacts on fisheries would be temporary and minimal.[141] Thus, it found that impacts on fisheries resources would be of such a temporary and minimal nature that no cumulative impacts on fisheries would be expected. The EA's use of the HUC-12 watershed as the geographic scope resulted in the inclusion of 13 other projects or activities occurring

[138] Conservation Groups September 22, 2013 Comments at 11, 23, 26-27.

[139] *Id.* at 23, 24, 27.

[140] EA at 36.

[141] *Id.* at 39.

within the HUC-12 watershed that could impact fisheries, water, and wetland, including previous Tennessee projects.[142] As stated in the EA, the project will have minimal direct impacts on wetlands.[143] The majority of the wetland impacts associated with the project are associated with emergent wetlands, which will revert and restore soon after construction. All of the wetlands impacted by the project will retain their hydrologic function following construction and restoration. The EA notes that the Orion Project could have impacts on wetlands; however, impacts associated with the other projects identified by the EA have occurred over various spatial and temporal scales within the HUC-12 watershed and previously impacted wetlands would have returned to pre-construction status.

95. The EA determines that the project will have only minimal direct and indirect impacts on waterbodies. As stated in the EA, if the Orion Project and other identified projects within the same geographic scope overlap in their construction, cumulative effects resulting from turbidity could occur, but any impacts will be minor.[144] Impacts will be further minimized by adherence to the Corps' section 404 of the Clean Water Act permit and the PADEP's section 401 of the Clean Water Act Water Quality Certification, which will include in-stream work timing restrictions to protect fish resources; and Tennessee's project-specific *Wetland and Waterbody Construction and Mitigation Procedures* (*Procedures*),[145] which specifies mitigation measures to minimize impacts on waterbodies from project construction and operation.[146] Therefore, we conclude that the likelihood that impacts associated with waterbody crossings to contribute cumulatively

[142] *Id.* at 82.

[143] *Id.* at 31-34.

[144] *Id.* at 86.

[145] Tennessee proposes three changes to the Commission's *Procedures*: (1) the setback for additional temporary workspaces would be within 50 feet of the edge of a waterbody or the boundary of a wetland for 10 work spaces; (2) the use of temporary slope breakers will be used where permanent slope breakers would alter the wetland characteristics; and (3) use of seed and mulch to restore wetlands as required by Pennsylvania agencies or County Conservation District Offices. We approve these changes. *Id.* at 27-29, 33-34.

[146] *Id.* at 26-30. On September 20, 2016, the PADEP issued its section 401 Water Quality Certification for this project to Tennessee. On January 15, 2016, and supplemented in June 2016, Tennessee filed its section 404 joint application. Authorization from the Corps is still outstanding and required prior to construction.

with other projects in the area is minor because of the various mitigation measures in place and the short time period for construction.

96. The Conservation Groups further comment that because the Orion, Susquehanna West, and Triad Expansion Projects will be located in the same air quality control region, additional analysis related to cumulative air quality impacts was omitted. As noted in the EA, no new emissions sources are proposed as a part of the Orion Project, thus the majority of the air quality emissions associated with the project will be generated during construction.[147] The operation of the Orion Project will result in a minor amount of fugitive emissions associated with the operation of the pipeline and additional components at Compressor Station 323 in Pike County, Pennsylvania. Because construction emissions will be temporary, and air quality in the vicinity of construction activities will return to preconstruction conditions once construction is completed, the geographic scope of analysis for cumulative air quality impacts was established as 0.25 mile.[148]

97. For these reasons, we agree with Commission staff's analysis that the resource-specific geographic scopes defined and evaluated in the EA are adequate in identifying potential cumulative impacts associated with vegetation and wildlife, land use and recreation, water, wetlands, and fisheries resources, and air quality in the project vicinity and that the potential cumulative impacts associated with the project were appropriately reviewed in the EA.

98. The Conservation Groups state that the cumulative effects of shale gas development on forested lands, waterbodies and wetlands, fish and wildlife, land use, recreation, noise, and air quality should be discussed in the EA. The Conservation Groups cite *National Resources Defense Council v. Callaway* for the proposition that the Commission must analyze impacts from small, individual, and unrelated sources for all projects, even those that have not been approved because "experience may demonstrate that its adoption and implementation is extremely likely."[149] The Conservation Groups provide a map depicting the wells that have been developed in Pennsylvania, and believe that the Commission's cumulative impact analysis excludes hundreds, if not thousands of wells associated with shale gas development.

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[147] *Id.* at 60-64.

[148] *Id.* at 73.

[149] Conservation Groups September 22, 2016 Comments at 30-31 (citing *Callaway*, 524 F.2d at 88)).

99. As stated in the EA, two permitted natural gas wells were identified within the geographic scope of analysis for this project.[150] The EA considers the cumulative impacts on forest resources as a result of clearing well pads for these gas wells. We agree that this analysis is appropriate for the scale of the project and the resources that will be impacted. However, regarding future natural gas production and its associated well development, an analysis of cumulative impacts is outside of the project scope, because the exact location, scale, and timing of these facilities are unknown. Moreover, the Conservation Groups' reliance on *Callaway* is unpersuasive. In *Callaway*, the court considered whether the U.S. Navy's analysis in the EIS adequately addressed the cumulative impacts associated with the dumping of polluted dredging spoils. The Navy proposed to dump the spoils from its dredging project in the Long Island Sound in an existing designated disposal site. In *Callaway*, the record included information that numerous other dumping projects were proposed or pending and would result in dumping in nearly the exact same site. The court found that the Navy's EIS failed to adequately address these other projects in the cumulative effects section of the EIS.[151] The court noted that the dredging spoils would all be disposed of in nearly the same site as the Navy's, and all of the spoils were similarly polluted. However, unlike *Callaway*, where the dredging spoils would all be deposited in the same site, the impacts associated with the development and production of natural gas in the Marcellus and Utica Shale formations are outside the geographic scope of analysis for the Orion Project area. As the court said, an agency "[does not] need to consider other projects so far removed in time or distance from its own that the interrelations, if any between them is unknown or speculative."[152] Accordingly, we find *Callaway* unavailing.

100. As noted above, shale gas development occurring outside the geographic scope of analysis does not constitute a cumulative impact. Therefore, it is not mandated as part of the Commission's NEPA review. Nevertheless, to provide the public additional information and to inform our public convenience and necessity determination under section 7(c) of the NGA,[153] Commission staff, after reviewing publicly-available U.S. Department of Energy and U.S. Environmental Protection Agency methodologies, has prepared the following analyses regarding the potential impacts associated with unconventional natural gas production and downstream combustion of natural gas. As summarized below, these analyses provide only an upper bound estimate of upstream and

[150] EA at 75.

[151] *Callaway*, 524 F.2d at 89.

[152] *Id.* at 90.

[153] 15 U.S.C. § 717f(e) (2012).

downstream emissions. In addition, these estimates are generic in nature because no specific end uses have been identified and reflect a significant amount of uncertainty.

101. 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 Orion Project, on an annual basis for greenhouse gas (GHG) emissions, and for the life of the project for land-use and water use within the Marcellus shale basin.[154] 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. Additionally, as noted before, it assumes that 100 percent of the incremental capacity resulting from the project will be new gas produced in the Marcellus Shale, as opposed to gas produced in other regions or withdrawn from storage. According to a 2016 study by the Department of Energy and National Energy Technology Laboratory (NETL), approximately 1.48 acres of land is required for each natural gas well pad and associated infrastructure (road infrastructure, water impoundments, and pipelines).[155] Based upon the project capacity and the expected estimated ultimate recovery of Marcellus shale wells,[156] between 290 and 570 wells would be required to provide the gas over the estimated 30-year lifespan of the project. Therefore, on a normalized basis over the life of the project,[157] these assumptions lead us

[154] Commission staff assumed the project will have a 30-year lifespan.

[155] Dep't. of Energy and Nat'l Energy Tech. Laboratory, *Life Cycle Analysis of Natural Gas Extraction and Power Generation,* DOE/NETL-2015/1714, at 22, Table 3-6 (August 30, 2016) (2016 DOE/NETL Study).

[156] U.S. Energy Info. Admin., *The Growth of U.S. Natural Gas: An Uncertain Outlook for U.S. and World Supply* (June 15, 2015), http://www.eia.gov/conference/2015/pdf/presentations/staub.pdf; Dep't of Energy and Nat'l Energy Tech. Laboratory, *Environmental Impacts of Unconventional Natural Gas Development and Production*, DOE/NETL-2014/1651, (May 29, 2014) (2014 DOE/NETL Study).

[157] Normalized yearly impacts are estimated based on the overall impacts for the life of the project averaged on a per year basis.

to an upper-bound estimate of between 14 and 28 additional acres of land per year that may be impacted by well drilling.[158] This estimate of the number of wells is imprecise and subject to a significant amount of uncertainty.

102. We also estimated the amount of water required for the drilling and development of these wells over the 30 year period using the same assumptions. The 2014 DOE/NETL Study finds 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.[159] Therefore, the upper bound estimate of the production of wells required to supply the project could require as much as 38 to 108 million gallons of water per year over the 30-year life of the project.

103. The EA quantifies GHG emissions from construction (approximately 10,296 metric tons over 2 years, CO2-equivalent [tpy CO_{2e}]) and only fugitive emissions will result from operation (about 95.2 metric tons per year).[160] The EA does not include upstream emissions. However, we conservatively estimated the upstream GHG emissions, which have an upper bound of: 110,000 metric tpy CO_{2e} from extraction, 210,000 metric tpy CO_{2e} from processing, and 100,000 metric tpy CO_{2e} from non-project upstream pipelines.[161] Again, this is an upper-bound estimate that involves a significant amount of uncertainty.

104. With respect to downstream GHG emissions, Commission staff used an U.S. Environmental Protection Agency-developed methodology to estimate the downstream GHG emissions from a project, assuming all of the gas to be transported is eventually

[158] The 2016 DOE/NETL Study 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/NETL Study at 24, Table 3-8.

[159] 2014 DOE/NETL Study at 76, Exhibit 4-1.

[160] EA at 63-64.

[161] The upstream GHG emissions were estimated using the methodology in the 2014 DOE/NETL Study. Generally, the average leak and emission rates identified in the analysis for each segment of extraction, processing, and transport were used. The method is outlined in Section 2 of the DOE/NETL Study, and the background data used for the model is outlined in Section 3.1. GHG emission estimates were based on the results identified in Tables 4.3, 4.4, and 4.5. New NSPS Oil & Gas rules or other GHG mitigation were not accounted for. Additionally, the length of non-project pipeline prior to the gas reaching project components was conservatively estimated.

combusted. As such, we conservatively estimated the GHG emissions from the end-use combustion of the natural gas to be transported by the projects. The project can deliver up to 135,000 Dth/d of new volumes to end-use customers in the United States, which can produce 2.5 million metric tpy CO_{2e} from end-use combustion. 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 other fuels, which could actually lower total CO_2emissions. It may also displace gas that otherwise would be transported via different means, resulting in no change in GHG 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.

7. Resource Specific Impacts

a. Waterbodies and Wetlands

105. The Orion Project's pipeline will cross a total of 31 waterbodies: 19 categorized as perennial; 5 as intermittent; 6 as ephemeral; and 1 as a flowing ditch. Tennessee will use a dry crossing method at 23 crossings, an open cut method at 1 crossing, and temporary road crossings at 5 crossings.[162] The construction of aboveground facilities will not have an effect on waterbodies or wetlands.

106. In its comments on the EA, Tennessee states that it will use the dry cofferdam crossing method to cross the Lackawaxen River, but should that method fail, it would use an open-cut crossing method,[163] which, as stated above, would require additional Commission review and authorization.[164] Tennessee notified the Corps and the PADEP of this plan in its Clean Water Act section 404 and Wetland and Waterbody Crossing permits, respectively.[165]

107. Workspaces for the Orion Project will impact a total of 65 wetlands.[166] Temporary construction workspace impacts will affect 19.13 acres of wetlands.

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[162] *Id.* at 26, appendix B-1 to B-2. One temporary access road crossing occurs at an existing culvert and the flowing ditch would be avoided.

[163] Tennessee September 22, 2016 Comments at 1.

[164] *See supra* P 71.

[165] Tennessee September 22, 2016 Comments at 1.

[166] EA at 31.

Tennessee will construct pipeline segments through wetlands in accordance with its project-specific *Procedures* and state and federal permit requirements.[167] Approximately 1.45 acres of palustrine scrub-shrub wetland and 3.48 acres of palustrine forested wetland would be permanently converted to emergent wetland following construction.[168] All other impacted wetlands will return to their original condition. Tennessee, in its comments on the EA, clarifies that the right-of-way width in wetlands would be limited to 75 feet for all but three of the wetlands (W20a, W11b, and W30a).[169]

108. The EA concludes that if Tennessee complies with the construction and restoration methods described in the EA, in the *Upland Erosion Control, Revegetation, and Maintenance Plan* (*Plan*) and *Procedures*, as modified by Tennessee, and Tennessee's *Erosion and Sediment Control Plan*, the impacts on waterbodies and wetlands would be minor and temporary.[170] The EA also concludes that if Tennessee implements its proposed mitigation restoration measures, which include location of the proposed pipeline facilities with the existing 300 Line and an existing power line, compliance with the *Procedures* and the *Spill Prevention Control and Countermeasures Plan*, and state and federal permit requirements along with offsets to mitigate the permanent conversion impacts of forested/scrub-shrub wetlands, the impacts on wetlands will be minor and temporary.[171]

109. The Conservation Groups state that the EA failed to take a "hard look" at the direct and indirect impacts of the Orion Project on wetlands and waterbodies.[172] The Conservation Groups believe that the EA incorrectly concludes that Tennessee's adherence to the Commission's *Plan* and *Procedures*, and Tennessee's *Erosion and Sediment Control Plan*, would only lead to minor impacts. The Conservation Groups claim that because Tennessee's previous construction of the 300 Line Project occurred under the Commission's *Plan* and *Procedures* and resulted in violations of

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[167] *Id.* at 32-34.

[168] *Id*. at 32.

[169] Tennessee September 22, 2016 Comments at 1.

[170] EA at 28.

[171] *Id.* at 33-34.

[172] We note that this order requires that Tennessee comply with the Commission's *Plan* and *Procedures*, both updated in May 2013, which are available on the Commission's website at http://www.ferc.gov/industries/gas/enviro/plan.pdf and http://www.ferc.gov/industries/gas/enviro/procedures.pdf.

Pennsylvania's Clean Streams Law, adherence to the *Plan* and *Procedures* here will not prevent Tennessee from committing violations during construction of the Orion Project.[173] The Conservation Groups also reference a wetland previously impacted during construction of the 300 Line Project, which will also be impacted with the construction of the Susquehanna West Project, to assert that pipeline crossings have the potential to cause long-term impacts on wetlands.

110. We affirm the EA's conclusions. The required mitigation measures are adequately protective and will be enforced. The EA discusses Tennessee's project-specific *Procedures*, which specify mitigation measures to minimize impacts on waterbodies and wetlands from project construction and operation.[174] Tennessee's compliance with its Clean Water Act permits and with other state permits will further mitigate impacts. Tennessee obtained a section 401 Water Quality Certificate from the PADEP on September 20, 2016, and also must obtain a section 404 permit from the Corps. Tennessee must also obtain a Water Obstruction and Encroachment Permit, a License to Occupy Submerged Lands, and an Erosion and Sediment Control General Permit for Earth Disturbance from the PADEP.[175]

111. In addition, during construction and restoration, Tennessee must employ environmental inspectors to ensure compliance with the *Plan*, *Procedures*, and conditions appended to this order.[176] Noncompliance is subject to the Commission's enforcement discretion. If Tennessee fails to comply with the other federal and state permits, Tennessee would also be subject to enforcement by the administering agencies. That

[173] Conservation Groups September 22, 2016 Comments at 15-16.

[174] Specifically, our *Procedures* already require Tennessee to cross perpendicularly to the waterbody, *Procedures* § V(B)(3)(b); to control erosion and sedimentation runoff from the start of construction through successful stabilization and revegetation with site-specific plants, *id*. §§ V(B)(4), V(B)(10), V(C)(8), VI(B)(2); to avoid damage to microhabitats, *id*. § V(C)(1)-(3); to maintain adequate flows to protect aquatic life, *id*. § V(B)(3)(e); to remove only vegetation impeding construction, *id*. § VI(A)(2)-(3); to avoid disturbance to root systems and soils, *id*. § VI(B)(2)(f)-(g); and to prevent equipment-based damage to vegetation, *id*. §§ VI(B)(1)(c)-(d), VI(B)(2)(e), (j).

[175] EA at 17 table A.7-1. The table provides an overview of when the various applications were submitted and supplemented.

[176] Appendix B contains our environmental conditions, which include environmental monitoring. Specifically, conditions 6(c)-(g) and 7(c)-(g) which require environmental inspectors to be present and to document all instance of noncompliance, the corrective actions taken, and any complaints from a landowner or a resident.

violations of state law occurred during the construction of the 300 Line Project does not indicate that the Commission's mitigation measures are inadequate to protect the environment in this instance. Moreover, the 300 Line Project was of an entirely different scale than the Orion Project, involving the construction of 127 miles of new pipeline (contrasted with approximately 13 miles here), potentially impacting 157 waterbodies, 331 wetlands, and 2 vernal pools (contrasted with 24 waterbodies and 65 wetlands here).[177] Based on the avoidance and minimization measures discussed in the EA, together with the environmental conditions included in Appendix B of this order, we agree with the EA's conclusions that impacts to wetlands and waterbodies will be minor and temporary.

112. Delaware Riverkeeper contends that the Commission will violate the Clean Water Act if it issues an order prior to PADEP's issuance of a section 401 Water Quality Certification.[178] Delaware Riverkeeper takes particular issue with the Commission issuing a certificate and allowing the pipeline company to proceed with tree felling before receipt of the section 401 certificate.[179] We note that the PADEP issued its section 401 Water Quality Certification for the Orion Project on September 20, 2016. Thus, Delaware Riverkeeper's argument is moot because the Commission did not issue the order in this proceeding prior to PADEP's issuance of the section 401 certification.

113. Delaware Riverkeeper also comments that insufficient baseline information was used for the assessment of potential project impacts on wetlands and waterbodies.[180] Tennessee provided an aquatic report when filing its application, and submitted amended versions in subsequent supplemental filings.[181] The aquatic report provided the results of wetland and waterbody field surveys conducted within 400 feet of the proposed project centerline. Commission staff reviewed this information in its entirety and found it

[177] See the EA for the 300 Line Project, Docket No. CP09-444-000, at 1-2, 1-28, 2-12, 2-25, 2-26 (filed Feb. 25, 2010).

[178] Delaware Riverkeeper September 22, 2016 Comments at 31-34.

[179] *Id.* at 32-33.

[180] *Id.* at 37.

[181] Application Resource Report 2 at appendix 1-C; February 10, 2016 supplemental filing at attachment 1-4; June 17, 2016 supplemental filing at attachment 2-1, 2-2.

sufficient to use the applicable information in the EA. Consequently, we conclude that the EA adequately and properly analyzes wetland and waterbody impacts associated with construction and operation of the project.

114. Delaware Riverkeeper suggests that the feasibility of using horizontal directional drills (HDD) for the crossing of wetlands and waterbodies was not considered in the EA. Tennessee did not propose to use HDD crossing for all waterbodies and, as mentioned above, the Commission need not analyze every possible alternative. The EA does, however, examine the crossing method for each waterbody.[182] The EA fully assesses the impacts on surface waters resulting from construction and operation of the proposed project, and finds that the project would not significantly impact water quality. The EA recognizes that constructing the pipeline using a dry-ditch crossing method for waterbodies could temporarily disrupt waterbody flow, increase turbidity and sedimentation, and adversely affect water quality for a short period.

115. Delaware Riverkeeper asserts that the EA did not fully analyze the potential feasibility of crossing the Lackawaxen River via an HDD method. We disagree, as the EA does provide such an analysis.[183] The EA cites the substrate of the Lackawaxen River in the vicinity of the project (gravel deposits with cobbles and boulders) as being a high risk for inadvertent returns (loss of drilling fluid) into the Lackawaxen River or surrounding upland areas. In addition, the vertical topographic difference (160 feet) of the entry and exit holes for the HDD create a potential "dry hole" situation, which would increase the risk of lost tooling, stuck carrier pipe, and/or hole collapse. We find that the EA appropriately discloses the potential feasibility of crossing the Lackawaxen River using the HDD method and agree with the conclusion that using an HDD to cross the Lackawaxen River is not a practical alternative.

116. The National Park Service comments that if the open-cut (wet) crossing method of the Lackawaxen River is used, peak suspended sediment concentration could be expected during removal of the rock filter that would be installed downstream of the crossing location. The National Park Service requests that in addition to trench excavation, turbidity monitoring take place during the removal of the rock filter in the event the open-cut crossing method is used.

117. The EA considers the potential environmental effects of the primary crossing method of the Lackawaxen River, which is the cofferdam (dry) crossing method.[184]

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[182] EA at 26-30, appendix B-1 to B-2.

[183] *Id.* at 92.

[184] *Id.* at 26-30.

The potential environmental effects of alternative crossing methods, including the open-cut crossing method were also analyzed in the EA.[185] We agree with the National Park Service's comments that if the open-cut crossing method were used, removal of the downstream rock filter would also represent an opportunity for collected sediment to become re-suspended in the watercourse. The crossing of the Lackawaxen River will require a permit from the Corps and PADEP, both of which will identify any specific monitoring and mitigation requirements.[186] If Tennessee changes its proposed cofferdam crossing method to an open-cut crossing of the Lackawaxen River, it will need to file for all regulatory approvals, including applicable permits from the Corps, PADEP, and National Park Service.[187] Tennessee will also need to request authorization from the Commission for the proposed change and follow our established procedures for evaluating and processing variance requests.[188]

b. Protected Species

118. Delaware Riverkeeper comments that the EA omits several state-listed threatened and endangered species and other species of state concern known to occur in the project area. Tennessee consulted with the U.S. Fish and Wildlife Service and Pennsylvania's Department of Conservation and Natural Resources, Game Commission, and Fish and Boat Commission regarding potential impacts on federal- and state-listed protected species. The results of these consultations were provided in Tennessee's application and supplemental filings and were summarized in the EA.[189] These consultations did not identify any of the state listed species mentioned in the Delaware Riverkeeper comments except for the American bittern and the upland sandpiper, which were correctly identified in the EA as protected under the Migratory Bird Treaty Act. Thus, we find that the EA appropriately addresses potential impacts on federal- and state-listed protected species.

8. Pipeline Operational Safety

119. Delaware Riverkeeper provides summaries of articles detailing a pipeline explosion that reportedly occurred due to routine testing on November 5, 2008, in Pike

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[185] *Id.* at 90-93.

[186] *Id.* at 17-18.

[187] *Id.* at 30.

[188] Environmental Condition 5 requires Tennessee to inform the Commission of any changes to its route. Appendix B, Environmental Condition 5.

[189] EA at 39.

County, Pennsylvania, on Columbia Gas Transmission, LLC's pipeline system. Delaware Riverkeeper expressed concerns regarding the safety of the proposed project in sensitive areas along the route.

120. Pipeline safety standards are mandated by regulations adopted by the U.S. Department of Transportation (DOT) in 49 C.F.R. Part 192. DOT has the exclusive authority to promulgate federal safety standards used in the transportation of natural gas.[190] These regulations are protective of public safety. As detailed in the EA, Tennessee has designed and will construct, operate, and maintain the project in accordance with the pipeline safety regulations in 49 C.F.R. Part 192.[191] DOT also prescribes the minimum standards for operating and maintaining pipeline facilities, including the requirement to establish emergency plans, maintain liaison with appropriate fire, police and public officials, and establish a continuing education program.[192] Tennessee must comply with these standards.

121. Based on the analysis in the EA, as supplemented in this order, we conclude that if constructed and operated in accordance with Tennessee's application and supplements, and in compliance with the environmental conditions in Appendix B to this order, our approval of this proposal will not constitute a major federal action significantly affecting the quality of the human environment.

[190] *See* Memorandum of Understanding Between the DOT and FERC Regarding Natural Gas Transportation Facilities (Jan. 15, 1993), http://www.ferc.gov/legal/mou/mou-9.pdf.

[191] EA at 66.

[192] *See* 49 C.F.R. § 192.615 (2016) (requiring emergency plans).

122. 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 local laws, may prohibit or unreasonably delay the construction and replacement of facilities approved by this Commission.[193]

123. The Commission, on its own motion, received and made a 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 Tennessee authorizing it to construct and operate the Orion Project, as described and conditioned herein, and as more fully described in its application.

(B) The certificate authority issued in Ordering Paragraph (A) is conditioned on Tennessee's:

(1) completing the authorized construction of the proposed facilities and making them available for service within two years of the date of this order, pursuant to paragraph (b) of section 157.20 of the Commission's regulations;

(2) compliance with all applicable Commission regulations including, but not limited to, Parts 154, 157, and 284 and paragraphs (a), (c), (e), and (f) of section 157.20 of the Commission's regulations;

[193] *See* 15 U.S.C. § 717r(d) (2012) (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); *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).

(3) compliance with the environmental conditions listed in Appendix B to this order; and

(4) executing firm service agreements equal to the level of service and in accordance with the terms of service presented in its precedent agreements, prior to commencing construction.

(C) Tennessee's proposed incremental recourse reservation rate for firm transportation service under Rate Schedule FT-A is approved. Tennessee shall revise its proposed incremental commodity charge to reflect its generally applicable commodity charge. Tennessee's proposal to use its generally applicable Rate Schedule IT rates for interruptible services are approved. These approvals are subject to conditions, as described above.

(D) Tennessee shall file its negotiated rate agreements, or a tariff record describing the essential elements of the agreements not less than 30 days, and not more than 60 days, prior to the commencement of service on the project.

(E) Tennessee shall file executed copies of the non-conforming service agreements as part of its tariff, disclosing and reflecting all non-conforming language not less than 30 days, and not more than 60 days, prior to the commencement of service on the project.

(F) Tennessee's request to utilize currently effective fuel and loss retention percentages and electric power cost rates is accepted, as described above.

(G) Tennessee shall keep separate books and accounts of costs attributable to the proposed incremental services, as described above.

(H) Tennessee 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 Tennessee. Tennessee shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

(I) The late motions to intervene are granted.

(J) Tennessee Gas Customer Group's protest is denied.

(K) The motion to consolidate this proceeding with the Susquehanna West and Triad Expansion proceedings is denied.

(L) The requests for an evidentiary hearing are denied.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

Appendix A

Parties Filing Motions to Intervene:

- Allegheny Defense Project
- Atmos Energy Corporation
- Atmos Energy Marketing LLC
- Margaret Babbitt
- Centerpoint Energy Resources Corp.; City of Clarksville Gas and Water Department, City of Clarksville; City of Corinth Public Utilities Commission; Delta Natural Gas Company, Inc.; Greater Dickson Gas Authority; Hardeman Fayette Utility District; Henderson Utility Department; Holly Springs Utility Department; Humphreys County Utility District; Town of Linden; Morehead Utility Plant Board; Portland Natural Gas System, City of Portland; Savannah Utilities; Springfield Gas System, City of Springfield; City of Waynesboro; West Tennessee Public Utility District; Athens Utilities; City of Florence, Alabama; Hartselle Utilities; City of Huntsville, Alabama; Municipal Gas Authority of Mississippi; North Alabama Gas District; Tuscumbia Utilities; and Sheffield Utilities ("Tennessee Gas Customer Group") (filing jointly)
- Consolidated Edison Company of New York, Inc. and Orange and Rockland Utilities, Inc.
- Jason Curtis
- Damascus Citizens for Sustainability, Inc.
- Delaware Riverkeeper Network
- Exelon Corporation
- Christine Foland
- Kimberlee Kruchinski
- Roberta Kruchinski
- Glen D. Johnson
- Andrew Jones
- Alicia Lewis
- Alexander Lotorto
- Gregory Lotorto
- NJR Energy Services Company
- National Fuel Gas Distribution Corporation
- National Grid Gas Delivery Companies
- New Jersey Natural Gas Company
- New York State Electric & Gas Corporation
- Winifred Olsen
- PSEG Energy Resources & Trade LLC
- Piedmont Natural Gas

- Range Resources-Appalachia, LLC
- Linda Reik
- Charles SanClementi, Jr.
- Sierra Club
- Trout Unlimited, Inc., Pennsylvania Council of Trout Unlimited, and Pike/Wayne chapter of Trout Unlimited (filing jointly)
- Sondra Wolferman
- Joseph Zenes

Appendix B

Environmental Conditions

1. Tennessee 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 EA, unless modified by the Order. Tennessee must:

    a. request any modification to these procedures, measures, or conditions in a filing with the 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 Orion 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**, Tennessee 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 locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Tennessee 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 the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Tennessee's exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to this Order must be consistent with these authorized facilities and locations. Tennessee's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of their 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. Tennessee 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 will 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 will 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 our *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**, Tennessee shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. Tennessee must file revisions to its plan as schedules change. The plan shall identify:

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

b. how Tennessee 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, and how Tennessee will ensure that sufficient personnel are available to implement the environmental mitigation;

d. Tennessee 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. Tennessee will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change);

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

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

h. for each discrete facility, a Gantt or Program Evaluation Review Technique (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. Beginning with the filing of its Implementation Plan, Tennessee shall file updated status reports with the Secretary 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 efforts to obtain the necessary federal authorizations;

b. the construction status of the project, 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 EI(s) during the reporting period (both for the conditions imposed by the 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 which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and

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

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

9. Tennessee 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.

10. **Within 30 days of placing the authorized facilities in service**, Tennessee 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 the company 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.

11. **Prior to construction**, Tennessee shall file with the Secretary updated information regarding how wetland mitigation areas established as part of the Northeast Upgrade and 300 Line Projects could be impacted by the Orion Project. Tennessee's filing shall include correspondence between Tennessee and the landowner, the Delaware Highlands Conservancy, and the Corps, as appropriate; and shall discuss measures that will minimize impacts on these mitigation areas.

12. **Prior to construction**, Tennessee shall file with the Secretary, for the review and written approval of the Director of the OEP, an American chestnut tree restoration plan. The restoration plan shall:

    a. identify the location of American chestnut trees planted in the previously disturbed temporary construction right-of-way as part of reforestation activities associated with 300 Line construction, and will be disturbed by construction of the Orion Project; and

    b. detail how Tennessee will restore these plantings where feasible and agreed upon by the landowner.

13. **Prior to construction**, Tennessee shall file with the Secretary, for the review and written approval of the Director of OEP, evidence of landowner concurrence with the site-specific residential construction plans for the residences at milepost (MP) 6.7 (EA appendix C, figure C-2, Tract No. 883) and MP 7.6 (EA appendix C, figure C-3, Tract No. 889.02) where the residences are within the proposed project construction work areas.

14. Tennessee shall develop and implement project-specific environmental complaint resolution procedures. The procedures shall provide landowners with clear and simple directions for identifying and resolving their environmental mitigation problems/concerns during construction of the project, and during restoration of the project rights-of-way. **Prior to construction of the project**, Tennessee shall mail the complaint procedures to each landowner whose property will be crossed.

    a. **In its letter to affected landowners, Tennessee shall:**

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

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

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

b. In addition, Tennessee shall include in its weekly status report for the project 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.

15. **Prior to construction**, Tennessee shall file with the Secretary, for the review and written approval of the Director of the OEP, a plan to minimize project-related tree clearing on each parcel of land enrolled in the Clean and Green Program that contains a forested component. This plan shall demonstrate how project construction and operation will not affect the property's eligibility in the program. In the event Tennessee is not able to avoid disqualifying a property from the program, Tennessee shall describe how it will compensate the affected landowner.

16. Tennessee **shall not begin construction** of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads **until**:

a. Tennessee files with the Secretary the Pennsylvania State Historic Preservation Office's comments on the:

i. Final Phase I Archaeological Investigation Report; and

ii. Phase I Cultural Resources Survey Report for the Lackawaxen Creek Restoration Site.

b. Commission staff reviews, and the Director of OEP approves, the cultural resources reports and notifies Tennessee in writing that construction may proceed.

All materials filed with the Commission containing location, character, and ownership information about cultural resources have the cover and any relevant pages therein clearly labeled in bold lettering: "**CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE**."

17. In the event that Tennessee is not able to complete tree clearing within the October 15 to March 31 window identified by the U.S. Fish and Wildlife Service to minimize potential impacts on protected bat species, Tennessee shall file with the Secretary a report identifying the locations where clearing is requested outside of the October 15 to March 31 window. The report must document the U.S. Fish and Wildlife Service's approval of Tennessee's Indiana Bat Conservation Plan as applicable to potential habitat associated with both the Indiana bat and the northern long-eared bat and detail how tree clearing associated with the project will comply with the plan.

Document Content(s)