

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas Branch 3
Tennessee Gas Pipeline Company, LLC
Northeast Energy Direct Project
Docket No. PF14-22-000
§ 375.308(z)

May 15, 2015

Mr. J. Curtis Moffat
Deputy General Counsel and Vice President
Gas Group Legal
Tennessee Gas Pipeline Company, LLC
1001 Louisiana Street, Suite 1000
Houston, TX 77009

Re: Comments on Draft Resource Reports

Mr. Moffat:

The enclosure contains the comments of the FERC staff on Tennessee Gas Pipeline Company, LLC's (Tennessee Gas) draft environmental resource reports (RRs) filed on March 13, 2015 for the planned Northeast Energy Direct Project (Project). The comments ask for clarifications of discrepancies and identify missing information that we believe necessary to begin substantive preparation of the draft environmental impact statement for the Project.

Due to the large number of public comments and the complexity of the Project, we are requesting that Tennessee Gas incorporate the requested information in the revised RRs. In addition, when Tennessee Gas files its full set of revised draft RRs please ensure that the comments identified in the enclosure are fully addressed. To facilitate review of the revised draft RRs, Tennessee Gas should include a matrix that identifies the specific locations in the RRs (i.e., section and page number) where the information requested in these comments may be found.

When filing documents and maps, prepare separate volumes as outlined on the Commission's website at <http://www.ferc.gov/help/filing-guide/file-ceii/ceii-guidelines.asp>. Any plot plans showing equipment or piping details or other Critical Energy Infrastructure Information should be filed as non-public and labeled "**Contains Critical Energy Infrastructure Information – Do Not Release**" (18 CFR 388.112). Cultural resources material containing location, character, or ownership information

should be marked **“Contains Privileged Information – Do Not Release”** and should be filed separately from the remaining information, which should be marked **“Public.”**

Thank you for your attention to this matter. If you have any questions, please contact me at (202) 502-8097.

Sincerely,

Eric Tomasi
Environmental Project Manager
Office of Energy Projects

Enclosure

cc: Public File, Docket No. PF14-22-000

**Northeast Energy Direct Project (Project)
Docket No. PF14-22-000**

Comments on Draft Resource Reports

General

1. General – Include the information requested for draft Resource Reports 1 and 10 as described in our comments dated February 27, 2015. If any of the requested information cannot be included within the next draft filing, indicate when that information will subsequently be filed.
2. Respond to the questions from the U.S. Environmental Protection Agency (EPA) included as Attachment A; and the U.S. Fish and Wildlife Service included as Attachment B.
3. Tennessee Gas should respond to the specific comment letters identified below:
 - a. The Town of Northfield, Massachusetts (and attachments), filed on April 1, 2015;
 - b. The U.S. Fish and Wildlife Service, filed on April 1, 2015;
 - c. The Town of Amherst, New Hampshire, filed on March 24, 2015;
 - d. The Town of Townsend, Massachusetts, filed on March, 24, 2015;
 - e. The Town of Warwick, Massachusetts, filed on March 9, 2015;
 - f. The Town of Mason, New Hampshire, filed on February 4, 2015;
 - g. The Town of Ashby, Massachusetts, filed on November 23, 2014;
 - h. The Town of Wilmington, Massachusetts, filed on January 20, 2015;
 - i. The Town of Wilmington, Water and Sewer Department, filed on January 28, 2015;
 - j. The Commonwealth of Massachusetts, Historical Commission, filed on May 1, 2015;
 - k. The Heritage Commission of the Town of Richmond, New Hampshire, filed on February 6, 2015;
 - l. The Town of Tewksbury, Massachusetts, filed on April 27, 2015;
 - m. The U.S. Army Corps of Engineers – Upstate New York Section, filed on April 24, 2015;
 - n. The Berkshire Planning Commission, filed on May 7, 2015; and

- o. The New York State Department of Environmental Conservation, filed on May 12, 2015.

Resource Report 1 – Project Description

1. Provide the locations and details for new compressor stations. Provide a large scale (1:3,600 or greater) plot plan identifying the proposed engine/compressor units, buildings, piping and other equipment, site property line, and nearby noise-sensitive areas (such as residences, farms, or schools). In addition, provide the mailing list for all landowners within ½ mile of the property boundary of the facility.
2. General – Include all information listed in Resource Report 1 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to:
 - a. the location and configuration of temporary workspaces, including justifications for any within 50 feet of wetlands;
 - b. locations and details for meter stations, mainline valves (MLV), pig launchers and receivers, cathodic protection systems, non-jurisdictional facilities, access roads, contractor yards, and other appurtenant facilities;
 - c. updated aerial imagery for the Project area;
 - d. updated acreages for lands affected by the Project;
 - e. environmental construction plans (ECPs), blasting plan, and state-specific invasive species management plans;
 - f. site-specific waterbody and wetland plans and associated crossing techniques;
 - g. site-specific residential construction plans;
 - h. locations and details for horizontal directional drills (HDD);
 - i. complete alignment sheets;
 - j. detailed construction schedule;
 - k. location of shallow bedrock, steep slopes, and side slopes; and
 - l.
3. proposed modifications to the Commission’s Upland Erosion Control, Revegetation, and Maintenance Plan (Plan) and Wetland and Waterbody Construction and Mitigation Procedures (Procedures) Plan and Procedures; Section 1.0 (page 1-2) – Clarify the statement that “Tennessee’s current proposed pipeline alignment along utility corridors is proposed to be generally located five (5) feet outside the existing utility easement.” Indicate whether the construction

and permanent right-of-way would directly abut existing easements where possible. Include a descriptive table, with explanations included, for each area where a generally co-located Project segment would temporarily deviate away from other co-located utilities. Include a discussion in Table 1.1-2 regarding the status of negotiations between Tennessee Gas and the owners of other utilities regarding the potential for use of a portion of those entities' rights-of-way by Tennessee Gas during construction and/or operation.

4. Section 1.1.2.2.1 (page 1-13) – Confirm whether all temporary workspace needed for the modifications at Station 319 are already owned by Tennessee Gas. In addition, provide a description of work/upgrades that would take place at Station 319 due to the Planned/Proposed Susquehanna West Project.
5. Section 1.2.3 (page 1-48) – Include any measures to be implemented to avoid or minimize impacts on sensitive resources, such as wetlands and forest, along new access roads.
6. Table 1.2-5 – Indicate whether forest, wetlands, waterbodies, or other sensitive resources would be affected by use of the contractor yards. Update draft Resource Reports 2 and 3 appropriately.
7. Section 1.3.1.13 (page 1-63) – Include a discussion regarding how ridge top areas used during construction would be restored and how post-construction contours may be different than their original condition (this may require an alternative to the FERC Plan Section V.A.5). In addition, describe the source of imported soils during restoration and plans to address potentially associated issues such as the spread of invasive plant species, soil type compatibility, and rock content. Describe any measures that would be employed to avoid allowing backfilled rock to directly contact the pipe. Update Resource Reports 6 and 7 appropriately.
8. Section 1.3.1.14 (page 1-64) – Confirm whether Tennessee Gas would use a spray diffuser to discharge hydrostatic test water directly into a waterbody where applicable, in lieu of discharge overland based on the potential for reduced environmental impacts on the receiving waters. Indicate whether biocides or other additives would be added to hydrostatic test water. Update Resource Report 2 appropriately.
9. Section 1.3.2.1 (page 1-73) – Include a discussion of any special measures that Tennessee Gas would use in rugged terrain to address potential issues such as erosion control, rocks rolling off of the right-of-way during construction, and post-restoration slips and landslides.

10. Section 1.3.2.2 (page 1-76) – Indicate whether Tennessee Gas would coordinate with local and state authorities regarding potential impacts to roads and traffic patterns, as well as a commitment to repair all road damage caused by the Project.
11. Section 1.3.2.2 (page 1-76) – Include Project-specific plans for burning slash if applicable, and detail measures to be implemented to protect forest, waterbodies, wetlands, air quality, nearby residents, and other sensitive resources in areas where slash would be burned.
12. Section 1.3.2.3 (page 1-77) – Include in Section 1.3.2.3 a description of what equipment would be used to remove excess rock from agricultural soils and what size of rock would be removed.
13. Section 1.3.2.5.2 (page 1-79) – Discuss whether Tennessee Gas, in certain circumstances, may be able to pull back an HDD section in sub-sections, thereby increasing flexibility, minimizing the false right-of-way, and precluding the requirement of pulling one continuous section.
14. Section 1.3.2.6 (page 1-81) – Include a discussion regarding whether blasting would be used in areas of limestone or karst geology.
15. Section 1.3.2.7 (page 1-82) – Evaluate the feasibility of additional HDDs in sites containing forested wetlands with an impact of more than 0.5 acre per crossing or in sites containing any high quality or specially designated forested wetland.
16. Section 1.3.2.8 (page 1-82) – Evaluate the potential for using HDDs at all major waterbodies (e.g., Schoharie Creek). In addition, evaluate the feasibility of additional HDDs in sites where the following characteristics are present:
 - a. waterbody crossings greater than 30 feet wide where a dry construction method is not feasible; and
 - b. waterbodies listed as sensitive or high quality.
17. Section 1.3.2.9.2 (page 1-83) – Indicate whether Tennessee Gas would to the extent possible, position temporary workspace to avoid upland and wetland forest as well as other sensitive resources.
18. Section 1.3.3.6 (page 1-85) – Indicate whether Tennessee Gas would install communication towers as part of the Project, and if so describe their location and features.
19. Section 1.3.5 (page 1-86) – Include a discussion regarding whether Tennessee Gas intends to fund a third-party compliance program that would operate at the direction of the Commission staff.

20. Section 1.4.1 (page 1-87) – Include a detailed description and table listing the nature and frequency of all patrols and inspections that would be used during operation of the pipeline by facility type.
21. Section 1.4.2 (page 1-88) – Confirm that Tennessee Gas would not use herbicides to maintain the permanent right-of-way for purposes other than invasive plant species control.
22. Section 1.7 (1-129) – Identify any non-jurisdictional facilities associated with the Project. If there are any non-jurisdictional facilities that would be built as a result of the new gas volumes associated with this Project, include the following detailed information for each facility:
 - a. company/owner;
 - b. type of facility;
 - c. dimensions (pipe diameter, length, horsepower, etc. as appropriate for pipeline and land area for other facilities);
 - d. maps showing locations;
 - e. federal permits required and their status;
 - f. status of local and state permits required; and
 - g. any environmental reviews required for local, state, or federal permitting authorities.
23. Section 1.8 (page 1-129) – Include landowner specific parcel or tract identification numbers within the referenced Landowner Line List.
24. Section 1.8.1 (page 1-131) – Update the section to include the results for wetland and waterbody field surveys conducted or identify when they will be included.

Section 1.9.3 (page 1-146) – In the forthcoming table listing projects that may contribute to cumulative impacts, also include data columns for watershed identification, air quality control region, and basic information (and/or internet links) regarding impacts where available such as number of waterbodies crossed, acres of wetlands affected, acres of forest affected, and number of crossings of the Appalachian Trail.

Resource Report 2 – Water Use and Quality

1. General – Include all information listed in Resource Report 2 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to:

- a. discussion regarding groundwater classification in the New Hampshire portion of the Project, post-consultation with New Hampshire Department of Environmental Services;
 - b. locations of new compressor stations and associated potential impacts to groundwater;
 - c. location of public and private drinking water wells and springs located within 150 feet of any Project workspace area;
 - d. avoidance and mitigation measures that would be taken around wellhead protection areas (WHPAs);
 - e. exact locations of pipeyards and contractors yards, as well as their potential resource impacts;
 - f. impact avoidance, minimization, and mitigation measures for waterbodies containing fisheries resources and how timing restrictions on those waterbodies may impact the Project schedule;
 - g. results of database search for contaminated sediments;
 - h. locations of potable water intakes within three miles downstream of any proposed waterbody crossing;
 - i. hydrostatic test water sources, quantity needed, as well as discharge location;
 - k. description and evaluation for any clearing and disturbance related to obtaining water for the HDD or for installation of the HDD guide wires;
 - l. field survey results and wetland delineation reports;
 - m. identification of wetland impacts associated with each facility;
 - n. wetland mitigation provisions;
 - o. State Wetland Classifications; and
 - p. wetland-specific crossing methods.
2. General – Include justification for all modifications to the Commission’s Procedures including but not necessarily limited to:
- a. Section 2.2.1.2 (page 2-44) – waterbodies containing sensitive fisheries;
 - b. Section 2.2.2 (page 2-73) – construction of aboveground and pipeline appurtenant facilities;
 - c. Section 2.2.9.1 (page 2-81) – crossing methods for sensitive surface waters;
 - d. Section 2.3.5.1 (page 2-156) – site-specific locations of additional temporary workspace (ATWS) within 50 feet of wetlands; and

- e. Table 2.3-12 (page 2-161) – any site-specific locations where a construction workspace greater than 75 feet would be utilized in wetlands.
- 3. Section 2.1 (General) – In the groundwater descriptions, include a detailed description of the aquifers in each state including the names, beginning and ending MPs for each crossing, confining layers, principal use, depth to water, and general water quality. Update Table 2.1-2 to include aquifer, well depth, and yield.
- 4. Section 2.1.1.2.1 (pages 2-4 to 2-6) – Clarify which aquifer system is associated with the sole source aquifer (SSA). Confirm that “Total Mileage” is equivalent to the proposed crossing length of the SSA.
- 5. Section 2.1.1.2.3 (pages 2-7 to 2-8) – Define the groundwater designation ‘Class GA.’
- 6. Section 2.1.1.3.1 (page 2-8) – Include a discussion and complete citations for the U.S. Geological publications Survey publications that characterize the aquifers in the Project area.
- 7. Sections 2.1.1.3, 2.1.1.5, and 2.1.6 (page 2-8, 2-11, and 2-19) – Confirm whether Massachusetts and Connecticut have a Wellhead Protection Program and identify WHPAs accordingly. Discuss construction/operations precautions that would be implemented near WHPAs as well as any mitigation measures that may be required by wellhead protection area managers.
- 8. Section 2.1.1.3.2 (page 2-9) – Confirm whether the Project would impact the drinking water well protected by the Massachusetts Source Water Assessment Program (located in the Town of Erving).
- 9. Section 2.1.5 and 2.1.6 (page 2-15 and 2-19) –Include a discussion of all surface water protection areas depicted in Figure 2.1-4 that could be impacted by the Project and mitigation measures for work conducted within surface water protection areas.
- 10. Section 2.1.6 (page 2-19) – Confirm whether Tennessee Gas would provide pre- and post-construction testing of water quantity and quality to landowners with wells or springs located within 150 feet of any workspace.
- 11. Section 2.1.6 (page 2-19) – Include a discussion of potential aquifer impacts resulting from ground disturbing activities (e.g., HDD drilling, blasting). Include mitigation measures for potentially impacted springs and aquifers.
- 12. Section 2.2 – Update section to include results from waterbody field surveys. Discuss typical staging area requirements at waterbody crossings that would be

crossed in each state. Identify all waterbodies crossed within karst-prone areas and their crossing methods.

13. Update Tables 2.2-4, 2.2-5, 2.2-6, 2.2-7, and 2.2-8 showing waterbodies crossed by the Project to include the correct crossing width, crossing method, timing restrictions, and any information that is missing or marked as “TBD.” Provide clarification on why some waterbodies have “unknown” listed under type of waterbody and clarify what the term “unknown” indicates.
14. Section 2.2.5 (page 2-73) – Identify all areas with known or potentially contaminated sediments.
15. Section 2.2.6 (page 2-76) – Update text based on agency consultations regarding the presence of public/private wells, surface water intakes, and springs in the vicinity of the Project.
16. Section 2.2.7 (page 2-79) – Include data for hydrostatic test pressure, volume (in gallons) of hydrostatic test water by specific source location (waterbody and milepost [MP]), the expected month water would be withdrawn and discharged, and source alternatives. Identify if any chemicals that may be added to the test water and include proposed treatment and/or disposal method for treated discharge water. Include specific locations of the test water discharges. Include a Hydrostatic Test Plan.
17. Section 2.2.9 (page 2-88) – Provide updated information on sensitive waterbodies and identify mitigation measures for potential impacts to sensitive waterbodies and fisheries. Section 2.2.10 (page 2-89) – Discuss potential surface water impacts resulting from the operation of the Project (e.g., increased runoff resulting from increased impervious surface).
18. Section 2.2.11 (page 2-90) – Include the rationale that a minimum cover depth of 5 feet is adequate for all waterbodies.
19. Section 2.3 (General) – Update the wetlands section to include results from wetland field surveys. Include the Wetland Delineation Report or an estimate of when Wetland Delineation Report will be included. Clarify how construction impact acreages were calculated. In each table, include specific construction right-of-way widths for each wetland crossed and note any wetlands with irregular workspaces which would create impacts greater than simply calculating length multiplied by width.
20. Update Tables 2.3-1, 2.3-3, 2.3-5, 2.3-7, and 2.3-9 showing wetlands crossed by the Project to include crossing methods, state wetland classification, crossing length, and any information that is missing or marked as “TBD”.

Resource Report 3 – Fisheries, Wildlife, and Vegetation

1. General – Include all information listed in Resource Report 3 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to:
 - a. copies of additional or continued state and federal agency correspondence with state and federal agencies regarding potential Project-related impacts on existing aquatic, wildlife, vegetation resources (including state- and federally protected species) and associated mitigation measures. The topics addressed in these correspondences should include, but not necessarily be limited to:
 - i. fisheries of special concern;
 - ii. water quality designations;
 - iii. construction timing restrictions;
 - iv. Priority Habitats mapped by Massachusetts Natural Heritage and Endangered Species Program (NHESP);
 - v. the incorporation of Massachusetts BioMap 2 data in agency analyses;
 - vi. mitigation measures to protect interior forest breeding birds and other wildlife;
 - vii. crossing methods that would be used in significant or sensitive wildlife habitats;
 - viii. vegetative communities of special concern; and
 - ix. protected species with the potential to occur within the Project area.
 - b. a discussion and figures of the interior forest blocks that would be crossed by the Project, as mapped by Tennessee Gas;
 - c. results of field surveys conducted to characterize the disposition landscape where the Project would cross the Appalachian Trail as well as a crossing plan for the same location;
 - d. a determination of whether or not the Project would cross the Talcott Mountain State Forest in New Hampshire and associated impacts and mitigation if appropriate;
 - e. a list of vegetative community types that would be crossed by the Project area based on National Land Cover Database mapping for the entire Project area;

- f. a discussion of impacts associated with the temporary or permanent replacement of established, woody, or scrub/shrub vegetation with herbaceous growth, if applicable;
 - g. a discussion of potential construction and operation impacts on vegetation associated with aboveground facilities and appurtenant facilities (MLVs, pig launchers and receivers), temporary and permanent access roads, pipe and contractor yards, cathodic protection systems, and alternating current (AC) mitigation systems;
 - h. copies of consultations with the Natural Resource Conservation Service (NRCS), local soil and water conservation districts, and the U.S. Fish and Wildlife Service (USFWS) regarding right-of-way re-seeding recommendations;
 - i. state-specific Invasive Species Management plans; and
 - j. locations, timing, and results of species-specific surveys conducted for protected species and their habitats within the Project area.
2. General – Regarding the April 1, 2015 listing of the northern long-eared bat as a threatened species under the Endangered Species Act (ESA), update the following information:
- a. species current status and implications for the Project;
 - b. revised or additional protection and mitigation measures recommended by state and federal agencies, including requests for surveys. Include updated agency correspondence.
 - c. Table 3.2-1 (3-23) and Table 3.4-1 (page 3-86) – Table 3.2-1 shows northern long-eared bats as being a common wildlife species potentially present in upland and forested wetland habitat types crossed by the Project in Pennsylvania, New York, Massachusetts, New Hampshire, and Connecticut. However, Table 3.4-1 shows New York as the only state in which the species could potentially occur within the Project area. Clarify this apparent discrepancy.
 - d. Section 3.4.2.1.2 (page 3-103) – Section 3.4.2.1.2 states that the USFWS recommends that Tennessee Gas perform biological surveys in the vicinity of the Project alignment to determine potential effects. Confirm whether or not Tennessee Gas plans to conduct these surveys, and provide a timeline for their completion, if applicable.
3. Section 3.0 (page 3-2) – Section 3.0 states that 80% of the pipeline will be co-located with other rights-of-way, while Section 3.2.2.6 states 83% will be co-located with other rights-of-way. Address this discrepancy.

4. Section 3.1 and 3.3 (general) – Include copies of the following agency correspondence referenced in the text:
 - a. Pennsylvania Game Commission. September 24, 2014 and January 21, 2015;
 - b. New York Natural Heritage Program, October 3, 2014;
 - c. Pennsylvania Fish and Boat Commission, October 16, 2014;
 - d. Pennsylvania Department of Conservation and Natural Resources, October 16, 2014;
 - e. USFWS, October 17, 2014;
 - f. U.S. Department of Agriculture, January 28, 2015; and
 - g. Massachusetts Association of Conservation Commissions, February 6, 2015.
5. Table 3.1-3 – Update table with a more recent reference and update the reference section accordingly.
6. Section 3.1.3 (page 3-15) – include a discussion of the methods that would be used revegetate waterbody banks and restore them to their pre-construction conditions.
7. Section 3.2.1.3 (page 3-20) – Clarify whether successional palustrine scrub-shrub (PSS) areas are considered wetlands or open land. .
8. Table 3.2-4 – Include data regarding interior forest and edge forest crossed by the Project.
9. Section 3.2.2.3.3 (page 3-40) – Define “disposition landscape”.
10. Section 3.3.2.3.2 (page 3-76) – Include a source for the statement that “the Massachusetts Audubon Society identifies the most serious threat to this ecosystem as natural ecological succession, and that regular mowing and/or burning of vegetation is necessary to maintain existing grassland and pitch pine communities.”
11. Section 3.3.2.3.2 (page 3-76) – Confirm whether Tennessee Gas is coordinating with appropriate state agencies regarding vegetation communities of special concern located throughout the Project area.
12. Section 3.3.2.3.3 (page 3-76) – Confirm whether or not the Project (including temporary construction workspace) would cross any Terrestrial Hemlock Ravine natural community.

13. Section 3.3.2.5 (page 3-78) – Clarify whether the floodplain forest habitat along the Farmington River along Segment S would be impacted by the HDD crossing at this location. Confirm that the text and Table 2.2-8 agree on the location, crossing methods and potential impacts.
14. Section 3.3.4.1 (page 3-80) – Include a description of the circumstances in which a tree located within an area slated for vegetation clearing would not be felled.
15. Discuss how Tennessee Gas intends to address the bat hibernacula present near the Wright Compressor Station.

Resource Report 4 – Cultural Resources

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

1. Include all information in first draft Resource Report 4 labeled as “TBD” or pending, not necessarily limited to:
 - a. Table 4.4-4 (Parcel), Table 4.4-6 (Parcel), Table 4.4.18 (Parcel), Table 4.4-20 (Parcel), and Table 4.4-21 (Parcel); and
 - b. Data missing from the first draft Resource Report 4, such as tables for the Susquehanna County PA Supply Path Head Station, Delaware County NY Supply Path Mid Station, Schoharie County NY Supply Path Tail Station, Schoharie County NY Market Path Tail Station, Rensselaer County NY Market Path Mid Station, Maritimes Delivery Line in Middlesex County MA, Concord Delivery Line in Middlesex County MA, Fitchburg Lateral Extension in MA, North Worcester Lateral in MA, Market Path Station 2 in Berkshire County MA, Market Path Mid Station 3 in Franklin County MA, Market Path Tail Station in Middlesex County MA, Wright to Dracut Pipeline Segment in NH, portion of Haverhill Lateral in NH, portion of Fitchburg Lateral in NH, Market Path Mid Station 4 in Hillsborough County NH, the 300 Line Loop in CT, and the Samford Loop in CT.
2. Include all new and previously unfiled correspondence, meeting notes, phone logs, or emails between Tennessee Gas and the State Historic Preservation Offices (SHPOs). This should include copies of comments from the Massachusetts SHPO dated October 1, 2014 and January 26 and April 22, 2015,
3. Include all new or previously unfiled correspondence, meeting notes, phone logs, or emails between Tennessee Gas and interested Indian tribes. This should

include copies of notes from the March 18 and April 27, 2015 meetings with Indian tribes. Update Table 4.2-1 accordingly.

4. Attachment 4a – Pages 239 through 418 appear to be duplicates of pages 59 through 238. Update the attachment to remove any duplicated correspondence from SHPOs and tribes.
5. Include copies of first draft work plans-research designs produced for each state. Document that the research designs-survey protocols were submitted to the SHPO for each state, and interested Indian tribes, and file the comments of the SHPOs and tribes on the work plans. File revised work plans for each state that address the comments of the SHPOs and tribes.
6. Include copies of the draft Unanticipated Discovery Plan for each state. Document that the Discovery Plans were submitted to the SHPOs and interested tribes. File comments from the SHPOs and tribes on the Discovery Plans. File revised plans that address the comments of the SHPOs and tribes.
7. Explain how Native American monitors or survey crew members would be incorporated into the on-the-ground cultural resources inventories conducted through Tennessee’s consultant, Louis Berger. Include copies of the results of investigations by Indian tribes to identify traditional cultural properties, ceremonial stone landscapes, burials, sacred sites, or other properties of cultural or religious importance to tribes that historically used or occupied the Project area.
8. At a minimum, Resource Report 4 should include an Overview Report that complies with Section V of the staff’s “Guidelines for Reporting on Cultural Resources Investigations for Pipeline Projects,” and includes the results of a literature review and site file search. Revise all the tables listing previously recorded archaeological sites and aboveground historic sites to cover all sites within 0.5 mile of the proposed facilities, including Smithsonian site number, site name if known, site type, segment, parcel, milepost or location, distance in feet from centerline, recorder and date, evaluation, and SHPO opinion of National Register of Historic Places (NRHP) eligibility and the date of that determination.

9. Include a schedule for the conduct of cultural resources surveys, and the filing of the results of those investigations. Also, include a table that lists all Project segments covered by a cultural resources survey, the date of the survey, and the archaeological or historic standing structures recorded within each inventoried segment, by state. The data in the table of newly identified sites should include Smithsonian site number, site name if known, site type, segment, parcel, milepost or location, distance in feet from centerline, company/recorder and date of recordation, NRHP evaluation, and recommendation for future work. File copies of all cultural resources survey reports and the comments of the SHPOs and Indian tribes on those reports.
10. Include a response to the February 9, 2015 letter from the town of Milford, New Hampshire, indicating how historic resources would be identified along the pipeline route through the town, and addressing how the town would be included as a “consulting party” in the Section 106 compliance process.
11. At a site visit of the planning crossing of the Hudson River, FERC staff identified a small graveyard approximately 400 feet from the west bank of the river. Currently the pipeline centerline would be very near the site. Provide an avoidance plan for this site.
12. Document that Tennessee Gas has submitted a revised research design for Massachusetts in response to comments from the SHPO on the first draft.

Resource Report 5 – Socioeconomics

1. General – Include all information listed in Resource Report 5 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to: Section 5.8 (page 5-12) – Environmental Justice discussion for aboveground facilities. Include a table that includes a breakdown of minority and low-income populations near each facility.
2. Section 5.1.3 (page 5-3) – Include an estimated percentage of the non-local workers that would be relocating to the Project area with their families. Include an estimate of the total population increase to the Project area.
3. Section 5.1.3 (page 5-3) – Include an estimate of the average construction workforce and peak construction workforce by year for pipeline facilities and for above ground facilities.
4. Table 5.2-1 (page 5-5) – In footnote number 2, clarify how Rental Vacancy Rate is determined including the units.

5. Section 5.3 (page 5-7) – For each county in the Project area, include the following:
 - a. number of police departments;
 - b. number of fire departments;
 - c. number of school districts and total enrollment; and
 - d. number of hospitals and total number of hospital beds.
6. Section 5.4 (page 5-9) – Specify the typical and maximum duration of a complete road closure when no detour is available, and include mitigation measures to ensure emergency access during these periods.
7. Section 5.4 (page 5-10) – Discuss the likelihood or provide an affirmative statement of whether “contractors may utilize buses” for worker transportation (emphasis added). Include locations of any “Park-N-Ride areas” and discuss traffic management and mitigation measures at these areas.
8. Section 5.8 (page 5-12) – Include an environmental justice analysis (please refer to guidance and comments by the EPA) and discussion for the pipeline portion of the Project. Include a table that includes a breakdown of minority and low-income populations for each state and county crossed by the Project.

Resource Report 6 – Geological Resources

1. General – Include all information listed in Resource Report 6 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to:
 - a. mines reported along the proposed pipeline routes based on state databases;
 - b. oil and gas well locations;
 - c. areas of severe erosion;
 - d. faults crossed by Project pipeline facilities;
 - e. steep slopes (15 to 30 percent) crossed by Project;
 - f. blasting locations by MP; and
 - g. Paleontological Resources Plan.
2. General – Clarify whether Tennessee Gas will be conducting geotechnical field surveys. Include the following information regarding field surveys for assessing potential hazards from karst, karst features within the right-of-way (ROW), steep slopes, and landslides:
 - a. what areas would be surveyed;

- b. a schedule for both when surveys would be conducted and when results would be made available;
 - c. who would conduct the surveys, e.g., a geotechnical engineer or certified geologist; and
 - d. if site specific recommendations for construction techniques would be developed for areas identified as having a hazard.
- 3. Section 6.2 (pages 6-67 to 6-73) – Include the following information is incorporated into the blasting plan, Resource Report 6, and other Resource Reports as appropriate:
 - a. Federal and state regulations that would be adhered to if blasting would be needed;
 - b. monitoring of blasting including peak particle velocity;
 - c. the monitoring of wells and springs within proximity to blasting activities including the type of monitoring, when monitoring would take place, and any specific testing that would take place;
 - d. damage mitigation measures including under what conditions the measures would be used (e.g., blasting mats); and
 - e. how Tennessee Gas would handle damage potentially caused by blasting and damage claims.
- 4. Section 6.3 (pages 6-73 to 6-82) – If any mines surface and/or underground are located proximal to, or would be crossed by, the Project. Include a detailed discussion of measures that would be taken to minimize hazards to the pipeline from mining operations. Include a discussion of:
 - a. how hazards occurring due to blasting would be minimized;
 - b. measures that would be used to prevent potential damage from excavation;
 - c. discussion of unstable surfaces, landslides, and slumping in mining areas; and
 - d. measures to prevent contamination from mine tailings.
- 5. Section 6.3 (page 6-73 to 6-82) – Include a table and discussion of oil and gas wells located within 0.25 mile of the pipelines, ATWS, aboveground facilities, and access roads by MP. Include the following information:
 - a. the total number of active, inactive (plugged), and proposed wells that would be within 0.25 mile of the Project;
 - b. identify any natural gas storage facilities that would be located with 0.25 mile of the Project;

- c. measures that would protect any well that may be located within the working area and/or located proximal to the working area; and
 - d. measures that would be taken if an unknown and unmapped well is encountered during construction.
- 6. Section 6.4.1.2 (pages 6-92 to 6-96) – Include US Geological Survey (USGS) probability estimates for both 2 percent and 10 percent exceedance for all states. Include a figure that displays the Project and the seismic probability zones for both 2 percent and 10 percent exceedances in 50 years.
- 7. Section 6.4.1.2.1 (page 6-93) – Include a citation for the second bulleted statement in this section.
- 8. Section 6.4.1.2.1 (page 6-93) – Define “small to moderate.” in the third bulleted statement in this section.
- 9. Table 6.4-3 – Include the type of fault, a class category for the listed faults, identify if the faults are class A, B, C, or D within the USGS fault data base, and include the age of the most recent movement or displacement for each.
- 10. Section 6.4.1.3.3 (page 6-96) – Table 6.4-3 identifies numerous faults crossed by the Project in Massachusetts; however, the text in Section 6.4.1.3.3 states that the Project would potentially cross three fault lines in Massachusetts. Clarify this discrepancy.
- 11. Section 6.4.1.4.7 (page 6-112) – As part of mitigation measures for Project areas located in areas of potential karst terrain prepare a karst mitigation plan that identifies who would be responsible for identifying karst features during construction, who would be notified of the karst features discovery, general karst remediation measures that could be used, and if a geotechnical expert, such as a certified geologist, would be employed to evaluate the karst feature and include site specific remediation recommendations.
- 12. Section 6.4.1.4.7 (page 6-114) - Prepare and include a mitigation plan for post-construction karst development within the ROW
- 13. Section 6.4.1.5 (page 6-115) - Provide a table of landslide susceptibility/incidence showing the MP intervals of areas crossed by the pipeline that are prone to landsliding where construction would take place along the toes of slopes and/or on side-slopes.

Resource Report 7 – Soils

1. General – Include all information listed in Resource Report 7 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to:
 - a. acreage of prime farmland soils that would be affected by construction and operation associated with compressor stations and MLVs;
 - b. state-Specific ECPs; and
 - c. proposed mitigation to minimize impact on soils.
2. General – Include justification for any modifications to the Commission’s Plan.
3. General – Include a table and discussion of vulnerable soils crossed by the Project based on NRCS guidelines.
4. General – Include summary tables that identify soil limitations that would be impacted by construction of the Project for pipeline facilities, aboveground facilities (including compressor stations, meter stations, and MLVs), temporary access roads, permanent access roads, and contractor yards by segment, MPs, state and county in acres. Include a table for both permanent impacts and temporary impacts. An example of a summary table is provided below.

County/State	Potential Water Erosion ^a	Potential Wind Erosion ^b	Stony/Rocky Soils ^c	Shallow Depth to Bedrock ^d	Soil Compaction Potential ^e	Poor Revegetation Potential ^f	Poor Drainage Potential ^g	Prime Farmlands ⁱ
State								
County								
(sub-total)								
Project Total								

5. General – Include a Section addressing invasive plant species and soil pests. The Section should address development of procedures, in coordination with the appropriate state and local agencies, to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.
6. General – Include the mitigation measures that Tennessee Gas would incorporate into its state-specific ECPs to mitigate impact to soils including erosion prone soils, stony/rocky soils and shallow depth to bedrock, soil compaction, low revegetation potential, poor drainage, hydric soils, and prime farmlands.
7. General – Include a discussion on ground heaving and any potential hazards it might pose to the Project.

8. General – Include a discussion of stony / rocky soils and include this soil limitation in Tables 7.1-1 through 7.1-3, 7.2-1, and 7.3-1.
9. Section 7.3 (page 7-5) – Include a table describing the extent of prime farmlands including the Project facility, state, county, and MPs.
10. Section 7.3 (page 7-5) – Include a summary table of impacts to prime farmlands and farmlands of state wide importance by type. See the preferred format below.

Impacts on Prime Farmlands and Farmlands of Statewide Importance (in acres) etc										
Farmland Classification	Farmland Type									
	Total Farmland Impacts		Active Agricultural Land		Agricultural Land/Fallow Field		Managed Forest Land		Open Field/Open Land	
	Constr. Impacts	Operation Impacts	Constr. Impacts	Operation Impacts	Constr. Impacts	Operation Impacts	Constr. Impacts	Operation Impacts	Constr. Impacts	Operation Impacts
STATE										
Pipeline										
Access Roads										
Compressor Station										
Meter Stations										
Contractor Yards										
State Subtotal										
Project Total										

11. Section 7.4.3 (page 7-8) – Clarify whether Tennessee Gas would use timber or board mats to prevent compaction instead of coconut fiber mats and geotextile fabric.
12. Section 7.4.3 (page 7-8) – Specify at what interval Tennessee Gas would conduct soil compaction tests in agricultural and residential areas.
13. Section 7.5.2 (page 7-10) – Delete the word “annually” in the first sentence of this Section. Delete the word “cultivated” and replace with the word “managed” in the second sentence of this Section.
14. Section 7.5.2 (page 7-11) – Add another bullet to the first bulleted list in this section addressing stabilization of the topsoil windrow.
15. Attachment 7B (page 7b-1 to 7b-101) – In Tables 7.1-1, 7.1-2, and 7.1-3, include the revegetation potential as either low, moderate, and high instead of as “yes” or “N/A” and define these ranges.

16. Attachment 7B (page 7b-1 to 7b-101) – Increase the font size of the footnotes for Tables 7.1-1, 7.1-2, and 7.1-3.
17. Attachment 7B (page 7b-1 to 7b-66) – In Table 7.1-1, several soil series including but not limited to Holly Soils, Udifluvents, cobbly, and Medisaprists, ponded have a revegetation potential listed as N/A. Confirm whether or not these soil series are not revegetation potential is not applicable for each of these soil series, and, if so, identify why the revegetation potential is not applicable.
18. Attachment 7B (page 7b-67 to 7b-73) – In Table 7.1-2, clarify why all aspects of the table are listed as N/A for Massachusetts, New Hampshire, and Connecticut.
19. Attachment 7B (page 7b-67 to 7b-73) – In Table 7.2-1, include the type of facility (e.g., MLV, compressor station).

Resource Report 8 – Land Use, Recreation and Aesthetics

1. General – Include all information listed in Resource Report 8 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to:
 - a. Section 8.1.1.3 (page 8-3) – Locations of each ATWS and justifications for any modifications to FERC’s Plan;
 - b. Table 8.1-2 (pages 8-6 to 8-8) – Missing acreages for various Project facilities;
 - c. Table 8.1-3 (pages 8-9 to 8-12) – ROW cross-section diagram;
 - d. Section 8.1.2 (page 8-13) – Locations of aboveground and appurtenant facilities within the text, Table 8.1-5, and associated updates to Volume II, Appendix F;
 - e. Section 8.1.3 (page 8-17) – Locations of additional pipe and contractor yards within the text, Table 8.1-6, and associated updates to Volume II, Appendices E and F;
 - f. Table 8.1-6 (pages 8-18 to 8-19) –Locations of new contractor and pipe yards within New Hampshire, Connecticut, and Massachusetts;
 - g. Section 8.1.4 (page 8-20) – Locations of additional access roads in section, Table 8.1-7 and Volume II, Appendices E and F;
 - h. Section 8.1.6.1 (page 8-25) – ECPs;
 - i. Table 8.1-11 (page 8-29) – Railroad crossings for the Project;
 - j. Section 8.2.1 (page 8-31 to 8-35) –Updated correspondence with planning agencies regarding planned development and impacts and avoidance, minimization, and mitigation measures.

- k. Table 8.2-1 (page 8-32) – Updated information regarding locations of newly identified planned developments;
 - l. Section 8.2.1.6 (page 8-35) – Information regarding the potential for conflicts with other construction projects;
 - m. Table 8.2-2 (page 8-36) – Residences and commercial buildings within 50 feet of the Project workspace;
 - n. Section 8.2.2.1 (page 8-37) – Site-specific drawings for all residences within 50 feet of the Project workspace;
 - o. Section 8.3 (page 8-38) – Recently identified public land, recreation, and other designated areas;
 - p. Section 8.3.1.1.1 (page 8-45) – Updated consultations with federal agencies to determine whether federal lands would be impacted by the Project;
 - q. Section 8.3.1.1.2 (page 8-45 to 8-52) – Updated consultations with state agencies;
 - r. Section 8.3.2.1.2 (page 8-61) – Crossing methods of scenic rivers;
 - s. Table 8.3-2 (page 8-62) – Updated list of properties covered under NRCS and Farm Service Agency programs for New Hampshire and Connecticut;
 - t. Table 8.3-4 (page 8-80) – New York 480/480A properties located in the vicinity of the Project;
 - u. Table 8.3-5 (page 8-88) – Hazardous waste sites for Massachusetts;
 - v. Section 8.3.5 (page 8-92) – Information on specialty farm lands identified as crossed by the Project;
 - w. Section 8.4 (page 8-93) – Visual resources discussion for all Project components and special recreation areas; and
 - x. Section 8.6 (page 8-93) – Cumulative impacts associated with land use, recreation, and aesthetics.
- 2. General – Revise the land use categories and definitions as listed in Section 8.1 to be consistent with the guidance in Section 8.1 of the FERC Guidance Manual for Environmental Report Preparation. The categories should include agricultural land, forest/woodlands, rangeland, open land, residential land, industrial/commercial land, and open water. Update all discussions and tables that reference land use types to include these land use categories.
 - 3. Table 8.1-2 – Update the table to include acres of impacts to each land use type by Project Segment (e.g., Pennsylvania to Wright), Project component (e.g., right-of-way, ATWS, access roads, compressor stations), state, and county.

4. Table 8.1-3 – Update the table to include a column that identifies the existing right-of-way utility that the Project would overlap.
5. Section 8.1.1.2 (page 8-3) – Identify any locations where looping pipeline would be more than 25 feet from the existing pipeline. Include this information in a separate table, along with an explanation.
6. Section 8.1.2 (page 8-13) – Include the following information on aboveground facilities:
 - a. specify whether land for aboveground facilities is currently owned or would be acquired by lease or purchase;
 - b. identify all aboveground facilities that would be within the permanent ROW;
 - c. identify how much land surrounding the compressor station sites would be held as a buffer and what the land use would be for the buffer following construction;
 - d. for all new aboveground facilities that would occupy more than 5 acres, consult with the county office of the NRCS to determine the acreage of prime farmland soils that would be affected; and
 - e. consult with the U.S. Army Corps of Engineers to determine if the new facilities would be within designated floodplain or flood storage areas. Identify mitigation is required.
7. Section 8.1.3 (page 8-17) – If additional pipe and contractor yards are unknown or are not yet established, identify the yard requirements, approximate locations, and the anticipated number of additional yards that would be needed.
8. Table 8.2-1 – Update the table to include all ongoing or planned projects within 0.25 mile of the Project workspace instead of the Project centerline.
9. Identify any open pit mines or nuclear facilities within ½ mile of the Project facilities.
10. Table 8.2-2 – Update the table to include all residences, commercial buildings, and structures (e.g., sheds, pools, barns, garages) within 50 feet of construction workspace. Include a column for county and state for each residence, building, and structure.
11. Section 8.2.2.1 (page 8-37) – Describe how landowners would be notified of construction activities and how hazards from open ditches would be minimized when active construction is not occurring. Describe whether the pipeline centerline would occur within 25 feet of a residence. If this could occur, describe

the procedures that would be followed to ensure that the trench would not be excavated until the pipe is ready for installation and that the trench is backfilled immediately after installation.

12. Section 8.3 (pages 8-38 to 8-93) – Include the results of consultations and coordination with agencies and landowners. For public lands, summarize the status of the negotiations for the special-use permits or right-of-way grants.
13. Section 8.3 (pages 8-38 to 8-93) – Describe the types of mitigation measures expected to be implemented to avoid or minimize impacts on public lands, recreation areas, and other special land.
14. Section 8.3 (pages 8-38 to 8-93) – For each special recreation area affected, identify the primary uses, peak use periods, and any seasonal restrictions.
15. Section 8.3.1.1 (page 8-38) – The text states that “Initial tree felling on these lands will likely occur in the first quarter of 2017” (*italics added*). Describe what mitigation would be implemented if this schedule is not adhered to.
16. Section 8.3.4 (page 8-92) – Include details regarding the status and consultations for the coastal zone consistency application for the New York State Department of State.
17. Identify all conservation lands affected by permanent or temporary right-of-way, identify type, and acres by county.
18. Section 8.4 (page 8-93) – Include in the visual resources discussion the following details:
 - a. a discussion of visually sensitive areas in the vicinity of pipeline crossings and aboveground facilities;
 - b. use established visual classification systems where appropriate to quantify potential impacts; and
 - c. for all designated or sensitive scenic areas, address mitigation proposed to reduce visual impacts.

Resource Report 9 – Air and Noise Quality

1. General – Include all information listed in Resource Report 9 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to:
 - a. direct and indirect estimated per year criteria pollutant and greenhouse gas (GHG) emissions from construction of the Project by state; as well as assumptions, data, and emission factors;

- b. criteria emissions and GHG emissions from construction per year for all nonattainment counties; as well as assumptions, data, and emission factors;
 - c. air emission estimates for the compressor stations for all criteria pollutants, speciated hazardous air pollutants, and greenhouse gases;
 - d. fugitive methane emissions from aboveground facilities (compressor stations, meter/regulation stations, valves, pig launcher/receivers, as well as estimated methane losses from the pipeline per year.
 - e. dispersion modeling to estimate air concentrations resulting from compressor stations, and demonstration of compliance with the NAAQS;
 - f. discussion on air regulatory requirements to which the Project would be subject;
 - g. ambient noise surveys for each compressor station location and meter stations (meter stations with homes within ½ mile),
 - h. acoustical analysis to determine the noise contribution at each NSA for each compressor stations;
 - i. construction noise impacts at compressor stations and meter and regulation stations at nearest NSAs;
 - j. compressor station noise mitigation requirements;
 - k. applicable state and local noise ordinances at compressor station locations;
 - l. proposed modifications or proposed equipment at all meter and regulation stations;
 - m. location of all HDD sites, ambient noise survey and the noise impacts of these locations with NSAs within ½ mile; and length of time of drill;
 - n. noise survey and acoustical analysis at each HDD entry and exit site;
 - o. noise mitigation requirements for each meter station, including baseline noise surveys;
 - p. blowdown silencer performance targets along with estimated sound level contribution at each NSA; and
 - q. discussion of the Project's cumulative analysis as identified in our February 27, 2015 comment letter.
2. Section 9.1, Table 9.1-1 (page 9-2) – Include the ambient air quality standard for lead, and both 1997 and 2008 standards for ozone.
 3. Section 9.1.1.2 (pages 9-5 to 9-8) – Update the existing ambient air quality discussion to include the distance and direction to the cited monitoring stations from each compressor station.

4. Section 9.1.1.2 (pages 9-9 to 9-12) – Verify whether or not there are any maintenance areas in the Project area and for which pollutant. If there are maintenance areas in the Project area, include a discussion of provisions that would be applicable within the maintenance area, or verify that no related provisions would apply to the Project.
5. Section 9.1.2.1 (page 9-13) – Include the distance to the nearest federal Class I area from each compressor station, and discuss potential impacts and mitigation.
6. Section 9.1.2.5.5 (page 9-21) – Include a discussion of any Connecticut state air quality provisions for construction emissions.
7. Section 9.1.3.1 (page 9-21) – Verify whether or not there would be open burning. If so, include emissions estimates in construction emissions.
8. Section 9.1.3.3 (page 9-25) – Include construction emissions by county for all maintenance or nonattainment areas.
9. Section 9.2.2 (page 9-32) – Include identification of NSA's within one mile of each compressor station.
10. Section 9.2.2.2.1 (page 9-32) – When conducting the acoustical analysis for existing conditions at the existing compressor station, ensure that the existing compressors are operating at full load.
11. Section 9.2.4 (page 9-67) – Include methods to mitigate noise and vibration impacts on NSAs in the Project Blasting Plan.
12. Section 9.2.6 (page 9-73) – Include a description of the likelihood of a pipeline blowdown event. This discussion should include the cause and frequency of a blowdown event, the approximate time it would take to evacuate gas from the pipeline, and the potential noise associated with the MLV based on the nearest NSA's distance from the noise source.
13. Provide an air quality screening (AERSCREEN) or refined analysis (AERMOD or EPA-approved alternative) of the Station 319 compressor station demonstrating that the incremental increase in emissions of criteria pollutants do not result in local exceedance of the National Ambient Air Quality Standards (NAAQS); state ambient air quality standards; or cause or contribute to additional violations of the NAAQS. This modeling should:
 - a. identify existing emission rates of criteria pollutants from the station, and provide modeling results to identify existing local impact levels of criteria pollutants; and

- b. identify proposed emission rates of criteria pollutants from the station and provide modeling results to identify the local impacts of the new turbines in addition to the existing equipment at the compressor station.
- c. Include all input parameters (emission rate, stack height, stack temperature, exit velocity, etc.) and justify bases for any assumptions. Provide a narrative describing and justifying the modeling basis, and all inputs (meteorological data, terrain data). For any mitigation measures, or air pollution control equipment, provide data to justify control efficiency. Provide output data showing maximum impacts outside the fenceline (the EPA-defined ambient air boundary), and at sensitive receptors in the area (schools, hospitals, nursing homes, etc).

Resource Report 10 – Alternatives

- 1. General – Include all information listed in Resource Report 10 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to:
 - a. locations and details for alternative compressor station, meter station, mainline valves, and contractor yard sites;
 - b. additional evaluation of major and minor route alternatives, and minor route deviations; and
 - c. information regarding Article 97 properties, including information from state agencies.
- 2. Section 10.1 (page 10-2) – List the “other shippers” mentioned in Section 10.1.
- 3. Section 10.1 (page 10-2) – Include an evaluation of the facilities, equipment, and processes that would be required to transport a Project-equivalent volume of natural gas from the supply area to the destination locations via alternative modes such as truck and rail.
- 4. Section 10.3 (page 10-14) – Include data categories in all alternatives comparison tables for streams with drinking water use designation, important bird areas, and Audubon forest blocks of importance.
- 5. Section 10.3.1 (page 10-25) – Include a detailed analysis specifically assessing alternative crossing locations for the Appalachian Trail to minimize impacts.
- 6. Section 10.3.1.8 (page 10-40) –Describe potential impact avoidance (such as HDD), minimization, and mitigation measures that could be used to address impacts to Article 97 properties.

7. Figure 10.2-5 and Figure 10.3-5 – Add the Portland Natural Gas System (and other applicable figures), and clarify a potential mapping error for Figures 10.3-5 and 10.3-7 (the alternative routes depicted appear to be identical).
8. Provide a discussion of the feasibility of using electric-motor-driven compressors at the proposed new compressor stations. Provide the rate of electricity required and the number of electric motors required. Compare the size of the electric transmission line necessary under the current proposal with what would be required for the electric motors.
9. Include in a table similar to table 10.3-10, a comprehensive list, assessment, and conclusion for all stakeholder-requested minor route deviations filed at any time in the pre-filing docket. Also include in the list any stakeholder comments where a minor route deviation may not be specifically requested, but where a specific resource concern (e.g., Project proximity to a home, well, spring, wetland, future residential development, etc.) is identified that would potentially benefit from a resource avoidance/impact minimization analysis by Tennessee Gas. Evaluate routing, workspace, and construction method alternatives as appropriate. The analysis should be based on direct stakeholder discussions and on-site evaluations, if the landowner is willing, and on available desktop imagery and data if landowner access is denied. At a minimum, the table should include columns for tract/parcel number, segment identification and milepost, description of the requested minor route deviation, Tennessee Gas's assessment of and conclusion for the minor route deviation (including adequate descriptive text as well as comparison tables and maps where appropriate), and a statement regarding whether the stakeholder's routing concerns have been resolved. Also, provide an identical table listing stakeholder routing and/or resource avoidance concerns reported to Tennessee Gas, but which do not appear within comments filed to the PF docket.
10. Identify any structural or engineering changes on the existing 200 Line, that could accommodate all or a portion of the NED planned gas volumes. This may include, but should not be limited to: additional compression, pipeline uprates, replacements, looping or a combination of these.
11. Prepare additional environmental, engineering, and economic analysis of the (1) Existing Line 200 Alternative combined with the New York Alternative and (2) Massachusetts Turnpike Alternative combines with the New York Alternative. The analysis should include the following information so that a quantitative comparison can be made with Tennessee Gas' planned route:
 - a. identify the total length of each pipeline alternative in miles;
 - b. the temporary and permanent acreage impacted by land use/vegetation type;

- c. identify the number of contiguous forest tracts greater than 100 feet long;
- d. identify the number of landowners affected;
- e. identify threatened and endangered species critical habitat that the pipeline would traverse, or would be within ¼ mile of the right-of-way;
- f. the number of residents within 50 feet of the edge of the construction ROW;
- g. identify the number of Major rivers (greater than 100 feet); Intermediate streams/rivers (between 10-100 feet); number of warm water and cold water fisheries; and wild and scenic rivers;
- h. delineate the wetland linear feet and acreage by wetland type, identify those dominated by exotic non-native species;
- i. identify what facilities are defined as “environmental hazards”. Narrow the focus radius to ¼ mile around the pipeline ROW.
- j. identify mines, quarries, and other geological hazards within ¼ mile of the pipeline ROW;
- k. identify any scenic areas, or historic viewsheds that the alternatives would cross;
- l. provide information for evaluation of environmental justice concerns such as: low-income populations, minority populations, or tribal communities;
- m. identify the number, relative locations, and horsepower of compressor stations that would be required for the alternative;
- n. identify on a map what laterals would be required to meet delivery points, if different than the planned current laterals; and
- o. Provide mapping of each alternative using the most up to date U.S. Geological Survey 7.5-minute-series topographic maps with mileposts; maps from the Massachusetts Office of Geographic Information (MASSGIS) system; and current aerial photography..

The above information should include all assumptions, (ex. 50 foot permanent ROW, overlap with existing ROW, etc)

Resource Report 11 – Reliability and Safety

1. General – Include all information listed in Resource Report 11 as pending or “TBD” (or include a schedule for submittal), which includes, but is not necessarily limited to US DOT class locations and high consequence areas.
2. Section 11.2.1 (page 11-2) – Describe how Tennessee Gas would monitor for changes in population density around the pipeline. If population density changes such that higher classification standards of safety must be met, discuss how and when Tennessee Gas would be required to meet the new standards.
3. Section 11.2 (page 11-2) – Describe any Project safety features that would result in facilities or measures that are more stringent than required by the U.S. Department of Transportation.
4. Section 11.2.1 (page 11-4) – Clarify whether each of the MLVs would be automated and/or remotely controlled.
5. Section 11.2.2 (page 11-6) – Specify each segment of the Project’s mainline pipeline and laterals that would have odorized gas, and identify the odorization location.
6. Section 11.2.5 (page 11-7) – Describe the location of Tennessee Gas’s area offices along the Project facilities which can provide a “quick response to any emergency situations” and indicate what the expected maximum response times would be. Further, clarify if these personnel would be available at all times.
7. In responding to landowner concerns, indicate whether Tennessee Gas would voluntarily construct the pipeline to a higher US DOT Class location category in any area where a residence would be within the potential impact radius.

Volume II Appendix F – Alignment Sheets

1. The following are general inconsistencies in the alignment sheets:
 - a. Overhead transmission lines are not documented on map; and
 - b. In general, there are several instances where the proposed access roads do not intersect with the ROW or centerline of the Project. These have been identified as roads that were likely used for the Constitution or adjacent projects. Lengths and acreages (as well as display on maps) should be adjusted to show full extent and connection with new ROW for the Project.
2. The following are inconsistencies between Table 2.3-1 and the alignment sheets:
 - a. Wetland BD-K-W008 (PFO) at MP 8.46 is labeled in the alignment sheet as “Wetland.” Please add Wetland ID to the label in the alignment sheet.

- b. Wetland BD-K-W004 does not appear to be impacted in the alignment sheet, but appears in Table 2.3-1. Please confirm.
3. In Table 2.3-1, Wetland BD-M-W008-PEM is labeled as BD-M-W008.
4. Please identify the two “unknown” wetlands in Table 2.3-3 in Segment F at MP 21.28 and 21.48.
5. The NWI wetland at MP 22.3 in Segment F in the alignment sheet does not have a wetland ID and does not appear in Table 2.3-3.
6. Wetland AL-D-W026 appears in the alignment sheet as being impacted by ATWS, but does not appear in Table 2.3-3.
7. Identify “unknown” wetland in Table 2.3-3 in Segment F at MP 26.89.
8. Wetland RE-L-W002 does not appear to be impacted in the alignment sheet, but appears in Table 2.3-3. Please confirm.
9. Wetland NWI-157 does not appear to be impacted in the alignment sheet, but appears in Table 2.3-5. There is a wetland with no ID being impacted at approximately the same point that does not appear in Table 2.3-5. Please confirm.
10. The ‘Begin Milepost’ values for NWI-616 and NWI-617 for Segment K are incorrect.
11. Wetland NWI-619 does not appear to be impacted in the Alignment Sheet, but appears in Table 2.3-5. Please confirm.
12. The pages in the alignment sheets for Segment P are out of order.
13. Wetland NWI-755 in Table 2.3-5 beginning at MP 4.25 is labeled as Wetland NWI-751 in the alignment sheets. Please address this discrepancy.
14. An NWI wetland appears to be impacted by the ATWS at the end of Segment Q, but is not labeled and does not appear in Table 2.3-5.
15. There are a number of NWI wetlands that are impacted by workspaces but are not labeled with a unique ID and do not appear in Table 2.3-7.
16. Wetland WI-P-W002 at MP 13.67 of Segment S does not appear in Table 2.3-9.
17. Update the alignment sheets to include the following information regarding ATWSs:

- a. all ATWSs should be labeled with a unique identifier, as listed in Table 8.1-4;
 - b. depict the full dimensions of each ATWS in the alignment sheets consistent with what is listed in Table 8.1-4;
18. The following are inconsistencies between Table 8.1-7 and the alignment sheets:
- a. Segment B: “AR 23 - TGP 300” does not connect to an existing road or other feature and is viewed as hanging out in empty space. Update to connect to existing infrastructure and update length and acreage;
 - b. Segment C:
 - i. “AR 34 – CON” does not connect to an existing road. Update to connect to existing road surfaces and update length and acreage accordingly;
 - ii. “AR 36 – CON” and “AR 37 – CON” are in close proximity. Verify that both features would be utilized;
 - c. Segment D:
 - i. “AR 72 – CON” is listed in the table but not shown on map;
 - ii. “AR 73 – CON” extends past ROW. Verify length and acreages to ensure that only required distance is represented and update alignment sheet;
 - d. Segment E: “AR 98 – CON” shown on table but not found in the alignment sheets;
 - e. Segment F:
 - i. “AR 109 – TGP 200” does not connect with ROW centerline. Update and revise length and acreage accordingly so that the road reaches the construction area;
 - ii. “AR 110 – TGP 200” does not connect with ROW centerline. Update and revise length and acreage accordingly so that the road reaches the construction area;
 - iii. “AR 111 – TGP 200” does not connect with ROW centerline. Update and revise length and acreage accordingly so that the road reaches the construction area;
 - iv. “AR 118A – TGP 200” does seem necessary since it overlays an existing road “Pitcher Lane.” Confirm that the road would be utilized;

- v. “AR 124 – TGP 200” does not connect with ROW centerline. Update and revise length and acreage accordingly so that the road reaches the construction area;
 - vi. “AR 134 – TGP 200” does not connect with ROW centerline. Update and revise length and acreage accordingly so that the road reaches the construction area;
 - vii. “AR 135A – TGP 200” does not connect with ROW centerline. Update and revise length and acreage accordingly so that the road reaches the construction area;
 - viii. “AR 139A – TGP 200” does not connect with ROW centerline. Update and revise length and acreage accordingly so that the road reaches the construction area;
 - f. Segment S: “AR 317A – TGP 300” and “AR 317B – TGP 300” are occurring on opposite sides of the ROW at the same MP. Confirm that both options would be utilized; and
 - g. Segment T: “AR 323 – TGP 300” extends past ROW. Verify length and acreages to ensure that only required distance is represented and update alignment sheet.
19. The following are inconsistencies between Table 8.1-9 and the alignment sheets:
- a. Segment A:
 - i. General – Driveways are not consistently identified in the table or in the alignment sheets;
 - ii. “Unknown Road” at MP 2.57 identified in table, but not in the alignment sheets;
 - iii. Apparent unidentified crossing near MP 22.7. Feature is visible in imagery but identified in table or in alignment sheets;
 - b. Segment B:
 - i. “Private Road” near “AR 25 – TGP 300” is not identified in the table;
 - ii. General – Driveways are not consistently identified in the table or in the alignment sheets;
 - c. Segment C:
 - i. Crossing of “Driveway” at MP 2.21 reported in table but no identification in the alignment sheets;
 - ii. Driveway crossed at MP 8.6 not identified in table or in the alignment sheets but is visible in imagery;

- iii. “Road No. 171” crossed at MP 34.9 identified in the alignment sheets but not found in table;
- d. Segment D:
 - i. Driveway crossed at MP 11.5 not identified in table or in alignment sheets but is visible in imagery;
 - ii. Second crossing of “Bundy Hollow Road” at MP 23.25 visible in the alignment sheet but not identified in table;
 - iii. Driveway crossed near MP 40.0 not identified, but visible in imagery;
- e. Segment E: Sheet 22 of file 2 of 2, has an errant placeholder label “XXXX”;
- f. Segment F:
 - i. “Unknown Road” crossing at MP 1.64 not shown in the alignment sheet;
 - ii. Crossing of “Pitcher Lane” at MP 10.1 not identified in table;
 - iii. Driveways crossed at MP 14.0, 18.7, 21.2, 37.9 are not identified in the alignment sheets or table but are visible in imagery;
 - iv. “Existing Road” crossed at MP 20.1 not identified in table;
 - v. “Driveway” crossed at MP 33.8 not identified in the alignment sheet;
 - vi. “Mud Pond Road” crossing at MP 41.31 not identified in the alignment sheet;
- g. Segment G:
 - i. Driveway crossed at MP 8.5 is visible on imagery but identified in table or in the alignment sheets;
 - ii. “Plains RD” crossing at MP 13.47 not identified in the alignment sheets;
- h. Segment I:
 - i. “Stone Mountain Road” and “Attleboro Road” feature not clearly visible in the alignment sheets;
 - ii. “Unknown Road” crossings at MP 13.5 and 19.2 not identified in table;
- i. Segment J:
 - i. Due to error in the table, the crossings listed for MP 1.99, 2.06 and 2.2 need to be removed;

- ii. Crossing at MP 1.63 needs to be attributed to “NH-124”;
- iii. “Unknown Road” crossings at MP 14.8 and 16.5 are not identified in table;
- iv. “Thoreau LN” crossing at MP 18.32 not shown in the alignment sheets;
- v. Remove “Unknown Road Crossings” at MP 19.00 and 18.94;
- vi. Add “Hertzgar DR” crossing at MP 18.95;
- vii. “Existing Road” crossing at MP 22.5 not shown in table;
- viii. Driveways need to be identified throughout;
- ix. “Greens Pond Drive” crossing at MP 24.71 not identified in the alignment sheets;
- x. “Unknown Road” crossing at MP 35.6 not identified in table;
- j. Segment N:
 - i. “Snowberry Road” crossing at MP 0.19 needs better identification of the feature
 - ii. “Cecilia Cr” crossing at MP 1.83 not identified in the alignment sheets;
- k. Segment P:
 - i. Sheets in provided PDF are out of order;
- l. Segment Q:
 - i. Driveway crossing at MP 10.90 not identified in the alignment sheets or in table, but clearly visible in imagery;
- m. Segment R:
 - i. “West Berlin RD” crossing at MP 1.15 not identified in table;
 - ii. Driveway crossings at MP 1.15 and 1.16 not identified in the alignment sheets; and
 - iii. “Existing Road” crossing at MP 11.8 not identified in table.

Attachment A

EPA Comments on Northeast Energy Direct Resource Reports (4-28-15)

Co-location

The resource reports explain that a significant portion of the proposed NED pipeline will be co-located with other utility rights of way as a means to reduce Project impacts. This approach has merit and should be fully considered. Additional information should be provided in the resource reports in both plan view and tabular format to clearly depict the overall (net) change in ROW width along the proposed Project segments to be co-located. Plan views, with sections along the entire corridor would improve understanding of potential impacts (and impact avoidance) including tree clearing/forest fragmentation, and impacts to wetlands, etc. The discussion in Resource Report 10 (page 10-15) notes that the new pipeline would be placed 5' outside of existing utility easements to reduce impacts. Is this the case for all co-located segments? We request that the Resource Reports (and ultimately the EIS) provide information for the entire Project area to explain the width of the existing ROW, how much of the ROW is currently cleared, and how much more the ROW will be expanded/widened (cleared) as a result of the proposed co-location (Table 1.1-2). Again, section views in representative co-located sections will be helpful in this regard.

The discussion of co-location at 10-15 and elsewhere begs the question whether co-location at any point along the proposed pipeline alignment will lead to a violation of commitments made or the spirit of previously approved pipelines. For example, if previous approvals included limits on the right of way width to avoid fragmentation/habitat impacts these approvals should be discussed in the co-location discussion.

Compressor Stations

Resource Reports 1 and 10 note that final locations for compressor stations have not been determined. This makes it difficult to offer comments. We note that this is a big data gap in an area of great public interest. When this information is developed it should be accompanied by a thorough evaluation including distances to abutters and sensitive receptors as well as potential impacts, including air, noise and lighting impacts, and mitigation measures to address those impacts. The analysis also notes that compressor stations require 10 acres of land for operation. It would be helpful if the report included the basis for that assumption and a discussion whether impacts from compressor station operation could be further minimized with additional land. A similar question applies to metering stations and how the suggested area standards were developed.

Safety Monitoring

Resource Report 1 (at 1-122) describes remote safety monitoring of the pipeline through Tennessee information and software networks. The resource report should describe whether Tennessee could crosslink their safety network with applicable emergency responders in the host communities to improve response times in emergency situations.

Lack of Property Access for Survey Purposes

The percentage of “no access” reported in the Resource Report 1 (at 1-51) is meaningful and presents barriers to the accurate characterization of potential environmental impacts. Waiting to collect relevant Project information until after the close of the NEPA process (after the FERC certificate is issued) is one potential strategy but is far from ideal. EPA is concerned about the amount of desktop analysis that will be used and whether it will allow for impact characterization that accurately informs future permit reviews. Moreover, the lack of specific Project information for the pipeline alignment is compounded along the co-located segment adjacent to the proposed Constitution Pipeline where property access constraints have already limited on-the-ground surveys. Ideally, specific Project related information will be developed for this co-located portion of the alignment and presented in the resource reports and EIS for the Project.

Alternatives Discussion

The narrative discussion of system alternatives in 10.2 and other systems in 10.2.2 would benefit from incorporation of an overall plan showing the locations of all existing pipeline infrastructure owned by Tennessee and other companies, existing capacities, and the degree to which those pipelines are at capacity. This information would help describe whether upgrades/expansions of existing systems owned by the Project proponent and others could meet the Project purpose.

Constitution Pipeline

Resource Report 10 (at 10-11) discusses the Constitution Pipeline and notes that the Constitution FEIS “...acknowledges that construction of one larger pipeline rather than two smaller pipelines [if Constitution and NED were to share a pipeline] will generally reduce long-term environmental impacts...” It also indicates, “Commission staff states that were it to recommend that Constitution construct a larger diameter pipeline, that recommendation will directly conflict with the Commission’s established policy on overbuilding.” We question whether this conclusion is as definitive as the discussion suggests based on the market need information presented to support both projects. That same information describes a market where the need for additional capacity is great. The potential impact reduction benefits of a shared pipeline should not be so readily discounted, even if the coordination between two project applicants is difficult or complicated. We believe delays to the Constitution Project due to lawsuits and survey access speak to keeping the dialogue about a combined pipeline alignment (through what is now the proposed co-located Constitution/NED corridor) alive during the analysis of the NED Project.

Water Supply Well Testing

Resource Report 1 (at 1-76) states that Tennessee may test water wells within 150 feet of the construction workspace, both before and after construction. As the use of the term “may” is ambiguous the report should be modified to explain the conditions under which Tennessee wouldn’t test. We also believe the 150 foot criteria should be extended where there is reason to believe that work may affect a larger area (e.g. where a drinking water well is downgradient of a work area).

Natural Gas Requirements in New England

The Competitive Energy Services February 2014 Report “Natural Gas Supply Assessing Natural Gas Supply Options for New England and their Impacts on Natural Gas and Electricity Prices” concluded that “2 bcf/d of additional pipeline capacity is required to eliminate the natural gas price differential between New England and pricing points to the region’s west and south. The additional 1 bcf/d above that proposed in the Governors’ Letter will provide the region’s electricity consumers \$600 million a year in reduced costs beyond the savings they will realize as a result of the 1 bcf/d incremental capacity proposed in the Governors’ Letter. This represents a 1 to 3 year payback period on the incremental pipeline investment, depending on the sequencing of the pipeline expansions.”

ISO New England president and CEO Gordon van Welie told reporters in January 2015 that “New England needs an additional 1.1 to 1.6 billion cubic feet of additional daily pipeline capacity to fuel the region's current natural gas generators during periods of peak demand, which occur on about 40 cold winter days per year...”.

According to the FERC EIS for the Constitution Project—Constitution will yield approximately .65 bcf/day, Spectra AIM will transport approximately .34 bcf/day, and Spectra’s Atlantic Bridge will transport approximately .22 bcf/ day. NED is proposed to provide 2.2 bcf/day. In addition, Access NorthEast states it will “funnel” an additional 1 billion cubic feet/day.

Based on this information we believe more information should be provided to explain expected requirements for natural gas in New England over the next few years. The resource reports should further explain whether a combination of other proposed and ongoing projects fulfill the same capacity need as NED.

Stormwater Management

Resource Report 1 (at 1-184) states that Tennessee will install silt fences and/or hay bales around disturbed areas, as appropriate to the land, soil and weather conditions, to minimize the potential for erosion and impacts to off-site wetlands and water bodies and that erosion and sediment controls will conform to Tennessee’s Project-specific ECPs for each state. Tennessee should consider the use of more effective best management practices, particularly where run-off could affect sensitive or impaired water bodies and wetlands. Many new stormwater best management practices have been developed in recent years.

Environmental Justice Analysis

Resource Report 1 (at 1-143) refers to the socioeconomic analysis at the county level. We have found that environmental justice analysis is more meaningful and less likely to mask potential impacts when conducted at the municipal level, as EJ populations can vary dramatically at the county level. Evaluating EJ impacts at the municipal provides a more precise screen for EJ populations and the localized impacts they may suffer. EPA has a tool that evaluates EJ populations at the municipal level in New England. We are willing to assist with this evaluation as time and resources allow.

Specific Comments on Resource Reports

1. RR1, Page 1-11. First paragraph. Please discuss the “backhaul” on Tennessee’s existing 200 line system, and how that increases capacity.
2. RR1 – Table 1.0-1 – Is the designation “3” after the Loop number, a descriptor indicating the third loop of pipeline in that area? If so, describe when the previous loop was constructed, and discuss whether replacement of the original pipeline with a larger pipeline is less environmentally damaging, and would need fewer compressors than the Project proposal.
3. RR1 – 1.1.2.3.2 – Compressor stations from the Constitution Pipeline should be listed as well.
4. RR-1 Table 1.1-4 – Please explain why the Table shows more capacity associated with pipeline segments than the total Project.
5. RR-1 Table 1.2-1 This table should indicate area taken for NED, and the area taken for Constitution. This information will be helpful in the assessment of cumulative impacts, as well.
6. RR 10.1.2.1. The report states that wind power is not an option for providing for existing or projected power needs in the Project area. The resource reports should describe any wind power projects in the Project area contributing to local energy demands. We also request that the contributions of the Anbaric Transmission’s Vermont Green Line and Maine Green Line be incorporated into the discussion.
7. RR10.2.1. As discussed on the second FERC sponsored interagency “western” phone call, please provide a map, and table of all of the pipeline upgrade, loops, etc. to the Tennessee pipeline system in PA, NY, CT, MA, and NH and discuss if any of these upgrades are related to, or could replace the NED. This information request is also described in the alternatives section above.
8. Table 10.3-4 – Provide Verification of impacts on Existing 200 line alternative. Tree and woodland losses should be included in all impact tables to reflect

vegetation management that will be in effect for the life to the Project. Comparisons of habitat quality between impacts from the proposed alternative and the 200 line alternative should be made. The Table also uses the term “environmental hazards”, and appears to use this as reason why the 200 line alternative may not be ideal. This term should be more fully explained as most of the environmental hazards appear to be gas stations and it is unclear how these present a danger to the pipeline. Also, disturbed land containing landfills and quarries along the route may represent an opportunity to avoid impacts thorough colocation.

9. RR10.3.1.1.2. EPA continues to disagree that the I-88 Alternative received sufficient review and analysis in the previous review of the Constitution Project. This alternative, or any hybrid alternatives that can be collocated with I-88 should be analyzed to determine if it can be constructed or operated with fewer impacts than the proposed alternative.
10. RR10.3.1.1.3 The discussion in the resource report should be expanded to explain why the NEEEX route is not viable even though it was used for the Constitution Project.
11. RR10.3.1.2 We recommend that Table 10.3 include two other factors: wetlands being crossed by HDD or bored crossings (as compared to dry crossings) and interior forest impacts.

Resource Report #1

1. Page 1-27: The resource report should compare energy usage, emissions and noise between proposed compressor stations to the baseline condition (which would include any existing machinery or compressor/metering station emissions).
2. Page 1-77: Historical and regular agricultural lands should be mapped. The analysis should discuss agricultural land affected during construction of the Project and long-term management of the Project.
3. Page 1-121: The analysis should discuss the frequency of pipeline inspections and the environmental effects from related truck traffic/inspection equipment.

Resource Report #2

4. Page 2-3: The analysis should explain why .25 miles was used in the search of the dataset report for groundwater hazards.
5. Page 2-4: It would be helpful if a map was provided with section 2.1.1.2.1 showing all the aquifers along the Project route.

6. Page 2-15: The analysis should discuss potential effects on wells on farms and other properties adjacent to the Project.
7. Page 2-30: “Unknown Crossings” in Table 2.2-2 should be more clearly defined.
8. Page 2-79: More information about hydrostatic pressure testing should be provided.
9. Page 2-89: The timeline for pipeyards and access roads should be described in greater detail. The description should include potential affects from these storage yards, how long they will be used, and measures that will be taken to restore occupied areas once they are no longer needed.
10. Page 2-104: Table 2.3-1, Wetlands Associated with the Project in PA. Do the totals provided include pipeyards, access roads, and compressor stations even though these sites have not been determined? How were these acreages calculated?

Attachment B

USFWS New York Field Office Comments on Northeast Energy Direct Resource Report 3 (5-6-15)

1. Section 3.1.1.2, New York Fisheries – Game and commercial species are listed but there are many other fish species not mentioned in this section which are vitally important for aquatic ecosystem health. Many species found in the Hudson River and its tributaries are not listed here but should be added. A more comprehensive list should be provided. This list can be obtained from the New York State Department of Environmental Conservation. They may also have GIS data that would help with the impact analysis. The NYSDEC Bureau of Fisheries produces annual reports which may also have relevant information.
2. Section 3.1.2, Fisheries of Special Concern – the document does not mention efforts by the FWS and our partners under the Eastern Brook Trout Joint Venture. This is a species of concern to us due to degradation and loss of habitat as well as declining populations (due to habitat impacts, climate change, and other factors). It is also a keystone species, representing other cold water biota. More information should be provided here on this species and the efforts to restore habitat. Just as important is an adequate analysis of the potential impacts from the proposed project on habitat (physical, chemical and abiotic attributes).
3. Section 3.1.2.3, New York Programs – This section should be updated to indicate that the New York Field Office provided information to consultants for the project on federally-listed species.
4. Section 3.1.3, Construction and Operation Impacts – General information is provided in this section and no substantial commitments are made to avoid impacts and minimize unavoidable loss. For example, it says fish migration may be temporarily blocked due to construction. A preferred approach would be to indicate that no work would take place during times when fish are migrating through a particular water body. The text also minimizes tree removal along the banks of streams to be crossed as minor and temporary. However, bank erosion can have long-term effects on stream stability and stream habitat. It would be preferably for the pipeline to be sited only in areas where there are openings adjacent to the stream and then be required to plant trees in work areas when finished. Special consideration should be given to the Hudson River crossing and should be discussed in the document.

5. Section 3.2.1, Existing Resources- Table 3.2-1 should be revised to indicate that the cerulean warbler is found in the New York section of the project and has been documented close to the project area. Page 3-35, the common name for *Gyrinophilus porphyriticus* should be northern spring salamander and not purple salamander.
6. The text indicates that the project will bisect a portion of the Cannonsville-Steam Mill Important Bird Area. Mapping provided by Tennessee indicates that a significant portion of the IBA will be bisected where the project does not collocate with the Constitution Pipeline in this area. Although the Constitution project will bisect a portion of the IBA, it appears that efforts were made to avoid a significant portion and instead will traverse mostly the perimeter. The NED project however would bisect substantially more IBA and presumably interior forest. This is of a concern to our agency. We request FERC require more justification for the current NED design and why it cannot collocate with the Constitution project to avoid the IBA. Consultations between Audubon and NYSDEC about this issue should include the FWS as well.
7. Impacts to interior forest are of concern to the FWS for many species but particularly migratory birds. Even those areas of the NED project which will be collocated with other rights-of-way will cause loss of habitat and push the impacts deeper into interior forests in most cases. We recommend FERC require an analysis of this impact on interior forest habitat. A discussion between Tennessee and the FWS should address how this analysis would take place.
8. A footnote appears to be missing on Table 3.2-2. It should be noted that there be other sensitive wildlife habitats not listed on this table such as interior forests.
9. As currently written, the document provides very limited information on potential avoidance and minimization measures for impacts to wildlife and habitat. For example, there is no commitment to timing the project construction outside of the breeding season for migratory birds. Further, staging and other work areas should be sited in previously disturbed areas to the greatest extent practicable. Finally, there is no mention of mitigation for the loss of habitat. If construction timing cannot avoid the breeding season, pre-construction surveys for species of conservation concern may be requested near known locations in 2016.
10. Section 3.4, Endangered and Threatened Species – The bog turtle and Northern long-eared bat should be noted for New York in Table 3.4-1. The status of the Northern long-eared bat on that table and Table 3.4-4 should be changed from Candidate to Threatened. Likewise, the text of the document should be updated to reflect the status change.

11. We have not yet received the survey results for the bald eagle surveys. Because this species has been expanding its range and breeding territories each year, the FWS may request a nest survey in the spring of 2016.