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April 17, 2014

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Connecticut Expansion Project
PROJECT MUNICIPALITY : Agawam, Sandisfield, and Tyringham
PROJECT WATERSHED : Farmington River and Connecticut River
EEA NUMBER : 15205
PROJECT PROPONENT : Tennessee Gas Pipeline Company, L.L.C.
DATE NOTICED IN MONITOR : March 1, 2015

Pursuant to the Massachusetts Environmental Policy Act (M.G. L. c. 30, ss. 61-62I) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Final Environmental Impact Report (FEIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations. To provide additional public review of final mitigation commitments, the Proponent will file revised draft Section 61 Findings with the MEPA Office for review and comment.

The MEPA regulations indicate that a FEIR can be found adequate even if certain aspects or issues require additional review and consideration, as long as these issues and aspects have been adequately described during MEPA review and subsequent permitting and review processes provide opportunities for additional public review and comment. The Proponent has thoroughly addressed the project's potential environmental impacts, considered alternatives and identified a comprehensive mitigation program to avoid, minimize and mitigate these impacts. Limited analysis of alternatives to minimize project impacts and development of more detailed mitigation is required, particularly in regards to mitigation associated with use of land protected by Article 97 of the Articles of Amendment to the Constitution of the Commonwealth and impacts to wetland resource areas.

The Department of Conservation and Recreation (DCR) and the Massachusetts Department of Environmental Protection (MassDEP) have sufficient regulatory authority to address outstanding issues that are identified in this Certificate and these processes will provide

additional opportunities for public review and comment. State agencies have not requested additional analysis in the form of a Supplemental EIR. To provide additional transparency regarding State review and permitting of the project, the Proponent will provide revised draft Section 61 Findings for public review and comment. The publication of the Section 61 Findings will also provide an opportunity for public review of proposed Article 97 legislation.

This Certificate includes a comprehensive list of commitments to avoid, minimize and mitigate project impacts which are commensurate with the scope and scale of the proposed project. The review of this project and resulting mitigation program may be instructive and provide context for subsequent reviews of other large energy infrastructure projects; however, it is not necessarily a corollary. MEPA review is tailored to the scope and scale of individual projects and associated activities and evaluated within the context of specific sites and associated infrastructure and constraints.

I acknowledge and appreciate the Proponent's efforts to work effectively with State Agencies to further avoid, minimize and mitigate project impacts and expect that these efforts will continue throughout the subsequent review and permitting processes. In addition to the measures identified in the FEIR, the Proponent has expanded its mitigation for impacts to Article 97 land. The Proponent will provide \$300,000 to DCR for land acquisition.

Project Description

As described in the FEIR, the project consists of the construction of a 3.8-mile 36-inch outside diameter (OD) pipeline within or adjacent to the existing Tennessee Gas right-of-way (ROW) in Sandisfield, and 0.11 miles of new 24-inch OD pipeline within or adjacent to the Tennessee Gas ROW in Agawam. The project will also construct appurtenant facilities to be located within the existing ROW, including facilities for the operation and maintenance of the pipeline such as mainline valves, blowdown valves, pig launchers, pig receivers, and other valves and piping. The project will also include pipeyard/staging areas. The project will require withdrawal of more than one million gallons of water from Lower Spectacle Pond in Sandisfield for a hydrostatic test of the assembled pipeline. Construction of the pipeline loops is expected to last for three to four months.

The new pipeline in Sandisfield will create a pipeline loop (the "Massachusetts Loop") along the existing Tennessee Gas 200 Line. The pipeline in Agawam will be part of an 8.1-mile pipeline loop extending into Connecticut (the "Connecticut Loop") along the Tennessee Gas 300 Line. A third loop will be constructed in New York. The purpose of a loop is to increase the volume of gas that can be transported along an existing section of pipeline. It is an alternative to constructing a new pipeline to increase supply within a service area. The location of the loop is dependent on the destination of the gas and flow dynamics of the pipeline system. The project is designed to increase gas flow by 72,100 dekatherms (72,100,000 cubic feet) per day. It will serve three natural gas utility companies in Connecticut. The project is proposed to provide a modest expansion of capacity within a regional network of natural gas infrastructure.

Tennessee Gas Pipeline Company has proposed another project, Northeast Energy Direct, that would significantly expand capacity of natural gas in the northeast. It consists of construction of a new pipeline extending from existing infrastructure in Wright, New York through Berkshire, Hampshire and Franklin Counties. From Massachusetts, it would extend into

southern New Hampshire and then reenter Massachusetts and terminate in Dracut. The Northeast Direct Energy project will be subject to a transparent and rigorous review, including the filing of a mandatory EIR with the MEPA Office that will include opportunities for public review and comment at each stage of the MEPA review process. Although these two projects are part of the same natural gas network, the Connecticut Expansion project has separate utility that is not dependent upon completion of the Northeast Energy Direct project. Construction of the Connecticut Expansion will not limit the consideration of alternatives to avoid, minimize and mitigate impacts associated with the Northeast Energy Direct project.

Project Site

Construction of the Massachusetts Loop will take place along an existing pipeline ROW in Sandisfield. The pipeline loop will begin at an existing valve site, designated as Milepost (MP) 0.0, off Town Hill Road. It will be located within or adjacent to the ROW of the existing Tennessee Gas 200 Line Mainline that runs from New York to Boston. The 200 Line includes a 24-inch diameter pipeline and a 30-inch diameter pipeline within the generally 75-foot wide ROW. Except for a quarter-mile long segment between MP 0.32 and MP 0.59, the first 2.26 miles of the ROW are located within the Otis State Forest, which is owned and managed by the Department of Conservation and Recreation (DCR). The remainder of the ROW passes through privately owned land, with the exception of crossings of Cold Spring Road, Hammertown Road, and South Beech Plain Road, which are public roads owned by the Town of Sandisfield. The project will withdraw water for hydrostatic testing from Lower Spectacle Pond, a 70-acre pond located within the Otis State Forest on the east side of Cold Spring Road. Lower Spectacle Pond includes mapped *Priority Habitat* and *Estimated Habitat* for the Umber Shadowdragon dragonfly (*Neurocordulia obsoleta*). The project will also require the use of a site, yet to be determined, as a pipeyard/staging area in the vicinity of the proposed pipeline.

The Connecticut Loop will include 0.1 miles of pipeline in Agawam. The loop will begin at the existing Tennessee Gas compressor station on Suffield Street and will be located within or adjacent to the ROW of the existing Tennessee Gas 300 Line that originates in Pennsylvania and extends to Boston. The 300 Line includes a 16-inch diameter pipeline within the 75-foot wide ROW. A staging area, including 3.26 acres in Agawam, will be located adjacent to the pipeline at the Massachusetts-Connecticut state line. The entire ROW for the portion of the Connecticut Loop in Agawam is located on land owned by the Proponent.

Environmental Impacts

According to the FEIR, the project will impact an area of approximately 64 acres, including: approximately 43 acres to be used for temporary workspace (TWS) and additional temporary workspace (ATWS) outside of the existing pipeline easement; approximately 13 acres of construction workspace within the existing easement; approximately 1.7 acres for use as access roads; and approximately 6.7 acres for use as pipeyards/laydown areas. Of this area, approximately 13 acres will be maintained as a new permanent ROW that will extend 15 to 35 feet from the pipeline loop. Approximately two miles of the pipeline will pass through DCR's Otis State Forest and will impact approximately 29 acres. On DCR land, the project will require a new permanent easement of approximately 6.19 acres, the temporary use of 7.2 acres located within the existing maintained ROW, and approximately 15 acres of TWS and ATWS outside of

the existing ROW that will be cleared and regraded during construction, resulting in long-term impacts.

Construction will impact wetlands resource areas, including 10.23 acres of Bordering Vegetated Wetlands (BVW), and five acres of Riverfront Area.¹ Pipeline construction will impact approximately 120 linear feet (lf) of Bank and 615 square feet (sf) of Land Under Water (LUW) resulting from four stream crossings. The project will withdraw 1,025,100 gallons of water from Lower Spectacle Pond for use in a hydrostatic test of the pipeline. During the review period, the Proponent also disclosed that it plans to withdraw water from Lower Spectacle Pond for dust control purposes.

Maintenance of the ROW will result in the conversion of 2.4 acres of BVW from forested wetland to herbaceous/scrub-shrub wetland types, and permanent impacts to one acre of Riverfront Area. Maintenance of the new 13-acre ROW will convert nine acres of non-wetlands forested land to low-growing herbaceous and shrub vegetation.

The project will generate one-time emissions of carbon dioxide equivalent (CO₂e) of approximately 1,160 tons resulting from construction and commissioning procedures. Fugitive emissions from routine maintenance are expected to be 0.77 tons per year (tpy) of CO₂e. Non-routine operations may emit 15.64 tons of CO₂e every five to seven years for inspections and maintenance, and up to 1,522.72 tons of CO₂e per blowdown event. Carbon loss due to tree removal would include a one-time loss of approximately 6,000 tons due to construction and an annual loss of carbon sequestration of approximately 3.6 tpy.

The Proponent has committed to a comprehensive suite of measures to avoid, minimize and mitigate project impacts. These measures are listed in the Mitigation section of this Certificate.

Jurisdiction and Permitting

This project is subject to MEPA review and required a mandatory EIR pursuant to 301 CMR 11.03(1)(a)(1) and 301 CMR 11.03(3)(a)(1)(a) because it requires State Agency Permits and, respectively, involves the direct alteration of 50 or more acres of land and alteration of one or more acres of BVW. The project also meets or exceeds several ENF thresholds, including: conversion of land held for natural resources purposes in accordance with Article 97 of the Articles of Amendment to the Constitution of the Commonwealth to any purpose not in accordance with Article 97 (301 CMR 11.03(1)(b)(3)); release of an interest in land held for conservation, preservation, agricultural or watershed preservation purposes (301 CMR 11.03(1)(b)(5)); and alteration of one-half or more acres of any other wetlands (301 CMR 11.03(3)(b)(1)(f)). The project will require a 401 Water Quality Certification (WQC) from MassDEP. It will require a Construction and Access Permit and a new easement from DCR. The project is subject to the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol (GHG Policy). Additionally, the project must demonstrate compliance with the EEA Article 97 Land Disposition Policy (Article 97 Policy).

¹ Impacts to isolated vegetated wetlands are included in the totals for BVW.

The project will require Orders of Conditions (OC) from the Agawam and Sandisfield Conservation Commissions (or in the case of an appeal, a Superseding Order of Conditions from MassDEP). It may require an OC from the Tyringham Conservation Commission if the Tyringham site is used as a pipeyard. This project is subject to review under the Massachusetts Endangered Species Act (MESA).

The project will require consultation with the Massachusetts Historical Commission (MHC) in accordance with Section 106 of the National Historic Preservation Act. It will require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the United States Environmental Protection Agency (EPA), an Individual Permit from the Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act, and a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC).

The project requires a Land Transfer in the form of an easement from DCR along approximately two miles of the pipeline route in Sandisfield. In accordance with 301 CMR 11.01(2)(a)(1), MEPA jurisdiction is broad in scope within the area of the Land Transfer. Within the remainder of the project area, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required or potentially required State Agency Actions and that may cause Damage to the Environment as defined in the MEPA regulations. In this case, MEPA jurisdiction extends to land alteration, wetlands, stormwater, water quality, rare species, and GHG emissions.

Changes Since the Filing of the DEIR

The FEIR identified changes to the project since the filing of the DEIR. The DEIR identified two pipeyards/staging areas, including a 3.5-acre hayfield in Tyringham and a 3.26-acre parcel owned by the Proponent that is part of the Hickory Street pipeyard, most of which is located across the Connecticut border. In its comments on the DEIR, DAR stated that the Tyringham parcel is subject to an Agricultural Preservation Restriction (APR) and that the pipeyard would not be an allowed use of the site. The FEIR identified three potential pipeyard sites in Sandisfield that may be used instead of the Tyringham site. These sites are located on Town Hill Road, South Beech Plain Road, and Cold Springs Road. The parcel on Cold Springs Road is owned by DCR. According to the FEIR, one or more of these sites may be used in place of the Tyringham parcel, but detailed surveys necessary to select a new pipeyard location have not been completed.

In response to the Scope issued in the DEIR Certificate, the Proponent has reduced the proposed project-wide area of construction workspace by three acres, including a two-acre reduction on DCR-owned land. The reduction in workspace was generally accomplished by reducing the width of ATWS in some areas from 25 feet to 10 feet.

During the review period, the Proponent indicated that the project may withdraw water from Lower Spectacle Pond for dust control. Dust control may be necessary during July and August when rainfall is lowest or during drought conditions. Water would typically be withdrawn in the morning and applied to areas of exposed dirt in the afternoon. It is not expected that more than one withdrawal would occur on a given day.

Review of the FEIR

The FEIR was generally responsive to the Scope issued in the DEIR Certificate. The FEIR included revised project plans with overlays of environmental and other resources, responded to comments received on the DEIR, explained the project purpose in terms of its potential effect on transmission capacity and the need for gas, reviewed the project's conformance to State Agency permitting requirements, and provided draft Section 61 findings for each Agency Action. The FEIR included a discussion of the framework for a wetlands mitigation package and documented the Proponent's ongoing discussions with MassDEP to further develop wetlands mitigation during the permitting process.

The FEIR provided additional information and analysis of the project's conformance with the Article 97 Policy. The FEIR reviewed the results of an analysis of ATWS on DCR land, which resulted in a two-acre reduction of DCR land needed for the project, and the Proponent's commitment to work with DCR before and during the construction process to further minimize construction period impacts. The FEIR included a proposed mitigation package for the use of Article 97 land, including monetary compensation and other measures, and a supplemental alternatives analysis with more information about the comparative impacts of the Roadway Alternative and the engineering infeasibility of the Compression Alternative.

Alternatives

The FEIR Scope required further analysis of alternatives to reduce the impacts of the project, with special emphasis on reducing the area of DCR land needed for the project. The FEIR documented reductions of the width needed for ATWS areas along certain sections of the project workspace from 25 feet to 10 feet, resulting in a reduction of three acres of ATWS, including two acres on DCR property. This analysis has reduced the project-wide combined area of TWS and ATWS workspace to 43 acres, including 15 acres on DCR land. The FEIR did not detail the method used for identifying areas where ATWS could be reduced or explain why further reductions were not possible. The FEIR included a commitment from the Proponent to work with DCR staff prior to and during construction to further reduce impacts to DCR land and to specific resources in the Otis State Forest, such as stone walls and specimen trees. Based on the FEIR analysis, 43 acres is the maximum combined area of TWS and ATWS outside of the existing ROW and 15 acres is the maximum combined area within DCR land. Through its permitting process and consultation with the Proponent prior to and during the construction process, DCR will reduce the area of impact as much as practicable.

The FEIR provided additional analysis of two alternatives briefly noted in the DEIR. The Compression Alternative would involve the addition of 3,500 horsepower of compression at the Agawam Compressor Station as a substitute to the pipeline loop, thereby avoiding the impacts the new pipeline ROW. As required, the FEIR provided additional justification for not selecting this alternative. It indicated that it would result in unacceptably lower pressures in the pipeline system, especially during periods of peak demand. This would affect the reliability of the system both upstream (west) and downstream (east) of the compressor station. The FEIR also noted that adding additional compression at the upstream compressor station in New York is not feasible because gas at that station is already discharged into the pipeline at its Maximum Allowable Operating Pressure.

The FEIR identified impacts associated with the 4.5-mile long Roadway Alternative identified in the DEIR. Under this alternative, approximately 3.1 miles of pipeline would be placed adjacent to Town Hill Road and Cold Spring Road. It would join the Preferred Alternative route at the Tennessee Gas ROW crossing of Cold Spring Road for the remaining 1.4 miles to the terminus of the project. The Roadway Alternative would involve the use of a one-mile long segment of DCR land, compared to two miles of DCR land that would be crossed under the Preferred Alternative. It would also avoid a considerable portion of the steep slopes (greater than 25-35 percent) that would be crossed by the preferred route and have fewer impacts to wetlands resource areas. The Roadway Alternative would use more land and require a larger permanent ROW than the Preferred Alternative, and impact a greater area of forested land. According to the FEIR, the Roadway Alternative was not adopted by the Proponent because it would have greater impacts to area roadways, would require significant additional land alteration and clearing, and would include construction workspace within 100 feet of 12 residences.

Conservation Land/Article 97

The FEIR provided additional analysis of the project's compliance with the Article 97 Policy. As noted earlier, the FEIR supplemented the analysis of the Roadway Alternative with a assessment of its impacts compared to the Preferred Alternative and discussed the results of a review of workspace needs on DCR property that led to a two-acre reduction of proposed ATWS on Article 97 land. I note that the Proponent has committed to working with DCR before and during the construction period to further reduce impacts to DCR property along the construction ROW. This coordination will include flagging specimen trees, stone walls, seeps and springs, and other features that are to be avoided by construction activity. I expect that this effort will result in further reductions in impacts to DCR property that cannot be quantified at this time.

The FEIR provided a more detailed mitigation proposal for the use of Article 97 land, including monetary compensation that would be directed to the DCR Conservation Trust for acquisition of replacement land and for stewardship activities at Otis State Forest. The following mitigation was identified in the FEIR and during the review period in consultation with DCR and the Proponent:

- Compensation for 6.19 acres of new permanent easement to be determined by the Executive Office of Administration and Finance (EOAF) Division of Capital Asset Management and Maintenance (DCAMM);
- Provide approximately \$239,280 to DCR Conservation Trust associated with the following:
 - DCR permit fee of \$6,000 per acre to compensate for impacts within the temporary construction easement (\$90,000 for the use of 15 acres);
 - DCR permit condition will include an additional mitigation fee of \$5,000 per acre (\$75,000 for the use of 15 acres);
 - Compensation of \$12,000 per acre for impacts associated with the new permanent easement (\$74,280 based on 6.19-acres); and
- Delivery of forest products to DCR for its use, sale, and management.

In addition, the Proponent has committed to provide \$300,000 to the DCR Conservation Trust for land acquisition to further mitigate impacts to Article 97 land. DCR will use the funds to acquire land within the project vicinity that has high conservation value and provides ecological functions equivalent to those that will be impacted by the project, including wetland resource areas, vernal pools and habitat. I appreciate the Proponent's support of this significant commitment.

The land acquisition funds and other mitigation commitments identified in the FEIR to address anticipated permit requirements (invasive species control and monitoring, gated access roads and other measures to control all-terrain vehicles) will be more fully developed during DCR's review and approval processes, including the Construction and Access Permit process. The DCR comment letter identifies specific issues to be addressed during its review, including the following:

- Provision of an ecologist/environmental monitor to oversee construction and restoration activities on behalf of DCR;
- Measures to protect Spotted Turtles during the construction period, including a survey of the population;
- Rehabilitation of the Lower Spectacle Pond boat ramp and picnic area parking area;
- Construction of a small recreational crossing over the Lower Spectacle Pond outlet brook near where the brook crosses the pipeline;
- Restoration of hydrology and microhabitats associated with small streams and seeps;
- Enhancement of early successional habitat and scenic qualities by mowing the fields behind the houses on Cold Spring Road and on the hill adjacent to the picnic area, or providing monetary compensation into the Conservation Trust;
- Refinement of the design for the restoration of Spectacle Pond Brook, including an analysis of the feasibility of using a bio-engineered vegetated surface treatment rather than riprap and restoration of the natural features of the stream channel and banks; and
- Revision of the Invasive Species Management Plan, including the identification of three additional invasive species present on the ROW, and additional measures to control and prevent the spread of invasive species during construction and maintenance activities of the ROW.

In addition, I expect that draft Article 97 legislation will be included in the revised draft Section 61 Findings for public review and comment.

The project will widen an existing DCR access road to 20 feet. In addition, the dirt road will be covered with gravel. The road will be used to access the pipeline ROW both during construction and for maintenance activities on a permanent basis. The FEIR Scope requested additional analysis of alternatives to the use of this road. The proposed road is the shortest route between the roadway and the pipeline in this section of the project corridor. According to the FEIR, the use of this existing access road will avoid impacts to wetlands and forested areas that would result from construction of a new access road.

I acknowledge the comments from DCR, the Berkshire Regional Planning Commission (BRPC), MassAudubon, and the Berkshire Environmental Action Team (BEAT) regarding the Invasive Species Management Plan, which was not updated since the filing of the DEIR. As noted above, DCR has identified the refinement and expansion of the Proponent's Invasive Species Management Plan as a condition of its permit. I expect the Proponent will consult the comment letters provided by BRPC and BEAT for recommendations on additional measures that could be employed to protect the pipeline corridor and adjoining areas from invasive species.

Pipeyard/Staging Area

In the DEIR, the Proponent had identified the use of a 3.5-acre agricultural field off Main Road in Tyringham as a pipeyard/staging area. The site was used approximately 25 years ago to provide access for the construction of a pipeline. An Agricultural Preservation Restriction (APR) exists on the site. South and west of the pipeyard area, the field contains an emergent marsh associated with a perennial stream. The field surrounds the remainder of the pipeyard area and Hopp Brook is located to the north. The area is located within mapped Priority Habitat and Estimated Habitat for the Sedge Wren (*Cistothorus platensis*), American Bittern (*Botaurus lentiginosus*), and Wood Turtle (*Glyptemys insculpta*). The Tyringham pipeyard is located approximately four miles from the start of the proposed pipeline loop in Sandisfield.

In response to concerns identified regarding the use of the Tyringham site, the FEIR identified three alternative sites that, alone or in combination, could be used as pipeyards/staging areas in its place. These sites are located on Town Hill Road, South Beech Plain Road, and Cold Springs Road. The parcel on Cold Springs Road is owned by DCR. The other sites are privately owned. All three sites are closer to the work area and would reduce construction-period vehicle use of local roadways. The sites on South Beech Plain Road and Town Hill Road are active hayfields on upland soils. The Cold Spring Road site is characterized as old field habitat. None of these sites are located within mapped rare species habitat. Wetlands surveys of the sites have not been conducted yet, but the DCR-owned Cold Spring Road site likely contains wetlands based on its mapped soil characteristics. In addition, MassDEP wetlands data available on the MassGIS website indicates the presence of wetlands along the western edge of the Town Hill Road site.

Alternative sites that avoid impacts to agricultural and Article 97 land should be considered prior to selection of a preferred pipeyard site. Use of the DCR site would require the Proponent to provide compensation for its use and mitigation for associated impacts through the Construction and Access Permit. Any associated mitigation would be incorporated into the revised draft Section 61 Findings. Upon identification of the preferred site, the Proponent should consult with the MEPA Office to determine whether additional MEPA review would be warranted based on an increase in environmental impacts beyond those identified in the FEIR or new State Agency Actions.

Wetlands

The project will impact approximately 10.23 acres of BVW, including 2.35 acres of permanently-impacted BVW associated with the conversion of forested wetlands to scrub-shrub or emergent wetlands, and 0.11 acres of fill to be placed for an access road. The remainder of

the permanent impacts will be due to the conversion of forested wetlands to herbaceous or shrub wetlands due to pipeline vegetation management practices.

The project will replicate BVW at a ratio greater than 1:1 ratio to compensate for the 0.11 acres of filled BVW. The FEIR included a replication plan and it is incorporated into the project plans provided with the FEIR. It is located to the south of the roadway and adjacent to the existing wetland area. The plan includes post-replication monitoring. Areas cleared or disturbed during construction will be replanted, regraded and re-contoured to pre-construction conditions, and allowed to recover naturally.

The project will impact 5.22 acres of Riverfront Area, of which 1.02 acres will be permanently impacted by a change in cover type. The project will include four stream crossings that will impact 120 lf of Bank and 615 sf of LUW. No certified vernal pools will be impacted by the project. Temporary construction impacts include 3,745 sf within three potentially-certifiable vernal pools, including 25 sf of permanently impact associated with vegetation management. Construction activities will occur in Bordering Land Subject to Flooding (BLSF), including 0.19 acres associated with Spectacle Pond Brook and, potentially, 0.058 acres associated with Hopp Brook at the Tyringham pipeyard. These areas will not be regraded. The project will not impact flood storage capacity.

The FEIR described the construction procedures to be used to install the pipeline across Spectacle Pond Brook and included a stream restoration plan. The stream in this area is currently directed into small-diameter steel pipes across the existing pipeline ROW. The steel pipes are in poor condition and the crossing does not conform to MassDEP's Stream Crossing standards. The Proponent will remove the pipes and recreate a natural stream condition. Cofferdams will be placed in the brook upstream and downstream of the pipeline crossing location. Stream flow will be pumped around the cofferdams and returned to the brook to maintain downstream flow while a trench is dug across the stream. The pumps will be sized to handle flow from a two-year storm event. After the pipeline is installed in the trench, the bottom will be restored with natural substrate. The stream bed and banks will also be restored to a more natural width and bank condition. A temporary span will be placed across the stream to provide access across the stream for construction vehicles, and the bridge will be removed after construction and restoration is completed.

The project will include in-situ restoration of forested BVW areas that have been cleared or otherwise impacted during construction. As noted by MassDEP, DCR, and other commenters, the duration of impacts is significant and will not be fully restored for decades. The FEIR discussed the Proponent's conceptual plan for additional mitigation of the temporary wetlands impacts based on discussions with MassDEP and mitigation policies of the ACOE requirements. Options for mitigation include payment into the ACOE's In-Lieu Fee Program (ILFP), off-site wetlands restoration or creation by the Proponent, and land preservation.

Additional specific wetlands mitigation measures will be identified in the WQC permitting process and I expect MassDEP will consult ACOE and DCR during permitting. A significant focus in permitting should include opportunities for improving stream crossings and additional wetlands restoration or enhancement opportunities in the vicinity of the project site and, in particular, on public parkland.

Traffic/Construction

The FEIR included a Traffic and Transportation Management Plan that described construction-period traffic and potential impacts. Four to five buses will be used to transport the 250 workers from a staging area to the construction site each day. Construction vehicles will routinely circulate between staging areas and the construction ROW. The project will generate approximately 176 truck trips to transfer pipe joints from the pipeyard to the ROW based on a load of three 40-foot long pipe joints per truck. The loaded trucks are expected to weigh up to 19,000 pounds. The Traffic Plan also provided general information about the condition and characteristics of roadways to be used as haul routes.

The FEIR indicated that construction vehicles will be required to adhere to the EPA's diesel Tier 3 and 4 emissions standards, will use ultra-low sulfur diesel fuel, and will limit engine idling.

The Traffic Plan evaluated the turning radii at four intersections where large trucks will be required to make turns to determine whether the turns can be safely made. The plan assumed that four pipeyards will be used to store pipe and serve as staging areas, which will spread construction traffic over a number of roads rather than just one route. The intersections include:

- Cold Spring Road and Hammertown Road;
- South Beech Plain Road and Cold Spring Road;
- Tyringham Road and Route 23; and
- Route 23 and Cold Spring Road.

The Traffic Plan did not identify the need to modify any of these intersections to accommodate construction vehicles, but rather, indicated that the assumptions used in the analysis will be verified with the construction contractor prior to construction. The BRPC comment letter identified concerns with the analysis, including conflicting information about roadway weight limits and the absence of fixed structures and road edge markings on the plans of turning radii. In addition, BRPC conducted a Pavement Management Survey including the roadways designated for use by construction vehicles and asserts that the project will cause damage to area roads. BRPC also noted that a local roadway access permitting process does not exist.

MEPA jurisdiction does not extend to local roadways; however, I note the concerns expressed by the BRPC and encourage the Proponent to consult with BRPC staff prior to preparing the final analyses and to consult with the Town of Sandisfield and BRPC to develop a mitigation plan for local roads.

Mitigation/Draft Section 61 Findings

The FEIR contained revised mitigation commitments and draft Section 61 Findings associated with each separate State Agency Action which are commensurate with the scope and scale of the proposed project. The review of this project and resulting mitigation program may be instructive and provide context for subsequent reviews of other large energy infrastructure projects; however, it is not necessarily a corollary. MEPA review is tailored to the scope and

scale of individual projects and associated activities and evaluated within the context of specific sites and associated infrastructure and constraints.

The Proponent has committed to the following measures to avoid, minimize and mitigate project impacts:

Article 97/DCR Property

- Provide compensation for 6.19 acres of new permanent easement in the amount to be determined by the Executive Office of Administration and Finance/Division of Capital Asset Management and Maintenance (DCAMM);
- Provide compensation, via the DCR Conservation Trust, for impacts to 15 acres within temporary construction easement at \$11,000/acre and for impacts to the new 6.19-acre permanent easement at \$12,000/acre;
- Provide \$300,000 to DCR Conservation Trust for targeted land acquisition to offset project impacts;
- Deliver forest products to DCR for its use, sale, and management;
- Provide gated access roads and control of all-terrain vehicles;
- Employ a third-party observer to consult with on-site representatives of DCR to identify specimen trees and other features to be avoided during construction;

Wetlands

- Minimize impacts to wetlands using the following construction techniques/practices:
 - Prior to tree cutting, mark wetlands and any trees to be saved, and delineate ROW to prevent cutting trees unnecessarily or to ensure that appropriate construction techniques are used;
 - Limit construction workspace in wetlands to 75 feet;
 - Segregate 12 inches of topsoil and restore it after pipeline installed;
 - Expedite construction in wetlands areas;
 - Permanently stabilize upland areas adjacent to wetlands as soon as possible after backfilling;
 - Periodically inspect ROW during and after construction;
 - Repair erosion control or restoration features until area permanently revegetated;
 - Use construction mats to minimize permanent alteration of wetlands;
 - Install temporary erosion controls around work sites in or near wetlands to minimize erosion and sedimentation;
 - Avoid or minimize access through wetlands to the extent practical. Where access roads must be improved or developed, the roads would be designed, where practical, so as not to interfere with surface water flow or the functions of the wetland;
 - Limit grading for access roads in wetlands to the amount necessary to provide a safe workspace;
 - Comply with the conditions of federal and state permit conditions related to wetlands;
 - Avoid piling cut woody wetland vegetation so as to block surface water flows impact wetlands;

- Cut forested wetland vegetation without removing stumps unless it is determined that intact stumps pose a safety concern for the installation of the pipeline, movement of equipment, or the safety of personnel;
 - Refuel construction equipment (apart from equipment that cannot be practically moved) 100 feet or more from a wetland. If refueling must occur within a wetland, temporary containment will be provided;
 - Store petroleum products in areas farther than 100 feet from wetland boundaries.
 - Avoid high flow/spawning period when working in streams;
 - Install sedimentation/erosion control to prevent sediment and silt from entering streams;
 - Construct pipeline perpendicular to streams;
 - Maintain downstream flow rates;
 - Restore stream channels and bottoms to original configurations and contours;
 - Permanently stabilize stream banks and adjacent upland areas;
 - Restore original contours and flow regimes upon backfilling of the trench;
 - Use cofferdams upstream and downstream of Spectacle Pond Brook crossing and use pumps to maintain downstream flow;
 - Perform tree clearing around vernal pool areas between June and September to avoid impacts to amphibians;
 - Minimize removal of low-growing vegetation surrounding breeding pools;
 - Reuse woody vegetation and other natural materials such as boulders for vernal pool habitat rare species monitoring during construction; and
 - Restore non-certified vernal pools by segregating soils for reuse, match preconstruction topography and microtopography, adding two inches of mulch matching leaf litter from nearby trees, applying wetlands seed mix, plant trees, shrubs, herbaceous vegetation, and implementing invasive species control.
- Develop a Compensatory Wetland Mitigation Plan in accordance with MassDEP permit requirements and mitigation guidelines and the ACOE Mitigation Guidance and Checklist Instructions;
 - Mitigate impacts to approximately 10 acres of BVW with in-situ restoration, including regrading of the construction ROW, re-seeding with New England Wetlands Seed Mix, and replanting wetlands trees and shrubs;
 - Replant with plant densities of 600 plants-per-acre within forested wetlands, 400 of which shall consist of tree species;
 - Plant tree species consisting of two-to-three foot whip-sized individuals in a variety of facultative wetland species obtained from a reputable plant nursery;
 - Use a qualified and reputable landscape contractor under the supervision of a qualified wetland scientist to provide oversight of the restoration and planting activities;
 - Employ an on-site wetland scientist/environmental inspector to monitor replanting of wetlands within TWSs to ensure compliance with the mitigation plan and to make adjustments when appropriate to meet mitigation goals;
 - Plant vegetation using on-foot personnel with hand tools to the extent practicable to avoid unnecessary impacts to restored wetland areas as a result of the planting activities;
 - Mitigate 2.11-acre permanent conversion of forested wetlands to scrub-shrub or emergent wetland and long-term impacts of clearing mature forested wetlands as part of MassDEP's permitting process with ACOE's In-lieu fee, off-site restoration, and/or land acquisition;

- Mitigate 0.11 acres of BVW permanently impacted by fill by replicating BVW at a greater than 1:1 ratio adjacent to the impacted area; and
- Mitigate impacts to 615 sf of Land Under Water and 120 lf of Bank through in-situ restoration.

Water Quality

- Maintain intake at the bottom of the Lower Spectacle Pond to prevent impact to bottom sediments;
- Discharge water from hydrostatic tests onto well vegetated area;
- Use dewatering BMPs, including flow dissipator, sedimentation and erosion control, for discharge of hydrostatic test water;
- Discharge hydrostatic test water into an area where water will flow back into the Spectacle Pond Brook;
- Discharge hydrostatic test water over a 24 hour period to minimize discharge rate; and
- Refuel and lubricate equipment at least 100 feet from any wetland, waterbody, or well or within 400 feet of a community water supply.

Rare Species

- If Tyringham pipeyard is used, place construction mats and install perimeter fencing in late winter/early spring prior to use of site by Wood Turtles and Sedge Wren;
- Use screen at the end of intake hose to prevent entrainment of organisms in Lower Spectacle Pond; and
- Withdraw water from Lower Spectacle Pond in the fall to avoid flight period of Umber Shadowdragon.

Historic and Archaeological Resources

- Mark identified historic/archaeological resources in the field so that they may be avoided by construction operations; and
- Implement Unanticipated Discovery Plan if archaeological objects are discovered.

Blasting

- Use blasting mats in areas that could be damaged by flying rock;
- Post warning signals, flags, and barricades;
- Prepare emergency response measures;
- Limit size of charges and stagger multiple charges to control excessive vibration;
- Prohibit the use of perchlorate-containing explosives and detonators containing perchlorates or Ammonium Nitrate Fuel Oil;
- Inspect structures within 200 feet of work area prior to and after blasting;
- Monitor ground vibrations at nearest structure or well within 200 feet of work area;
- Schedule blasting activity and use muffling techniques to minimize disturbance to the public;

- Trench blasting techniques will be used to protect nearby structures, wells and wetlands; and
- Repair or provide compensation for damage to wells and structures caused by blasting.

Greenhouse Gas/Air Quality

- Proponent conducted a GHG analysis in accordance with the EEA Greenhouse Gas Policy, including analysis of GHG emissions associated with land alteration and loss of carbon storage;
- Use hot-tap methodology for connecting pipelines to reduce gas venting;
- Use hydrostatic testing of pipeline rather than gas testing to reduce gas venting;
- Regularly inspect pipeline and valves for leaks and fix leaks expeditiously;
- On and off-road vehicles will adhere to the EPA's Tier 3 and 4 diesel emissions standards, use ultra-low sulfur diesel fuel, and limit the amount of engine idling time;
- Reduce pipeline pressure when possible prior to performing maintenance activities; and
- Prevent release of gas by employing leak-detection measures, including:
 - Cathodic protection to minimize pipeline corrosion;
 - Gas odorizer to allow for quicker recognition of a leak;
 - Periodic flyovers of the pipeline to inspect the condition of the ROW; and
 - Maintain readily-available leak repair equipment to minimize releases of gas.
- To ensure that all GHG emissions reduction measures adopted by the Proponent as the Preferred Alternative are actually constructed or performed by the Proponent, the Proponent shall provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed.

Traffic and Construction

- Use track pads at work zone entrances and exits to prevent spread of soil and dust;
- Sweep public roads to remove construction-generated soil and debris;
- Repair roads in accordance with Traffic and Transportation Plan and agreements with municipalities;
- Properly maintain construction equipment and use mufflers to minimize construction noise;
- Use construction BMPs, including sedimentation and erosion controls and dust control practices, to minimize erosion and off-site tracking of dirt; and
- Provide police details in connection with project-related road closures.

Conclusion

Based on a review of the FEIR and consultation with State Agencies, I find that the FEIR adequately and properly complies with MEPA and its implementing regulations. The Proponent shall provide revised draft Section 61 Findings for review and comment in the Environmental Monitor subject to the ENF comment and review period.

April 17, 2015

Date

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Matthew A. Beaton

Comments received:

03/12/2015 Natural Heritage and Endangered Species Program (NHESP)
03/18/2015 Susan Baxter
04/03/2015 Berkshire Regional Planning Commission (BRPC)
04/08/2015 Berkshire Regional Planning Commission (BRPC) (supplemental letter)
04/10/2015 Massachusetts Department of Environmental Protection (MassDEP)/Western
Regional Office (WERO)
04/10/2015 MassAudubon
04/10/2015 Berkshire Environmental Action Team (BEAT)
04/10/2015 Department of Conservation and Recreation (DCR)