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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
EXPANDED ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: Tennessee Gas Pipeline 261 Upgrade Projects
PROJECT MUNICIPALITY	: Agawam
PROJECT WATERSHED	: Connecticut River
EEA NUMBER	: 15879
PROJECT PROPONENT	: Tennessee Gas Pipeline Company LLC
DATE NOTICED IN MONITOR	: July 11, 2018

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA Regulations (301 CMR 11.00), I hereby determine that this project **requires** a mandatory Environmental Impact Report (EIR). The Proponent submitted an Expanded Environmental Notification Form (EENF) with a request that I allow a Single EIR to be submitted in lieu of the usual two-stage Draft and Final EIR process pursuant to Section 11.06(8) of the MEPA regulations. The Proponent should file a Draft EIR in accordance with the Scope outlined below.

Project Description

As described in the Expanded Environmental Notification Form (EENF), the project is proposed to increase capacity and enhance reliability of the Tennessee Gas Pipeline (TGP) system to provide gas to Columbia Gas of Massachusetts (CMA) and the Holyoke Gas and Electric Department (HG&E). The Department of Public Utilities (DPU) issued an Order (DPU 17-172) on May 31, 2018 authorizing the transportation contract between TGP and CMA ("precedent agreement").

The EENF identified three projects: construction of a 2.1-mile long pipeline loop; replacement of two turbine compressors with a single, larger compressor; and construction of a new meter station in Longmeadow. It also identified appurtenant structures and access roads and removal of a portion of an inactive pipeline. The pipeline loop will increase capacity by 17,000 dekatherms per day (Dth/d). The approximate capacity of TGP's Compressor Station 261 (CS 261) will increase from approximately 1,191,000 Dth/d to 1,244,000 Dth/d. The new compressor will provide an additional 30,800 Dth/d to the nearest delivery point on the CMA system and 25,000 Dth/d to TGP's regional delivery system.

Pipeline Loop

The pipeline loop will include a 12-inch diameter pipe that will tie in to existing structures at CS 261, cross under Suffield Street to the gas transmission right-of-way (ROW) on the west side of the street, and continue north within or adjacent to the ROW to the terminus of the pipeline loop approximately 500 feet north of Silver Street. Facilities for the cleaning and inspection of the pipeline loop by "pig" devices will be installed at either end of the project, including a pig launcher at CS 261 and a pig receiver at the northern terminus.

Approximately 1.9 miles (90 percent) of the pipeline loop will be constructed either within the existing ROW (1.5 miles) or on the CS 261 site (0.4 miles). To avoid a residential apartment complex and power line structures, the pipeline route will be located within a new 40-ft wide ROW easement in two areas totaling 0.2 miles. In areas where the pipeline loop will be constructed within the existing ROW, the permanent ROW will be expanded by 20 feet. The project will add a total of 5.51 acres of new ROW. Three new permanent access roads (PAR) to maintain the pipeline are proposed on existing farm roads and utility easements. The PARs will require 1.07 acres of new easements.

Construction activities will affect 32.5 acres of land, including the existing and proposed permanent ROW, a 75-foot wide construction ROW centered on the pipeline loop, additional temporary workspaces (ATWS), the PARs, four temporary access roads (TAR) and a pipe yard. The pipeyard will be located on an 11.3-acre parcel adjacent to CS 261. The pipeyard includes 3.3 acres in Massachusetts and 8 acres in Connecticut.

Construction activities will include the following:

1. Clearing and grading of the construction zone;
2. Trenching;
3. Delivery and assembly of pipe joints;
4. Lowering of the pipeline into the trench;
5. Backfilling and grade restoration; and
6. Hydrostatic testing.

The trench will be approximately 28 inches wide and the pipeline loop will be buried to a depth of 3 to 5 feet. In areas where the pipeline loop will be installed adjacent to the abandoned 6-inch pipe, the trench will be wide enough to install the new pipe and remove the existing one.

Approximately 1.1 miles of the abandoned 6-inch diameter pipe will be removed. At the four roadway crossings along the route, the pipeline loop will be installed without disturbing the surface of the road using a conventional bore technique. As described in more detail below, the project will use specialized construction procedures in wetlands and waterbodies to avoid and minimize impacts.

Hydrostatic testing of the pipeline loop will require approximately 70,000 gallons of water. Hydrostatic testing of the new compressor will require 40,000 gallons of water. The water will be obtained from the municipal water service. Upon completion of hydrostatic testing, the water will be transferred to holding tanks, tested and transported for off-site disposal.

Compressor Station

Two gas turbines with a combined horsepower (hp) of 6,689 hp will be replaced with a 11,107 hp gas turbine. An emergency generator will also be replaced. A 2,600-sf building will be constructed and an exhaust stack will be improved and extended from 62.5 feet to 67.5 feet. The new turbine and all associated facilities and construction activities will be located within the fenced area of CS 261.

Project Site

The pipeline loop and gas compressor will generally be installed within the Proponent's pipeline ROW and existing CS 261 facility. The 41.07-acre compressor station site is located on Suffield Street near the Massachusetts-Connecticut state line. The compressor station is adjacent to undeveloped land to the west and east. An apartment complex north of the compressor station and several single-family homes along Suffield Street to the south are at least 500 ft from the station and separated from it by vegetated buffers. The gas compressors and associated equipment are located within a fenced portion of the eastern half of the site that is largely cleared and maintained as lawn. Three small areas of Bordering Vegetated Wetlands (BVW) are located along the perimeter of the station, including an area of BVW that extends through the western half of the site. Office space, a parking lot, Worthington Brook and associated BVW are located on the western half of the site. The pipeyard will be located on land owned by the Proponent which is adjacent to CS 261 and extends south into Suffield, Connecticut. The pipeyard area is maintained as a field; wetlands areas are located along the east and west sides of the pipeyard.

The existing ROW includes a 10-inch pipeline (Line 261B) and an abandoned 6-inch pipeline. It begins at the compressor station and travels in a northerly direction through the residential apartment complex north of CS 261 and across Suffield Street. It passes to the west of residential and commercial properties along Suffield Street and through commercial and industrial parks on Gold Street and Silver Street. The ROW crosses three perennial streams and two intermittent streams. Much of the ROW, particularly its southern half, passes through BVW. Most of the ROW is located within or adjacent to Priority Habitat for State-listed rare species, including the Eastern Box Turtle (*Terrapene carolina*), a Species of Special Concern, and the Eastern Worm Snake (*Carphophis amoenus*), a Threatened species.

Environmental Impacts and Mitigation

Potential impacts are associated with emissions of air pollutants from the installation and operation of the pipeline, compressor turbine and emergency generator, and alteration of wetlands and rare species habitat associated with pipeline installation. The gas compressor turbine will emit 46,692 tons per year (tpy) of Greenhouse Gas (GHG), measured as carbon dioxide equivalent (CO_2e); 14.14 tpy of oxides of nitrogen (NO_x); 3.99 tpy of carbon monoxide (CO); 5.59 tpy of sulfur dioxide (SO_2); 2.63 tpy of particulate matter (PM); 2.14 tpy of volatile organic compounds (VOC); and 0.21 tpy of hazardous air pollutants (HAP). The project will alter approximately 25 acres of land, including 6.64 acres of land outside of the existing ROW. Construction of the pipeline loop will impact approximately 7.5 acres (328,00 sf) of BVW, including 0.88 acres of permanent conversion of wetland type; 0.18 acres (7,800 sf) of Isolated Vegetated Wetlands (IVW); 1,001 linear feet of Bank; 6.2 acres (271,900 sf) of Riverfront Area; and 0.15 acres (6,500 sf) of Land Under Water (LUW). The project will impact rare species habitat, resulting in a Take of the Eastern Worm Snake and Eastern Box Turtle.

The project will increase reliability and capacity of the system through improvement to and expansion of existing infrastructure. Measures to avoid, minimize, and mitigate project impacts include minimization of the ROW, use of timber mats to prevent permanent impacts to wetland resource areas during construction, restoration of wetland areas, off-site wetland restoration and conservation, installation of erosion and stormwater best management practices (BMPs) and replacement of older turbines with a high-efficiency turbine.

Jurisdiction and Permitting

The project is undergoing MEPA review and is subject to a mandatory EIR pursuant to 301 CMR 11.03(3)(a)(1)(a) of the MEPA regulations because it requires State Agency Actions and will alter one or more acres of BVW (approximately 7.5 acres). The project will require a Section 401 Water Quality Certification (WQC) and a Non-major Comprehensive Plan Approval from the Massachusetts Department of Environmental Protection (MassDEP) and a Conservation and Management Permit (CMP) from the Natural Heritage and Endangered Species Program (NHESP). It is subject to review under the May 2010 MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol (GHG Policy).

The project requires an Order of Conditions (OOC) from the Agawam Conservation Commission (and, if the OOC is appealed, a Superseding Order of Conditions (SOC) from MassDEP), a Section 404 approval by the Army Corps of Engineers under the General Permits for Massachusetts and a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the Environmental Protection Agency (EPA). It requires approval from the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act and review by the Massachusetts Historical Commission (MHC) pursuant to Section 106 of the National Historic Preservation Act and M.G.L. c.9, ss.26-27C (950 CMR 70-71).

Because the Proponent is not seeking Financial Assistance from the Commonwealth for the project, 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 and water quality, rare species, air and GHG emissions.

Single EIR Request

In accordance with Section 11.05(7) of the MEPA regulations, the Proponent has submitted an EENF with a request that I allow the Proponent to fulfill its EIR obligations under MEPA with a Single EIR, rather than a Draft and Final EIR. According to 301 CMR 11.06(8), I may allow a Single EIR provided that the EENF:

- Describes and analyzes all aspects of the project and all feasible alternatives, regardless of any jurisdictional or other limitation that may apply to the Scope;
- Provides a detailed baseline in relation to which potential environmental impacts and mitigation measures can be assessed; and
- Demonstrates that the planning and design of the project use all feasible measures to avoid potential environmental impacts.

The EENF was subject to a 30-day comment period. The Single EIR request was discussed at the consultation session held on July 27, 2018.

Review of the Expanded ENF

The EENF provided information about the existing conditions along the length of the project route, including soils, geology, vegetation, wildlife, land use, and cultural resources. It included an inventory of wetlands and watercourses along the project route and a report describing the wetlands delineated in the project area. The EENF described the pipeline construction process, identified potential environmental impacts and mitigation measures, and reviewed alternatives to the project. It included a copy of an Upland Erosion Control, Revegetation and Maintenance Plan identifying standard construction mitigation measures required by FERC.

Comments on the EENF indicated that Draft and Final EIRs should be prepared to provide an expanded alternatives analysis, revised analyses of air emissions, including GHG emissions, and greater detail with respect to measures for minimizing and mitigating wetland impacts and invasive species management. Comments requested that the DEIR include other projects proposed by CMA to address reliability and capacity throughout its system. Comments also request that the alternatives analysis be expanded to address alternatives to natural gas including renewable energy and energy efficiency. In addition, commenters requested that the Proponent be required to conduct a health assessment of the compressor station.

Segmentation

The purpose of MEPA review is to provide meaningful opportunities for public review of the potential environmental impacts of projects for which Agency Action is required, and to

assist each Agency in ensuring that the project will employ all feasible means to avoid and minimize, or mitigate Damage to the Environment to the maximum extent practicable.

The MEPA regulations include provisions (301 CMR 11.01 (2)(c)) to ensure that projects, including any future expansion thereof, are not segmented to evade, defer or curtail MEPA review. This provision addresses what constitutes a "single project" under MEPA and thereby ensure that projects are not phased or segmented to "evade, defer or curtail MEPA review."

> *...The Proponent, any Participating Agency, and the Secretary shall consider all circumstances as to whether various work or activities constitute one Project, including but not limited to: whether the work or activities, taken together, comprise a common plan or independent undertakings, regardless of whether there is more than one Proponent; any time interval between the work or activities; and whether the environmental impacts caused by the work or activities are separable or cumulative.*

The EENF indicated that the three projects identified in the precedent agreement regarding TGP are separate and distinct projects with independent utility. The EENF included analysis and quantification of environmental impacts for the pipeline loop and the compressor station. It indicated that the West Longmeadow Meter Station project is identified solely for informational purposes and that it should not be included in MEPA review. It also indicated that the Meter Station does not exceed MEPA review thresholds, has independent utility and that the natural gas supply associated with it will come from the TGP mainline. The three projects are proposed by the same Proponent within a similar timeframe; they are included in the precedent agreement as one of three TGP projects necessary to increase capacity and reliability of the system; and the Meter Station is directly linked to the compressor station by a pipeline. The Meter Station should be included in the DEIR.

Alternatives Analysis

The purpose of the project is to increase the capacity and reliability of the transmission system. Project goals are consistent with the Commonwealth's efforts to create a clean, reliable and cost-effective energy future for Massachusetts residents and to significantly reduce GHG emissions to combat climate change. These efforts include significant investment in energy efficiency, renewable energy, and improvements to capacity and resiliency of energy infrastructure.

The EENF reviewed alternatives for meeting CMA's need for additional gas capacity, for increasing the capacity of TGP's transmission system to provide gas to CMA and for adding more compression at CS 261. It also reviewed alternative pipeline routes for the Preferred Alternative.

According to the EENF, the demand could not be met solely through energy conservation and efficiency. The EENF indicated that providing energy through non-carbon sources would not be sufficient to meet demand and would require new transmission infrastructure with similar or greater environmental impacts than the Preferred Alternative. The EENF also stated that

increasing energy efficiency of the pipeline and compression systems would not increase its capacity to the extent required to provide additional gas supplies.

The EENF reviewed three alternatives to the pipeline loop proposed in the Preferred Alternative, including a Compression Only alternative, a Lift and Relay alternative and an Uprating alternative. The Proponent indicated that the Compression Only alternative is not feasible because it would not increase transmission capacity sufficiently to meet demand. The Lift and Relay alterative would involve the replacement of the 10-inch pipeline with a larger diameter pipe. The EENF indicated that this alternative would have similar construction impacts as the Preferred Alternative. It would require the transport of liquefied natural gas (LNG) by trucks when the pipeline is not available during the approximately two-month construction period, which would add traffic and air quality impacts and higher costs. The Uprating alternative would involve increasing the transmission capacity of the existing 10-inch pipeline by operating it at a higher pressure. The EENF indicated that this alternative is not feasible because an operating pressure of 815 pounds per square inch (psi) would be necessary to deliver the necessary volume of gas and pressure of the existing pipeline is limited to 700 psi.

Alternatives to the replacement of the compression turbine include the Looping Only alternative, the Rewheeling alternative and an Electric Driver alternative. According to the EENF, the Looping Only alternative would provide the necessary added capacity with a 4.3-mile long, 12-inch diameter pipeline loop and a 36-inch diameter, 4.8-mile long mainline pipeline. The Proponent dismissed this alternative based on increased land alteration, wetlands impacts and expansion of the ROW. The Proponent also noted that it would not achieve the reliability benefits of the Preferred Alternative in connection with the replacement of the outdated compressors. The Rewheeling alternative would make design and performance modifications to existing compressors to provide equivalent capacity to the system as the Preferred Alternative. This alternative was rejected because rewheeling the old compressors would not achieve the reductions in emissions and noise that would be achieved by the Preferred Alternative. The Electric Driver alternative would involve the installation of an electric motor compressor rather than a gas turbine. Emissions associated with this alternative would be generated by electric generating facilities supplying power to the grid and may not have lower concentrations of contaminants than the Preferred Alternative. This alternative was rejected because an electric compressor would be subject to power line outages and other reliability concerns, is more complicated to maintain, would require additional ancillary facilities, including a new building an electric substation and would have higher costs.

The Proponent selected the Preferred Alternative because it will meet the identified demand for natural gas; it will minimize impacts by installing a 12-inch diameter pipeline loop within or adjacent to the ROW, restore BVW temporarily impacted by construction; and it will replace older, less efficient turbines with a more efficient turbine that generates fewer emissions of air pollutants.

Greenhouse Gas (GHG) Emissions

The project is subject to review under the MEPA GHG Policy. The GHG Policy is one element of a comprehensive effort to meet the Commonwealth's obligations under the Global

Warming Solutions Act (GWSA) which include reducing carbon emissions by between 10% and 25% below 1990 emissions levels by the year 2020, and by 80% below 1990 emissions levels by the year 2050. Consistent with MEPA's overall purpose to evaluate alternatives that avoid, minimize and mitigate environmental impacts to the maximum extent practicable (301 CMR 11.01), the Policy requires that GHG impacts of projects have been carefully considered and that all feasible means and measures to reduce those impacts are adopted. The Policy requires that all projects that are subject to preparation of an EIR quantify GHG emissions, evaluate measures that could reduce GHG emissions and quantify potential reductions of mitigation measures. This is a case-by-case inquiry that allows project proponents to select mitigation measures that are determined to be feasible for the particular project being proposed, thereby providing project proponents with maximum flexibility to design their projects.

The EENF analyzed GHG emissions associated with the following project elements:

1. Construction: release of vented gas associated with connecting the pipeline loop and disconnecting the existing compressors, and diesel emissions from construction vehicles;
2. Commissioning: releases of gas when the new pipeline is inspected and filled with natural gas;
3. Normal operations: fugitive leaks in the pipeline, primarily at valves at either end of the pipeline, and operation of the combustion turbine and compressor; and,
4. Non-routine operations: long-term maintenance procedures, such as in-line inspections, or unplanned blowdowns when a section of pipeline must be vented for maintenance or repair purposes.

The analysis calculated GHG emissions for baseline and alternative conditions for each category. The analysis considered emissions of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) from these sources. CO_2e values were calculated to establish equivalency among the types of emissions. The analysis identified whether the baseline or alternative would be adopted as the Preferred Alternative. For activities related to construction, operation and maintenance of the pipeline loop, baseline conditions generally reflecting standard practices were incorporated into the Preferred Alternative. An alternative method for connecting the pipeline loop involves the use of a hot-tap to minimize the amount of vented gas by connecting the pipelines without taking the existing pipe out of service. The hot-tap method would avoid the release of 396 tons of CO_2e. Mitigation measures for minimizing emissions from fugitive leaks include cathodic protection to minimize pipeline corrosion, the use of a gas odorizer to allow for quicker leak detection, periodic flyovers of the pipeline to inspect the condition of the ROW and maintaining readily available leak repair equipment to minimize releases of gas.

The EENF compared the GHG emissions from the use of the proposed gas combustion turbine to an electric motor to drive the compressor. The electric motor would be powered by electricity from the grid. Emissions from the electric motor alternative were calculated using the emissions factors published by the Independent System Operator-New England (ISO-NE) in its 2016 Emissions Report. The electric motor alternative would generate 33,036 tpy of CO_2e compared to 46,691 tpy of CO_2e released from the proposed gas combustion turbine. The EENF indicated that the use of an electric motor is not feasible because: the electric supply is not as reliable as the gas supply and its use would render the compressor station vulnerable to

blackouts; electric motors and ancillary equipment are more difficult to maintain; additional impacts associated with the construction of an additional building, an electric substation and other ancillary structures; and its capital and fuel costs are higher than the gas turbine.

The GHG emissions from the four sources listed above are summarized in Table 1.

Table 1: GHG Emissions (tons) for the Preferred Alternative

Source	Duration/Frequency	CO_2	CH_4	N_2O	CO_2e
Construction	Once	3,143	20.31	0.16	3,880
Commissioning	Once	0.001	1.24	-	42
Normal Operation	Annual	46,635	0.90	0.09	46,692
Non-routine	Every 5 to 7 years	0.00006	0.07	-	2
Operation	Infrequent/when needed	0.01	8.80	-	299

Air Quality

The EENF included a review of the emissions of air pollutants by the proposed gas turbine compressor and emergency generator. The Proponent must submit a Non-major Comprehensive Plan Application (NMCPA) for review and approval by MassDEP and the project will require a modification to the Title V Operating Permit for the compressor station. The EENF also identified emissions from a new emergency generator that will be certified under MassDEP's Environmental Results Program (ERP) or approved in connection with the modified Operating Permit, construction-period emissions and emissions from operation and maintenance of the pipeline loop.

The Proponent previously filed an application for a smaller turbine with MassDEP. A new or modified application is required due to the change in equipment. Comments from MassDEP indicate that a facility-wide pollutant modeling analysis is required for the future configuration of the facility. The EENF did not include information from the previous application or a draft application for the new submission.

The project will replace a 5,490-HP Solar Centaur H turbine and a 1,199-HP Solar Saturn T-1001 turbine with a 11,107-HP Solar Taurus 70 turbine. Emissions from the turbine include NOx, CO, VOC, HAP, SO_2, PM_{10}, $PM_{2.5}$ and GHG. The EENF did not include a Best Available Control Technology (BACT) analysis. According to the EENF, a BACT analysis will be employed which will consider natural gas fuel, efficient equipment and advanced combustion controls to demonstrate that the project will minimize emissions of air contaminants. The Solar Taurus 70 turbine will be equipped with a lean premix technology that will ensure a uniform air/fuel mixture and minimize emissions of oxides of nitrogen (NOx), carbon monoxide (CO), volatile organic compounds (VOC) and hazardous air pollutants (HAP). An oxidation catalyst will be installed on the turbine to minimize emissions of CO, VOC and HAP.

The EENF did not identify the capacity of the existing compressor station or provide a comparison of existing conditions to proposed conditions. As shown in Table 2, the EENF did identify emissions associated with the turbines upon completion of the project. [1]

Table 2: Air emissions from gas turbines (tpy)

Contaminant	Two turbines to remain in operation	Solar Taurus 70	Total
Particulate matter	6.57	2.55	9.12
CO	35.04	4.01	39.05
SO_2	1.09	5.47	6.57
VOC	16.79	2.19	18.98
NOx	52.56	14.23	66.79
HAP	0.36	0.15	0.51

The ENF did not include the assumptions, data and emission factors used in its analysis. The EENF provided the results of air dispersion modelling to demonstrate that the project will not cause an exceedance of the National Ambient Air Quality Standards (NAAQS). Modeled concentrations of pollutants emitted by the Solar Taurus 70 turbine and proposed emergency generator were compared to Significant Impact Levels (SILs) that generally correspond to impact thresholds. According to the EENF, hourly and daily concentrations of all pollutants will be well below applicable SILs.

Emissions associated with pipeline operations will include fugitive leaks, venting of gas during maintenance and inspection procedures and blowdowns that may be necessary if repairs to the pipeline loop are necessary. Emissions from the pipeline will be minimized by regular inspection of the pipeline and repair of any detected leaks. Construction-period emissions will be minimized by using a hot tap to connect the pipeline loop to the main pipeline, using construction vehicles and engines that meet the EPA's stringent Tier 3 and Tier 4 emissions standards and minimizing idling of vehicles.

Noise

The EENF described the noise levels that will be generated by the new compressor upon completion of the project. It identified the predicted noise levels at the north and west property lines, an inhabited building located 600 feet east of the site and an inhabited building located 1,150 feet to the west of the site. Upon completion of the project, sound levels at these locations will be 6.9 to 8.8 decibels (dBA) above ambient levels based on the current operating conditions at the compressor station. According to the EENF, these increases are below the 10-dBA impact level identified in MassDEP's Noise Policy. Measures to minimize noise generated by the new

[1] As required by the EENF form, the Proponent identified emissions in tons per day (tpd). Those values were converted to tpy by multiplying them by 365.

turbine include inlet and exhaust silencers and acoustic treatment of piping.

Wetlands and Water Quality

Construction of the pipeline loop will impact approximately 7.5 acres BVW, including 0.88 acres of permanent conversion of wetland type; 0.18 acres of IVW; 1,001 linear feet of Bank; 6.2 acres of Riverfront Area; and 0.15 acres of LUW. The pipeline loop will cross five streams. The EENF reviewed construction methods in wetlands areas, stream crossing techniques and restoration and mitigation measures.

The pipeline loop will be constructed across streams using conventional trenching when there is no flow at the time construction; a flume or dam-and-pump techniques will be used when the stream is flowing. A flumed crossing would redirect flow through one or more pipes to allow for passage of aquatic organisms while providing dry conditions in the stream for trenching. This technique will be used where stream bank soils will remain stable during trenching and where the flow volume can be accommodated by pipes. The dam-and-pump method will be employed where pumps and hoses can transfer stream flow from the upstream area to the downstream side and it is not necessary to provide for passage of aquatic organisms. This technique involves the construction of a cofferdam to prevent material from entering the waterbody. To minimize impacts, the stream crossings will be located perpendicular to the channel, high flow and spawning periods will be avoided, construction will be expedited and the amount of equipment in the stream will be limited and sediment and erosions controls will be used and the stream will be restored immediately upon installation of the pipeline across the stream. Upon completion of construction, the stream channels and bottoms will be restored to their original configurations and contours and stream banks will be stabilized.

Pipeline installation through wetlands will be conducted using either conventional wetland construction or drag-section construction techniques. Conventional wetland construction will be used in wetlands with saturated soils or soils unable to support construction equipment. Timber mats or corduroy roads will be placed on the surface of the wetland to provide a stable surface to support construction equipment. A 12-inch layer of wetland topsoil will be removed, stored directly adjacent to the trench and reused as the top layer of backfill over the trench. The trench will remain open until pipe segments are assembled and lowered into the trench. The drag-section technique will be used when sufficient space adjacent to the pipeline trench for pipe assembly is not available and must be assembled elsewhere and brought to the ROW. This method involves trenching, installing the pipeline and backfilling the trench all in one day. Trees within the workspace will be cut down to facilitate access to the ROW by construction equipment.

All wetland areas will be restored to pre-construction grades, contours, and drainage patterns. These areas will then be reseeded or replanted with native wetlands plant species. According to the EENF, a detailed wetlands mitigation plan describing additional measures to avoid, minimize, and mitigate temporary and permanent wetlands impacts will be developed in consultation with federal and state agencies during permitting. Mitigation for permanent impacts to wetlands will include off-site wetlands restoration and conservation of existing wetland areas. The Proponent will also develop an Invasive Species Management Plan to prevent colonization

of disturbed wetland areas by invasive species. Wetlands within the permanent ROW will be subject to ROW maintenance practices. Wetlands vegetation within a 10-ft area centered on the pipelines will be maintained as low-growing emergent or scrub-shrub wetland. Woody wetlands vegetation will be allowed to become reestablished in the remainder of the ROW, except that trees within 15 feet of a pipeline that are taller than 15 feet high may be cut and removed from the ROW.

Rare Species

The pipeline route and associated workspace includes 7.65 acres mapped as *Priority* and *Estimated Habitat* for the Eastern Worm Snake and Eastern Box Turtle. According to NHESP, the project is likely to result in a Take of these species and the project will require a CMP. The project will be required to avoid, minimize and mitigate impacts to rare species, including assessing alternatives with fewer temporary and permanent impacts, demonstrating that an insignificant portion of the local population will be impacted, and by developing and implementing a conservation and management plan that provides a long-term net benefit to the conservation of the state-listed species.

The EENF described mitigation measures for impacts to rare species habitat, including:

- Pre-construction surveys,
- Pre-construction monitoring for at least one active season prior to tree clearing immediately prior to pipeline construction;
- Use of exclusion fencing and pre-construction sweeps to remove individuals;
- Contractor training; and,
- Providing written reports to NHESP.

Construction

The EENF included a discussion of construction period impacts, including erosion and sedimentation, air quality, solid waste disposal, water quality and water supply protection, and construction management and traffic. The Proponent will prepare an Environmental Construction Management Plan (ECMP) that will identify all necessary mitigation measures to eliminate or minimize these impacts. The Proponent install erosion and sedimentation controls around work areas. The Proponent will require contractors to use Ultra Low Sulfur Diesel (ULSD) fuel in all off-road construction equipment and to comply with EPA emissions standards. The project will include recycling of existing asphalt, concrete, and packing crates. All construction activities will comply with the MassDEP Air Pollution Control Regulations at 310 CMR 7.02 (Plan Approval and Emission Limitations) and 310 CMR 7.09 (Dust, Odor, Construction, and Demolition), and with the Massachusetts Idling regulation at 310 CMR 7.11.

Conclusion

Based on review of the EENF, consultation with public agencies and consideration of public comments, I have determined that the Proponent should file a Draft EIR and Final EIR consistent with the Scope included below. The EENF provided a detailed project description,

identified potential impacts associated with construction of the pipeline loop and compressor station and identified mitigation measures. It did not compare overall emissions of the CS 261 facility, provide dispersion modelling for the facility under existing and proposed conditions and did not provide information regarding the protocol and inputs used for modeling. The EENF referenced the prior NMCPA submitted to MassDEP but did not include it in the EENF.

SCOPE

General

The DEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. It should respond to comments received on the EENF. The DEIR should identify and commit to specific environmental mitigation measures and provide draft Section 61 Findings. The DEIR should include a list of required State Agency Permits, Financial Assistance, or other State approvals, as well as any local or federal permitting. It should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and a description of how the project will meet those standards.

The DEIR should provide updated project plans based on refinements to the project design and verified conditions along the proposed pipeline route and other work areas, and identify any changes to the project since the EENF. It should include existing conditions site, including CS 261, and provide plans at a legible scale. It should identify all existing and proposed compressors, including gas and electric driven compressors. It should describe the capacity of CS 261 under existing and proposed conditions. It should review construction procedures for all components of the project and highlight any changes from the EENF. The EENF should include more detailed information regarding hydrostatic testing and specific measures to avoid accidental or unintended discharge of testing water.

The DEIR should provide a rationale for removing the abandoned 6-inch diameter pipe. It should quantify any additional temporary or permanent impacts to wetlands and rare species habitat due to any widened or additional trenching needed to expose and remove the pipe. It should describe any potential impacts of abandoning the pipe in place and any necessary remediation of the pipe or soil whether the pipe is removed or left in place. The DEIR should document that all feasible measure to minimize damage to the environment will be undertaken.

Climate Change

Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569) was issued on September 16, 2016. EO 569 recognizes the serious threat presented by climate change and directs state agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet greenhouse gas emissions reduction limits established under the GWSA and will work to prepare state government and cities and towns for the impacts of climate change. As noted in the Scope, the DEIR should address the potential effects of climate change on the project site.

The GWSA includes a section focused on meeting the threats and challenges posed by climate change. Pursuant to that section, MEPA review of projects subject to an EIR must consider the reasonably foreseeable climate change impacts and GHG emissions of projects subject to MEPA review (and effects such as predicted sea level rise); and (2) ensure that projects subject to MEPA take all feasible measures to avoid, minimize, or mitigate "Damage to the Environment" (as defined in the MEPA statute), including GHG emissions.

The GHG Policy and requirements to analyze the effects of climate change through EIR review is an important part of this statewide strategy. These analyses advance proponents' understanding of a project's contribution and vulnerability to climate change.

Consistent with EO 569, the Massachusetts State Hazard Mitigation and Climate Adaptation Plan and the Massachusetts Energy Plan will be released in September. The DEIR should address the project's consistency with these plans. If the plans are not available prior to the filing of the DEIR, consistency with the plans should be addressed in the subsequent MEPA filing.

Adaptation and Resiliency

It is widely accepted by the scientific community that the increased emissions of GHGs are contributing to a changing climate. Changes to climate are already causing, and will continue to cause, significant local impacts. Observed effects of climate change in the US and the Northeast include increased atmospheric and ocean temperatures, heat waves, increased evapotranspiration and precipitation, and a greater intensity of storms, and floods. In addition, thermal expansion of a warmer ocean and the melting of glaciers are contributing to a rise in sea level. In the future, annual average temperature is predicted to increase, and is expected to be coupled with a greater number of extreme heat days; precipitation changes by season, intensity and type will occur; and, acceleration of sea level rise in combination with land subsidence, will continue to re-shape our coastline.

The DEIR should assess the vulnerability of the project to the effects of climate change, including storms and flooding, and identify measures incorporated into the project design that will increase the resiliency and ability of the site to adapt to climate change.

Greenhouse Gas Emissions

The GHG analysis in the EENF should be expanded to include a comparison of GHG emissions under existing and proposed conditions and should reflect any additional GHG mitigation measures adopted since the filing of the EENF. The EENF included a general description of alternatives to expanding natural gas capacity including energy conservation, energy efficiency and energy alternatives (e.g. solar, geothermal); however it did not provide data or analysis to compare environmental impacts (positive and negative) of the alternatives, including the Preferred Alternative. The EENF should include additional description of these measures, and provide relevant analysis and data.

Air Quality

The EENF provided estimates of the emissions of the proposed Solar Taurus 70 and a new emergency generator. The analysis provided emissions data for two turbines that will remain in use along with the new turbine to provide an estimate of emissions from CS 261 under proposed conditions. The DEIR should include existing emissions for the station, including all permitted turbines, so that the projects negative or positive effects on emissions can be determined. This information was provided to the MEPA office during the review period and indicated that emissions of some pollutants will decrease upon completion of the project. The DEIR should also provide revised dispersion modelling that includes all regulated emissions from CS 261 under proposed conditions and compare the model results to SILs. The DEIR should provide a BACT analysis evaluating air control measures that are available to minimize emissions and identify measures that will be adopted by the project.

Information provided in the DEIR will be employed to determine whether additional air quality analysis is necessary to identify impacts and consistency with air quality regulations and whether sufficient measures to avoid, minimize and mitigate impacts are proposed.

Wetlands and Water Quality

The DEIR should include a review of workspaces identified in the EENF and identify any areas where the size or orientation of the workspace could be changed to minimize wetlands impacts. As requested above, the DEIR should quantify impacts associated with abandoning the 6-inch diameter in place. MassDEP recommends that an Abbreviated Notice of Resource Area Delineation (ANRAD) be filed to confirm the location and area of wetlands to be impacted. Based on any changes or refinements to the project or the delineation of wetlands, the DEIR should identify and quantify impacts to all wetlands resource areas, including BVW, Bank, Riverfront Area, LUW, BLSF, and Isolated Land Subject to Flooding (ILSF), as well as IVW and vernal pools. For any wetlands mitigation or replication that will be required through local, state, and federal permitting requirements, the DEIR should describe the general standards, possible locations of wetlands mitigation and replication, and typical monitoring requirements that may be required. The DEIR should demonstrate that the project has been designed to avoid or minimize impacts to wetlands, detail all mitigation measures to be implemented as part of the project and review how the project will comply with all relevant standards of the Wetlands Protection Regulations (310 CMR 10.00) and 401 WQC Regulations (314 CMR 9.00).

The DEIR should address whether hydrostatic testing will occur near resource areas and the potential impact of unintentional discharge of testing water on resources. It should identify specific measures that will be employed to avoid discharge and to protect resource areas.

Rare Species

Comments from NHESP recommend that the Proponent continue to consult with the agency to address outstanding state-listed species issues. The DEIR should include an assessment of additional alternatives that would minimize temporary impacts to state-species habitat. This analysis should consider abandoning the 6-inch diameter pipeline in place, changes

to the workspace and other options identified by NHESP. The DEIR should provide an update on the Proponent's development of a conservation and management plan that provides a long-term net benefit to Eastern Worm Snake and Eastern Box Turtle, with a focus on protection of high quality habitat in the immediate vicinity of the project site.

Cultural Resources

The project will require review by MHC pursuant to Section 106 of the National Historic Preservation Act and M.G.L. c.9, ss.26-27C (950 CMR 70-71). According to the EENF, the Proponent has commenced an intensive (locational) archaeological survey developed in consultation with MHC. The DEIR should provide the results of the survey and identify any measures necessary to avoid, minimize and mitigate impacts to cultural resources.

Mitigation and Draft Section 61 Findings

The DEIR should include a section that summarizes proposed mitigation measures and provide draft Section 61 Findings for each State Agency Action. It should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

In order 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 Secretary requires proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the DEIR.

Responses to Comments

The DEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the DEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended, and shall not be construed, to enlarge the scope of the DEIR beyond what has been expressly identified in this certificate.

Circulation

The Proponent should circulate the DEIR to those parties who commented on the ENF, to any State Agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. A copy of the DEIR should be made available for review at the Agawam public library.

August 17, 2018
Date

Matthew A. Beaton

Comments received:

08/07/2018	Pioneer Valley Planning Commission (PVPC)
08/08/2018	Greater Boston Physicians for Social Responsibility
08/09/2018	Henry Rosenberg and 34 co-signers
08/10/2018	Massachusetts Department of Environmental Protection (MassDEP) / Western Regional Office (WERO)
08/10/2018	Pipe Line Awareness Network for the Northeast (PLAN)
08/10/2018	Berkshire Environmental Action Team (BEAT)
08/10/2018	Natural Heritage and Endangered Species Program (NHESP)

MAB/AJS/ajs

BEAT
Berkshire Environmental
ACTION TEAM

Working with you to protect the environment for wildlife

27 Highland Ave., Pittsfield, MA 01201
413-230-7321 • www.thebeatnews.org

nofracked gasinmass.org
Protect Our Common Wealth
A Program of Berkshire Environmental Action Team

August 10, 2018

Secretary Matthew Beaton
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
Alex Strysky, EEA No. 15879
100 Cambridge Street, Suite 900
Boston MA 02114

Re: Tennessee Gas Pipeline 261 Upgrade Projects – Agawam - EEA # 15879

Dear Secretary Beaton,

Please accept the following comments from Berkshire Environmental Action Team, Inc. (BEAT) whose mission is to protect the environment for wildlife in support of the natural world that sustains us all; and our No Fracked Gas in Mass program that works specifically to stop the expansion of fossil fuel infrastructure in the Northeast states and to promote energy efficiency and sustainable, renewable sources of energy and local, permanent jobs in a clean energy economy.

— Please require the Massachusetts Department of Public Utilities (DPU) to withdraw the precedent agreements that are being used to support the claim of "need" for this project until after the MEPA process is completed.

The precedent agreements that are being used to support the claim of "need" for this expansion should not have been issued prior to the MEPA process. The whole point of MEPA is to bring forth all the environmentally relevant information and these agreements were issued without the benefit of this information. During the DPU process, as stated in the order ("DPU17-172", dated May 31, 2018 attached) "The Company explains that this reliance is misplaced because Section 61 findings are only required where an environmental impact report is necessitated, which is not the case here, so MEPA is inapplicable and Section 61 findings are not necessary (Company Reply Brief at 23, citing 301 CMR 11.01(4); NRG Canal 3 Development LLC, EFSB 15-06/D.P.U. 15-180, at 156-157 (2017)). Bay State urges the Department to reject CLF's request to develop a framework for assessing greenhouse gas

impacts of precedent agreements when evaluating them under Section 94A (Company Reply Brief at 23)."

It is the Massachusetts Department of Environmental Protection's (DEP's) statutory obligation as affirmed by the state Supreme Judicial Court in its ruling on *Kain et al. v. Massachusetts Department of Environmental Protection (DEP),* affirming the State's obligations under the 2008 Global Warming Solutions Act (GWSA) and ordering the Commonwealth to create and implement regulations to meet its carbon emission reduction mandates. The MEPA process is one logical place for this to be implemented. It is also logical that the DPU process for allowing the burning of additional fossil fuels should not take place until after the MEPA process in order to consider the full impacts of the increase in the amount of fossil fuels to be burned and released in comparison with Clean Energy Alternatives.

BEAT would again like to express our concern about having both the Department of Energy Resources (DOER) and the DEP combined in one secretariat when the DEP must be able to impartially regulate proposed energy projects.

— The EENF that Tennessee submitted is insufficient.

Please require Tennessee Gas Company to submit both a Draft and Final Environmental Impact Report (EIR).

The purpose of the Massachusetts Environmental Policy Act process is to bring forward all relevant environmental information. We believe Tennessee only brings forward information if specifically required by the regulatory authority. Please do not rush this process, but require Tennessee to file both a DEIR that may be reviewed and commented upon, and then in response to those comments a FEIR. Already, the Western Regional Office of the Massachusetts Department of Environmental Protection has already required submission of two additional filings for the Air Quality Permit, and yet we do not see any analysis of the greenhouse gas (GHG) emissions from the burning of the potential increased amount of "natural" gas delivered. We need a careful analysis of the impact of this proposed project and what alternatives might eliminate the need for this project - potentially saving customers money, and saving the air, land, water, and globe from the negative impacts of this project.

The DEIR should include:

1. **Clean Energy Alternatives Analysis** that analyzes using clean energy alternatives including: energy efficiency, demand response, storage (e.g. batteries), heat pumps (air source and/or geothermal ideally combined with photovoltaic panels), solar thermal, and electrification of homes that currently have gas appliances and heating.
2. **Detailed analysis of the greenhouse gas (GHG) impacts** of their proposed project including GHG emissions from the compressor station, possible blow offs and leaked and unaccounted for gas, and the burning of the full amount possible of additional "natural" gas that this project would possibly bring into Massachusetts. Please have Tennessee include in this narrative how these additional "natural" gas emissions would fit with the state's statutory obligations under our Global Warming Solutions Act to decrease GHG emissions by 25% by 2020 and 80% by 2050.

3. **All 3 projects that Tennessee mentions, but claims are not segmentation, should be included.**
4. **A health impact study should be conducted prior to and following the proposed compressor station replacement.**

— Please require Tennessee to submit a much more thorough Alternatives Analysis

From the EENF, page 2, Summary of Alternatives 1.3

> "Tennessee reviewed construction, fuel source, system, and the No-Action alternatives, and determined that the proposed Projects, as designed, represent the preferred alternative. If the proposed Projects are not constructed to meet customer demand (i.e., the No-Action Alternative is selected), the market served by the customers that have executed binding precedent agreements for all of the Projects' capacity may experience energy shortages in times of peak demand or users may revert to the consumption of alternative fuels including oil. Use of alternative fuels to supply the energy needs of Tennessee's natural gas customers is not the best practicable alternative as compared to the use of cleaner-burning natural gas. In addition, although energy conservation is a valuable measure as part of an overall energy plan, energy conservation alone is not a solution to the current energy demand of consumers served by these Projects."

Tennessee proposes that customers may experience energy shortages in times of peak demand or may revert to the consumption of alternative fuels including oil – and then goes on to state that using oil "is not the best practicable alternative as compared to the use of cleaner-burning natural gas."

We suggest that using "natural" gas is not the best practicable alternative as compared to using truly clean energy that could be provided in a number of alternative ways.

"Natural" gas is NOT a Clean Fuel

Tennessee has tried to portray "natural" gas as a cleaner fuel, but there is little clean about "natural" gas. From the fracking fields that destroy thousands of acres of land (see photo "frackwells.pdf" attached); and pollute, according to the USGS, millions of gallons of water every time a well is fracked[1]; to the gas itself which is mostly methane a greenhouse gas that, according to the IPCC, 2013: Climate Change 2013: The Physical Science Basis[2] report is 86 times as potent a greenhouse gas as CO2 over a 20 year time frame; but also contains

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[1] USGS "Water use per well can be anywhere from about 1.5 million gallons to about 16 million gallons." https://www.usgs.gov/faqs/how-much-water-does-typical-hydraulically-fractured-well-require

[2] IPCC, 2013: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp. p714

benzene, toluene, ethylbenzene, xylene (BTEX all highly toxic[3]) as well as radon; to the final "cleaner" burning but still burning of a fossil fuel that emits toxins along with CO2.

Please Require an Alternatives Analysis that Includes Clean Energy Alternatives
The alternative to burning "natural" gas is not oil. The alternatives to burning "natural" gas are: energy efficiency, demand response, storage (e.g. batteries), heat pumps (air source and/or geothermal), solar thermal, and electrification ideally with photovoltaic. The state has been actively encouraging all these alternatives *(see attached[4])* and yet Tennessee has failed to consider any of them. Instead, Tennessee dismissively says that "energy conservation" is not a solution, but offers no evidence to support this vague claim.

Energy Efficiency vs Conservation
BEAT would like to point out that we used to give presentations that staff from Tennessee attended during which we would point out the difference between energy conservation – where you put on sweaters and blankets and shiver in your room – and energy efficiency – where you change things like how well your home is insulated, weatherized, and the efficiency of your lighting, appliances, and heating system rather than necessarily your behavior. Massachusetts has been a leader in installing energy efficiency measures not only lowering our over all electricity use, but also our peak electricity use. One would think that by weatherizing and insulating our homes and businesses, we could dramatically reduce heating fuel use. The director of BEAT owns a house originally built in 1890. By weatherizing, insulating, and installing energy efficient lights, appliances, and furnace, she reduced oil use from 1,300 gallons per year to about 300 gallons per year while reducing electric use by about 50%. The next step will be to get off of fossil fuels entirely.

Energy efficiency has not just slowed our previously increasing electric demand in New England, but has actually begun to show an annual decrease in electric demand. Consider these "Fast Stats" from ISO-New England (https://www.iso-ne.com/about/key-stats/electricity-use):

- **-0.9%** average annual growth in regional electricity demand forecasted through 2027, after factoring in energy efficiency (EE) and distributed generation (DG)
  - **-0.04%** average annual growth in summer peak demand forecasted through 2027 under normal weather conditions after subtracting EE and DG; **-0.2%** under extreme summer weather
  - **-0.7%** average annual growth in winter peak demand forecasted through 2027 under both normal and extreme weather conditions after subtracting EE and DG

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[3] "All four components can produce neurological impairment, and benzene can additionally cause hematological effects which may ultimately lead to aplastic anemia and development of acute myelogenous leukemia. Concern for the carcinogenicity of BTEX is also raised by evidence that ethylbenzene is carcinogenic." INTERACTION PROFILE FOR: Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX). U.S. Department of Health and Human Services Public Health Service Agency for Toxic Substances and Disease Registry May 2004 https://www.atsdr.cdc.gov/interactionprofiles/ip-btex/ip05.pdf

[4] "MassPrograms_EfficiencyAndThermal", synopsis of Massachusetts state sponsored programs, including thermal conditioning programs from MassCEC. (attached file)

BEAT understands that the alternatives that we are suggesting are not something that Tennessee Gas would profit from, but as the Massachusetts Attorney General said in her letter with 6 other states Attorneys General in commenting to the Federal Energy Regulatory Commission about their review under the National Environmental Policy Act on page 10:

> "***The Commission's alternatives assessment should include clean-energy and other non-pipeline alternatives.***
>
> *"The alternatives analysis required by NEPA is "the heart of the environmental impact statement."[5] Federal regulations require the Commission to explore all reasonable alternatives rigorously with an analysis that "present[s] the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public."[6]*
>
> *"In addition to exploring the effect of not building the proposed project[7], the analysis must thoroughly address non-pipeline alternatives outside of the Commission's jurisdiction and the project applicant's preferences or capabilities.[8] "*

BEAT believes that the Massachusetts Environmental Policy Act also requires such a thorough look at alternatives in this case, especially because the Clean Energy Alternative will, in our opinion, result in:

- cost savings to affected residents of Massachusetts,
- cleaner air
- fewer greenhouse gas emissions
- fewer wetland impacts, and
- fewer land disturbances

A Clean Energy and Non-Pipeline Alternative is not a new concept. In 2017, Consolidated Edison Company of New York, Inc. issued a Request for Proposals for New York on "Non-Pipeline Solutions to Provide Peak Period Natural Gas System Relief". (see attached)

— Please require Tennessee to submit a Detailed Analysis of the Greenhouse Gas (GHG) impacts of this proposed project.

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[5] 40 C.F.R. § 1502.14; *see also Union Neighbors United, Inc. v. Jewell*, 831 F.3d 564 (D.C. Cir. 2016).

[6] *Id.*

[7] 40 C.F.R. § 1502.14 (d) (the analysis must "[i]nclude the alternative of no action").

[8] 40 C.F.R. § 1502.14 (c) (the analysis must "[i]nclude reasonable alternatives not within the jurisdiction of the lead agency"); *see also* Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,033 (March 23, 1981) ("In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative.") ("AttorneysGeneralFERCLetter.pdf" attached)

The change in emissions from the Horsepower Replacement Program are not defined in the EENF.

General statements are made about SoLoNox™ technology reducing VOC, OX, NOx and Hazardous Air Pollutants and emissions for the new unit are provided, but not the emissions ratings for the old units that are to be removed. This type of comparative data is provided regarding noise levels on page 82 of the EENF in Table 4-12[9], but there is nothing making the same comparison of emissions between the old turbines and the new one. With a stated increase of 4,418 horsepower to the station[10] and a notable increase in noise level of up to 8.8 decibels[11], clearly identifying any change compared current emissions should also be required.

Downstream emissions from increased gas use by customers is not addressed. The Looping Project is cited as serving new Columbia Gas (CMA) customers with an additional 17,000 dekatherms a day[12]. With the mandated requirements of the Global Warming Solutions Act being an 80% reduction of greenhouse gas emissions by 2050, any new project should be required to account for all emissions, including downstream use by customers.

— All 3 projects that Tennessee mentions the EENF, but claims are not segmentation, should be included in the DEIR.

Tennessee mentions 3 projects in the EENF, but claims that only submitting two for consideration under MEPA is not segmentation. But in the DPU17-170 Order, it is clear that all 3 projects are being used to supply "natural" gas for the same purpose.

> "Three construction projects are required to provide the capacity under the Tennessee Agreement: (1) a new city gate station called West Longmeadow to provide a new point of delivery into Springfield; (2) replacement of existing compression at Tennessee's Agawam compressor station receipt point; and (3) a new two-mile pipeline loop within an existing right of way starting at the Agawam compressor station, which will be dedicated for service at the Company's Agawam gate station."

All aspects of the project are shown in Columbia's Reliability Project Overview[13], demonstrating that it's all part of the same project, despite Tennessee's claim that the West Longmeadow city gate is not[14]. Any emissions from the new West Longmeadow city gate

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[9] EENF, Page 82 (PDF page 140)

[10] EENF, Page 8 (PDF page 66)

[11] Id.

[12] "The Looping Project, which includes 2.1 miles of 12-inch-diameter loop to be installed on Tennessee's existing 261B-100 pipeline, would provide an additional 17,000 dekatherms per day ("Dth/d") of capacity to transport incremental natural gas requested by Tennessee's customers to the existing CMA distribution system." EENF cover letter - (PDF page 2)

[13] Columbia Gas Reliability Project overview sheet. ("columbiaprojectinfo.pdf", attached)

[14] EENF, page 3 of Environmental Notification Form (EENF PDF page 7)

station must be included as a part of this MEPA filing to assess the full GHG impacts of this project.

— An independent, comprehensive health impact study should be conducted prior to and following the proposed compressor station replacement.

With multiple unit residences 600 ft. north of the compressor station, and others 1,150 ft. to the west, a health impact study of the Horsepower Replacement Program should be required. Because of the evidence pointing to negative human health impacts of pollution associated with natural gas infrastructure, the Massachusetts Medical Society, the American Medical Association, the Massachusetts Nurses Association, and 71 Massachusetts municipal boards of health have called for comprehensive health impact assessments prior to construction of gas infrastructure (see "PSR letter" attached)[15]. As stated earlier in this filing, Tennessee has provided information on the rise in noise levels (as high as 7.8 decibels at the nearest residences), and the rise in total station horsepower of 4,418 HP, but not the difference in emissions levels between the two old turbines being removed and the new turbine replacing them. The full impact to occupants of nearby residences of particulate matter, VOCs, NOx and other pollutants needs to be assessed through an independent, comprehensive health impact study before any state permits are issued, as is currently underway regarding the proposed compressor station in Weymouth, Massachusetts, under the direction of the Massachusetts Department of Public Health.

In summary, please require Tennessee to provide a much more thorough DEIR that may be reviewed and commented upon before a FEIR is prepared for the Secretary's review. Please require the DEIR to include analysis of a Clean Energy Alternatives Analysis, detailed analysis of Greenhouse Gas Impacts, inclusion of all 3 Segments of the project, and a Health Impact Study.

Thank you for considering our comments.

Sincerely,

Jane Winn, Executive Director
Berkshire Environmental Action Team

Rosemary Wessel, Program Director
No Fracked Gas in Mass, A Program of Berkshire Environmental Action Team

[15] "PSRLetter_RE-Agawam.pdf" Letter to MEPA from Greater Boston Physicians for Social Responsibility, requesting a comprehensive, independent health study; signed by multiple health professionals and organizations. (attached)

GBPSR

GREATER BOSTON PHYSICIANS
FOR SOCIAL RESPONSIBILITY

CARING FOR OUR CLIMATE
PREVENTING NUCLEAR WAR

August 8, 2018

Secretary Matthew Beaton
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Tennessee Gas Pipeline 261 Upgrade Projects – Agawam; EEA # 15879

Submitted electronically to mepa@mass.gov and to MEPA Analyst Alexander Strysky (alexander.strysky@state.ma.us)

Dear Secretary Beaton,

As Massachusetts health professionals and health advocacy organizations, we are writing to alert you to our concerns about the health risks of the proposed natural gas infrastructure expansion by Tennessee Gas at their Agawam facilities, including the increased horsepower of compressor station #261 and the installation of 2.1 miles of 12" looping pipeline, a new pig receiver, and a launcher. We urge you to obtain an independent **comprehensive health impact assessment** before issuing any state permits for this proposed system expansion.

"Natural" gas poses health dangers not only to individuals living near hydraulic fracturing sites, but also to individuals living along the entire pipeline transportation and distribution systems [1]. Peer-reviewed studies have identified associations between residential proximity to gas wells and pediatric acute lymphocytic leukemia [2], preterm birth [3], asthma [4], and overall hospitalization rates [5]. Gas transmitted in pipelines contains contaminants that cause human illness even at low concentrations, including benzene and other volatile organic compounds, heavy metals, formaldehyde, and particulate matter. Studies have linked gas transmission infrastructure to adverse health effects among people living nearby [1]. Release of pipeline contents is well-documented and occurs via equipment failures, by deliberate venting of compressors, and by leaks in streets and homes. In fact, a relay switch failure at the Agawam compressor station led to a large fugitive release of gas in July 2018.

Because of the evidence pointing to negative human health impacts, the Massachusetts Medical Society, the American Medical Association, the Massachusetts Nurses Association, and 71 Massachusetts municipal boards of health have called for comprehensive health impact assessments prior to construction of gas infrastructure. A comprehensive health impact assessment is essential to fully understand the potential health risks of a proposed project to nearby populations, and it should be performed in an open and transparent manner consistent with widely-accepted best practices [6]. This is not without precedent in Massachusetts; we note that a comprehensive health impact assessment is currently underway for a proposed compressor station in Weymouth, Massachusetts, under the direction of the Massachusetts Department of Public Health.

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GREATER BOSTON PHYSICIANS
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In addition to direct health risks from gas extraction and pipelines, methane – the primary component of "natural" gas -- is also a potent heat-trapping compound that makes a significant contribution to climate change. We support the statement of the Medical Society Consortium on Climate and Health that climate change threatens the health of every American and that reduction in fossil fuel use, including "natural" gas, is essential to help limit global climate change [7].

As health professionals, we are keenly aware of the personal health impacts of exposure to "natural" gas, including asthma flares, childhood cancers, and pregnancy complications, and we therefore urge you to undertake a **comprehensive health impact assessment** of the effect of gas infrastructure expansion on the residents of Agawam and its vicinity.

With regards,

Matt Bivens, MD
on behalf of Greater Boston Physicians for Social Responsibility

Regina LaRocque, MD MPH
on behalf of Physicians for Policy Action (www.physiciansforpolicyaction.org)

Brita Lundberg, MD
on behalf of Massachusetts Health Professionals for Clean Energy

Martha Nathan, MD
Baystate Brightwood Health Center
on behalf of Pioneer Valley Physicians for Social Responsibility

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Leann Canty, MD
Jamaica Plain, MA

Inge Damm-Luhr, Ph.D (psychologist)
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GREATER BOSTON PHYSICIANS
FOR SOCIAL RESPONSIBILITY

CARING FOR OUR CLIMATE
PREVENTING NUCLEAR WAR

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GREATER BOSTON PHYSICIANS
FOR SOCIAL RESPONSIBILITY

CARING FOR OUR CLIMATE
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[1] Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Unconventional Gas and Oil Extraction, March 2018. Physicians for Social Responsibility.
[2] McKenzie L et al. Childhood hematologic cancer and residential proximity to oil and gas development. *PLoS One*. February 2017
[3] Casey JA et al. Unconventional natural gas development and birth outcomes in Pennsylvania, USA. *Epidemiology*. March 2016;27(2):163-72.
[4] Rasmussen S et al. Association between unconventional natural gas development in the Marcellus Shale and asthma exacerbations. *JAMA Internal Medicine*. 2016;176(9)
[5] Jemielita T et al. Unconventional gas and oil drilling is associated with increased hospital utilization rates. *PLoS One*. July 2015.
[6] Minimum Elements and Practice Standards for Health Impact Assessments, North American Health Impact Assessment Practice Standards Working Group. September 2015. www.hiasociety.org
[7] www.medsocietiesforclimatehealth.org

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

August 10, 2018

Matthew Beaton, Secretary
Executive Office of Energy & Environmental Affairs
Massachusetts Environmental Policy Act Office
Alex Strysky, EEA No. 15879
100 Cambridge Street 9th Floor
Boston, MA 02114-2524

Re: 261 Upgrade Project - Agawam

Dear Secretary Beaton,

The Massachusetts Department of Environmental Protection (MassDEP), Western Regional Office (WERO) appreciates the opportunity to comment on the Environmental Notification Form (ENF) submitted for the proposed 261 Upgrade Project (EEA #15879) in Agawam. Applicable MassDEP regulatory and permitting considerations regarding wetlands, waterways, wastewater, drinking water, air pollution, solid and hazardous waste, and waste site cleanup are discussed. MassDEP staff attended the MEPA site visit on July 27, 2018.

I. Project Description

The Proponent of the project is Tennessee Gas Pipeline Company, (TGP) a subsidiary of Kinder Morgan. The 261 Upgrade Project involves construct of approximately 2.1 miles of 12-inch outside diameter gas pipeline in Agawam, and appurtenances including a pig launcher and receiver. The new pipeline is installed to replace and loop an existing main. An abandoned 6-inch gas main will be removed. The majority of the new pipeline (work) will be located within the existing TGP Right-of-Way (ROW) or adjacent. The yard/staging area is proposed to be located in Connecticut adjacent to the Compressor Station. In addition, two older compressors and engines will be removed and replaced by one new compressor and engine. One existing building will be removed and one small building will be added to the compressor station yard. Over all the looping and upgrade will allow increased pressure and increase the ability to move gas through the station to accommodate existing contracts for gas as approved by The project exceeds a wetland threshold for a mandatory Environmental Impact Report; the Proponent has requested a Single EIR.

The project will require filing a Notice of Intent (NOI) with the Agawam Conservation Commission, a 401 Water Quality Certificate from MassDEP, a permit from Army Corps of Engineers, and review by the Natural Heritage and Endangered Species Program. The EENF also includes a request for a Single EIR. The EENF includes the following environmental impacts:

- 18.40 Acres alteration (temporary); 6.64 Acres alteration (permanent)

- 0.06 acres new impervious area
- 289,000 s.f temporary impacts to Bordering Vegetated Wetlands (BVW); 95,396 s.f permanent impacts,
- 7,800 s.f temporary impacts to Isolated Vegetated Wetlands (IVW); 0 s.f. permanent, and
- 200,000 s.f. temporary impacts to Riverfront Area; 71,900 s.f. of impacts due to permanent conversion,
- 6,500 s.f. temporary impact to Land Under Water and Waterways.

II. Required Mass DEP Permits and/or Applicable Regulations

Wetlands and Waterways
310 CMR 10.00
314 CMR 4.00
314 CMR 9.00
Wastewater
314 CMR 7.00
Air Pollution
310 CMR 7.00
Solid Waste
310 CMR 16.000
310 CMR 19.000
Bureau of Waste Site Cleanup
310 CMR 40.0000

III. Permit Discussion

Bureau of Resource Protection

Wetlands

The proposed project includes 2.1 miles of new gas pipeline installation, abandoned pipeline removal, staging and system upgrades. As noted by the Proponent in the EENF, the project area contains regulated resources areas of Bank (Inland), Bordering Vegetated Wetland, Riverfront Area, Isolated Vegetated Wetlands and Land Under Water Bodies as there are proposed stream crossings of the pipeline. The Proponent indicates no vernal pools.

MassDEP suggests that the Proponent consider filing an Abbreviated Notice of Resource Area Delineation (ANORAD) with each community Conservation Commission to legally establish the regulated resource areas, as the ANORAD may be extended and resource areas remain fixed. The Proponent stated during the site visit its intention of submitting a Request for Determination of Applicability (RDA) to set the resource area boundaries as an acceptable alternative to an ANORAD.

When a Notice of Intent (NOI) is submitted to the Agawam Conservation Commission, the Commission should review the project for compliance with all of the provisions of the Wetlands Protection Act (Act); prior to commencement of project construction, the Commission must issue a final Order of Conditions. If a NOI is submitted prior to competition of the MEPA process, MassDEP will recommend that Commissions hold NOI hearings open until the Secretary issues

a Certificate indicating the MEPA process is completed and the Army Corps of Engineers, and MassDEP (Section 401) issue permits, as applicable.

Isolated Vegetated Wetlands are not regulated under the Act. The Proponent should make every effort to distinguish between Isolated Vegetated Wetlands and Isolated Land Subject to Flooding when the ANORAD/RDA and/or NOI are filed with the Commission.

The project will result in conversion of resource areas such as conversion of forested wetland to scrub/shrub wetland.

The project should also comply with MassDEP's Stormwater Management Standards, as applicable.

Water Quality Certification
Section 401 Water Quality Certification (WQC) issued by MassDEP is required for this project. The Proponent is required to provide sufficient information to adequately describe cumulative impacts to "Waters of the United States within the Commonwealth" (Bordering and Isolated Vegetated Wetlands and Land Under Water). The WQC regulations require impacts to be avoided, minimized and mitigated.

The pipeline crosses several streams within the project area. Streams shown as intermittent or not shown on the latest USGS map should be reviewed as to whether they may be considered perennial in accordance with 310 CMR 10.58(2)(a)1 to establish jurisdiction. The dam and pump method, if used will also be addressed through 401WQC application. If the Proponent utilizes Horizontal Directional Drilling for stream crossings, please be aware this may be part of the 401 WQC applications. If Proponent utilizes Horizontal Directional Drilling for stream crossings, it will be required to develop a "frac out" plan.

Limited Project Provisions
The Proponent has noted that the work may be submitted for review under the Limited Project provision. Proposed work must, where possible, meet *General Performance Standards;* work that cannot meet *General Performance Standards* may be approved as a limited project. Limited Project status requires the Proponent to demonstrate practicable avoidance and minimization of alteration to jurisdictional resource areas, and then describe appropriate mitigation measures for remaining, unavoidable alteration.

Land Under Wetlands and Waterways
Like Bank, no net loss of Land Under Wetlands and Waterways is proposed as the relocation of the stream proposes to result in the creation of equivalent land under water in the new stream channel.

Boundary Determination and Delineation
All delineation of jurisdictional resource areas should be accomplished through flagging in the field, surveying, and then presented on a scaled site plan. The Proponent is referred to MassDEP guidance documents and the regulations for specific requirements and methods for all resource delineations. MassDEP is available to provide additional assistance.

Bordering Vegetated Wetland
MassDEP notes that there is no reference to "temporary impacts" in the Act or regulations. The Proponent should describe these activities in terms of "in-situ" replacement, i.e., the excavation and fill disturbance will be "replaced" in accordance with regulation within the footprint of that

disturbance. The Proponent is also referred to *Massachusetts Inland Wetland Replication Guidelines" (DEP March 2002)* for the planning and construction of Bordering Vegetated Wetland "replacement area".

Bordering Land Subject to Flooding
Although not initially identified, the Proponent should confirm no impacts to floodplain will occur though any portion of the project as plans progress. If floodplain is identified, site plans should show the boundaries of the "Lower Floodplain" and the Proponent should demonstrate that adequate compensatory flood storage is provided. In addition, if the "Lower Floodplain" proposed to be altered is naturally vegetated and/or composed of a natural substrate, the applicant will be required to meet the General Performance Standard.

Cold Water Fishery
The Proponent should ensure that non-native sediment does not enter the brook(s), and that stream flow be maintained during the work to the extent practicable. Please note the *Spill Prevention* comments under Bureau of Waste Site Cleanup.

Riverfront Area
Work conducted in undisturbed Riverfront Area, must meet General Performance Standards; work conducted within existing degraded Riverfront Area may be submitted as "redevelopment". The Limited Project provisions noted above may also be applicable to work conducted in the Riverfront Area. The Proponent has correctly identified conversion of vegetative cover in RA as "impact". As noted, some work may be eligible for review under Limited Project provisions.

Stormwater
Regulation requires that when proposing a development or redevelopment project subject to the *Stormwater Management Standards*, proponents shall consider environmentally sensitive site design and planning. Considerations should include low impact development techniques, stormwater best management practices (BMP) utilizing source control (nonstructural control measures), structural BMPs and maintenance. The applicant is referred to the *MassDEP Stormwater Management Handbook.*

Massachusetts River and Stream Crossing Standards
The Proponent should be aware that any new permanent jurisdictional stream crossings must comply with the *Massachusetts River and Stream Crossing Standards.* Any improvements proposed to existing culverts should comply with *Design Standards for Culvert Replacement* in that document.

Waterways

The Proponent has not identified work apparently subject to *Public Waterfront Act, Chapter 91.* Any Request for Determination of Applicability under 310 CMR 9.06, should be submitted to the MassDEP Boston Office Waterways Program.

Drinking Water & Wastewater

The proposed work lies within existing Rights of Way (ROWs) for at least one sewer. MassDEP strongly recommends contacting and coordinating within the municipality to minimize potentially impact and ensure protection of municipal water, sewer and stormwater structures.

National Pollutant Discharge Elimination System (NPDES)

Discharge of the hydrostatic pressure testing of the new pipeline will require the Proponent to apply for and receive a NPDES permit. U.S. EPA requires the *Remediation General Permit* which would be issued jointly by EPA and MassDEP. Activities Category Section IV (3) of the General Permit identifies Hydrostatic Testing of Pipelines and Tanks:
http://www.epa.gov/region1/npdes/remediation/RGP2010_FactSheet.pdf
http://www.epa.gov/region1/npdes/remediation/Appendix-A.pdf

If the wastewater is considered to be non-hazardous waste, then the project proponent may elect to manage the wastewater in accordance with the following regulations:

The Proponent is proposing to utilize potable water for the testing and capture and appropriate disposal of the hydrostatic testing water. The NPDES permitting process will include extensive testing to determine water quality and potential treatment and establish the necessary method of disposal. Guidance is available at the following:
https://www.mass.gov/files/documents/2018/07/26/permitrequirementsforhydrostaticwatertesting.pdf

Groundwater and Surface Water Quality Standards
The Proponent is referred to the following regulations for guidance for management of hydrostatic testing water:

310 CMR 4.00 Surface Water Quality Standards
310 CMR 40.0000 Massachusetts Contingency Plan
310 CMR 27.00 Underground Injection Control
314 CMR 3.00 Surface Water Discharge Permit Program
314 CMR 5.00, Groundwater Discharge Permit Program
314 CMR 7.00, Sewer Discharge Program
314 CMR 18.00, Industrial Wastewater Holding Tank and Container Program

Bureau of Air and Waste

Air Pollution

Non-major Comprehensive Plan Approval
MassDEP issues an approval of a Major or Non Major Comprehensive Plan Application (MCPA or NMCPA) to limit increases in air contaminant emissions and protect public health, welfare and the environment. A plan application is required if you are proposing construction, substantial reconstruction, or alteration of a facility that has the potential to cause or contribute to a condition of air pollution.

The Proponent has correctly identified the project requires a Non Major Comprehensive Plan Approval (NMCPA) from MassDEP for the modifications to the Compressor Station. MassDEP received an application for *CPA Fuel, CPA Process & CPA Crematory (Non-Major, BWP AQ 02)* on December 14, 2017 however; the equipment specified in the application is the Solar Taurus 60 compressor unit. It is our understanding following a pre-permitting meeting, that the Solar Taurus 70 compressor unit specified in the EENF is currently the preferred unit. MassDEP does not have permitting information specific to the upgraded compressor unit Solar Taurus 70 and therefore cannot at this time offer any further comments. Through permitting, MassDEP has requested a facility-wide pollutant modeling analysis for the future configuration for this project.

The NMCPA must be approved by MassDEP prior to the construction and operation of the Solar Taurus 70 turbine. Once approval has been obtained, the facility must modify the existing Title V Operating Permit, in accordance with 310 CMR 7.00: Appendix C, prior to the operation of the new Solar Taurus 70.

Construction and Demolition Activities
The construction and demolition activity must conform to current Air Pollution Control Regulations. The proponent should implement measures to alleviate dust, noise, and odor nuisance conditions that may occur during the construction and demolition activities. Such measures must comply with the MassDEP's Bureau of Waste Prevention (BWP) Regulations 310 CMR 7.01, 7.09, and 7.10.

Construction Equipment
MassDEP believes it is necessary to mitigate the construction-period impacts of diesel emissions to the maximum extent feasible and recommends that the project proponent participate in the MassDEP Diesel Retrofit Program. As of June 1, 2010, all non-road engines shall be operated using only ultra low sulfur diesel (ULSD) with a sulfur content of no greater than 15 ppm pursuant to 40 CFR 80.510.

Boilers/Generators/Emergency Generators
Many industrial, commercial and institutional development activities have facility heating and supplemental or emergency power generation associated with them that require air quality permitting from MassDEP before construction or operation. This equipment must be certified through MassDEP's Environmental Results Program (ERP) at 310 CMR 7.26 or approved by MassDEP prior to construction via the Plan Application program at 310 CMR 7.02, depending on equipment type, specifications, and size.

Smaller units and specifically, engines (emergency and non-emergency), combined heat and power (CHP) units and some boilers may not require a specific Plan Approval but are subject to performance standards and ERP certification. Specifically:

- 310 CMR 7.26(30) thru (37) – Boilers; and
- 310 CMR 7.26(40) thru (45) - Engines and Combustion Turbines

The Proponent is referred to: https://www.mass.gov/how-to/compliance-certification-commercial-industrial-or-institutional-boiler and https://www.mass.gov/how-to/compliance-certification-stationary-engine-or-turbine

Solid Waste

The Proponent shall properly manage and dispose of all solid waste generated by this proposed project pursuant to 310 CMR 16.00 and 310 CMR 19.000, including the regulations at 310 CMR 19.017 (waste ban).

Asphalt, brick and concrete (ABC) generated through crushing and reuse on-site must be handled in accordance with regulation and policy. Otherwise, the proponent would need to obtain a site assignment and facility permit for the crushing activity and a Beneficial Use Determination (BUD) for the reuse of the crushed material. More information regarding the handling of ABC, and a copy of the 30-day notification form may be found at the following website:

http://www.mass.gov/eea/agencies/massdep/recycle/reduce/using-or-processing-asphalt-pavement-brick-and-concrete-.html.

The BUD regulations at 310 CMR 19.060 establish levels of assessment for four categories of beneficial use. Similarly, the fee regulations at 310 CMR 4.00, et seq. were amended. These amended regulations would be applicable to reuse of any materials generated by this project that would otherwise be considered solid waste.

The project Proponent should be advised that construction activity at the site must comply with both Solid Waste and Air Quality Control regulations. The appropriate Solid Waste provisions addressing this include M.G.L. Chapter 40, Section 54.

Hazardous Waste and Industrial Wastewater

As noted, the hydrostatic testing water will be regulated under NPDES, with the project proponent determining if the quality of the waste water. If the wastewater is considered to be hazardous waste, then the project proponent must comply with all applicable provisions of 310 CMR 30.000

Greenhouse Gas

The Proponent presented a Greenhouse Gas (GHG) analysis in the EENF regarding construction period and long term operational GHG emissions. The analysis includes construction, commissioning, normal operations and non-routine operations. Construction mitigation included compliance with low emission equipment requirement and hot tapping the pipeline to minimize/eliminate emissions during tie-in. Hydrostatic pressure testing utilizes water and no emissions will occur. Normal pipeline operation emissions minimization alternatives included a review of USEPA Natural Gas STAR program applicable options and current standard operations. The preferred alternative proposes current and applicable STAR options. The normal compressor operation analysis included the replacement of the two older compressors and engines with one new set. The emergency generator is also proposed to be replaced. The analysis does not include a facility wide analysis and therefore MassDEP cannot at this time offer any further comments regarding emissions.

Bureau of Waste Site Cleanup

This project involves a large subject area that contains one open disposal site with a Release Tracking Number 1-0020395 and several disposal sites with Response Action Outcomes (RAOs) or Permanent Solutions within a 0.5-mile radius of the project site. If soil and/or groundwater contamination is encountered during work activities, the Proponent should retain a Licensed Site Professional (LSP); the MCP details procedures to follow for the parties conducting remediation and cleanup work. MassDEP staff are available for guidance.

Spills Prevention

A spills contingency plan addressing prevention and management of potential releases of oil and/or hazardous materials from pre- and post-construction activities should be presented to workers at the site and enforced. The plan should include but not be limited to, refueling of machinery, storage of fuels, and potential future on-site activity releases.

Although the Proponent does not anticipate encountering areas of shallow bedrock, they have included a blasting protocol in the EENF. Although the environmental impacts from the use of perchlorate-containing blasting agents and explosives have not been fully defined, MassDEP recommends that contractors take the following reasonable steps to minimize potential problems:

- To the extent practical, avoid the use of perchlorate-containing explosives
- When the use of perchlorate-containing products is unavoidable:
  - Determine the perchlorate content of blasting agents and explosives to be used
  - Institute rigorous "housekeeping" practices.
  - Take reasonable steps to prevent and address misfires
  - In all cases, the safety of workers and the general public is of paramount concern

The following link provides additional information:
http://www.mass.gov/eea/agencies/massdep/cleanup/regulations/contamination-perchlorate-containing-explosive-products.html

IV. Section 61 Findings

Section 61 Findings were not specifically presented for comment. At this time, there is inadequate information regarding proposed mitigation associated with wetlands impacts and the NMCPA.

V. Comments/Guidance

As noted previously, the Proponent has requested that a Single EIR be allowed. Mass DEP has no objection to the Secretary granting that request as he sees appropriate. MassDEP has adequate authority through the regulatory permitting process for the NPDES, the 401 WQC and NMCPA to determine the potential environmental impacts from the project and to ensure that all feasible measures are taken to avoid, minimize and mitigate any negative impacts, as necessary.

MassDEP encourages pre-permitting of complex projects and have previously met with the Proponent in the initial phase of planning this project with regard to both the Air Quality permit and the wetlands impacts. MassDEP staff are available to provide further guidance and to meet with the Proponent upon request.

If you have any questions regarding this comment letter please contact Catherine Skiba at (413) 755-2119 or catherine.skiba@mass.gov.

Sincerely,

Michael Gorski
Regional Director

cc: MEPA File

P•L•A•N
PIPE LINE AWARENESS NETWORK
FOR THE NORTH EAST, INC.
www.plan-ne.org

August 10, 2018

VIA EMAIL

Secretary Matthew Beaton
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office, EEA No. 15879
Alex Strysky, MEPA Analyst
100 Cambridge Street, Suite 900
Boston MA 02114

Re: EEA #15879, Tennessee Gas Pipeline 261 Upgrade Projects, Agawam, MA

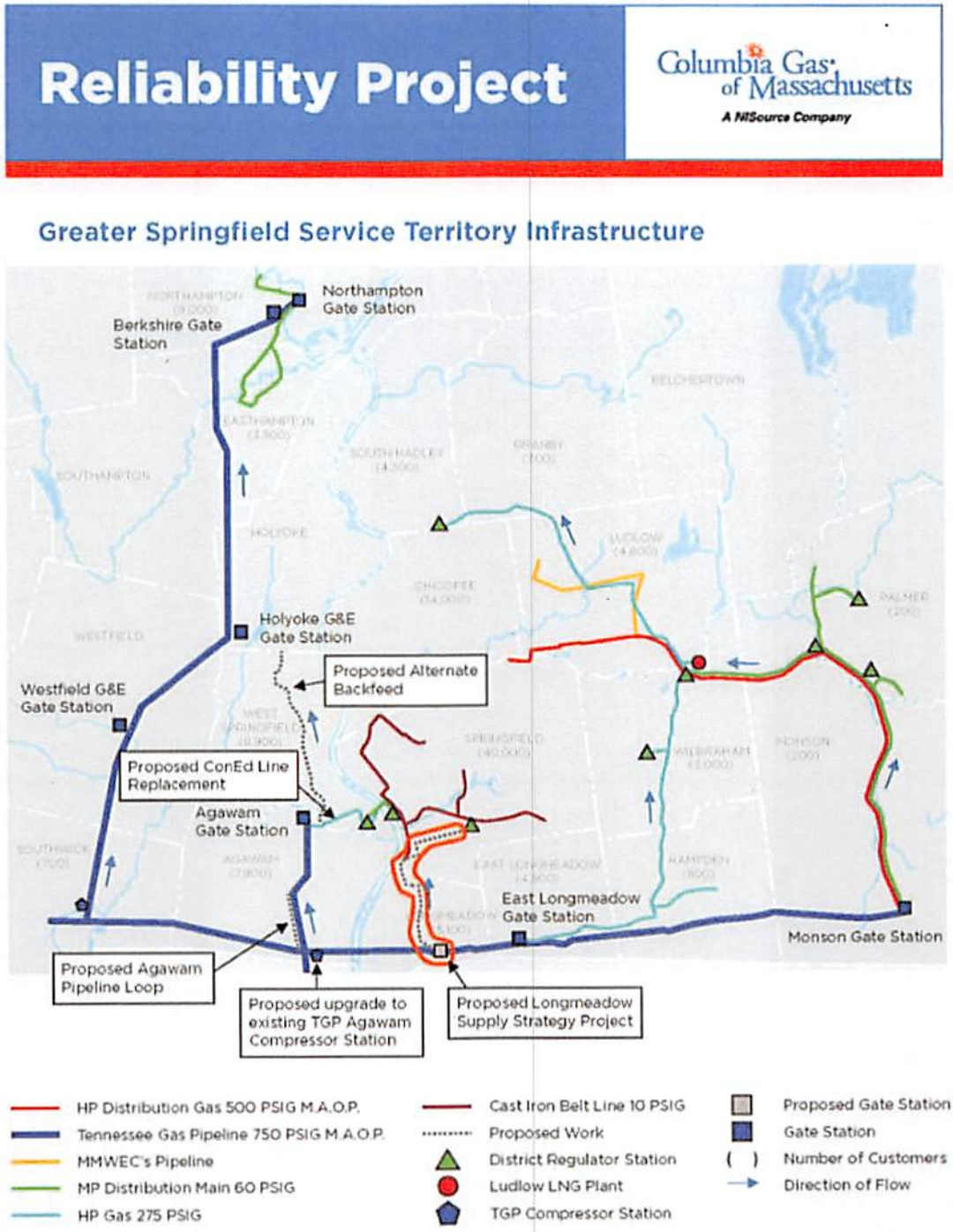
Dear Secretary Beaton:

The Pipe Line Awareness Network for the Northeast, Inc. ("PLAN") submits the following comments in response to the Expanded Environmental Notification Form ("EENF") submitted by Tennessee Gas Pipeline Company L.L.C. ("TGP" or the "Company") for its proposed 261 Upgrade Projects (the "Projects").

An overarching concern is that the Projects are being evaluated out of context, in isolation from the expansion projects developed by TGP's customers, Bay State Gas Company dba Columbia Gas of Massachusetts ("Columbia Gas" or "Columbia") and Holyoke Gas & Electric ("HG&E") – multiple projects of which the instant Projects are an integral part. When considered as a whole, these *five* projects clearly would result in an overbuild of the system and thus avoidable unjustifiable environmental impacts.

As described in the EENF, TGP proposes to construct 2.1 miles of 12-inch pipeline looping (the "Looping Project"), commencing at the existing Compressor Station #261 and proceeding northerly, roughly following the Company's existing Agawam Lateral route. TGP proposes to construct one pig receiver and one pig launcher at either end of the Looping Project. TGP also proposes to increase the horsepower of Station #261 (the "HP Project") by replacing two older turbines with one new more powerful turbine.

These Projects are part of what Columbia Gas has referred to as "five integrated supporting infrastructure projects" (together, the "Springfield Area Reliability Plan"), depicted on the Columbia Gas website[1] and reproduced below:



[1] See www.columbiagasma.com/images/default-source/promotion/reliability-handout-draft---nov-1-draft-6_page_1.jpg; www.columbiagasma.com/images/default-source/promotion/reliability-handout-draft---nov-1-draft-6_page_2.jpg (last visited August 9, 2018).

Single EIR Not Justified

The Company has requested permission to prepare a single environmental impact report ("EIR"). PLAN does not believe that the EENF as submitted demonstrates "that the planning and design of the Project[s] use all feasible means to avoid potential environmental impacts", as required under 301 CMR 11.6(8)(c), to allow granting of a Single EIR.

To implement the instant Projects, the Company seeks to impact 36.91 acres in total and to widen its existing permanent right of way to accommodate the proposed adjacent pipeline looping. Further, the Company seeks to impact more than one acre of Bordering Vegetated Wetland, more than one thousand feet of Bank, two hundred thousand square feet of Riverfront Area, to impact Isolated Vegetated Wetlands and Land Under Water, to cross five streams, to convert prime agricultural land, and to engage in construction activities that will result in the "take" of rare species. While TGP understates the environmental impacts of the Projects (asserting that "the vast majority of these wetland impacts will be temporary in nature"), the reality is that everything from wetland resource areas to land currently in agricultural use will be permanently altered by soil compaction, tree and shade loss, and the wide array of hydrologic, vegetative and habitat changes that will result should the Projects be allowed to move forward.

These Projects exceed multiple thresholds for a Mandatory EIR and, as we heard at the July 27, 2018 MEPA Consultation Session, there are many aspects of the Projects that TGP is "still figuring out." PLAN recommends that the Secretary deny the request for a Single EIR and instead require both a Draft and Final EIR, both of which should comprehensively address the entire Springfield Area Reliability Plan.

Alternatives Analysis

The alternatives analysis provided in TGP's EENF is inadequate. Reviewing agencies should consider all parts of the Springfield Area Reliability Plan together to determine an appropriate alternative to address the energy needs of Holyoke and the communities in the Columbia Gas Springfield Division. Alternatives that eliminate or reduce the length of proposed new pipeline construction should be investigated, as such alternatives would most likely avoid or minimize adverse environmental impacts that would result from implementing TGP's preferred alternative.

TGP's Over-Reliance on Precedent Agreements in Alternatives Analysis

As a preliminary matter, TGP's reliance on precedent agreements is inappropriate in the context of a MEPA evaluation of any alternative that would provide less pipeline capacity than the maximum contract amount authorized by the Department of Public Utilities ("DPU"). The claimed "need" for these Projects (which the DPU relied upon when approving TGP's precedent agreement with Columbia Gas) is founded upon speculative sales forecasting. We have seen the same scenario play out with TGP's Connecticut Expansion Project, just completed in Agawam and Sandisfield last fall:

the forecasts used to justify the Connecticut Expansion have proven to be drastically overblown, even though the state of Connecticut actively encouraged conversions to gas heat.[2] In the case of the Projects now under review, the forecasts predict a significant rise in demand for natural gas even in municipalities that have declared their intent to transition to 100% renewable energy.[3]

Precedent agreements are in no way binding on state or federal agencies; the parties' agreement to enter into firm transportation contracts are *conditioned* on environmental permits and should not determine the permitting outcome. DPU approval does not diminish the duty of the state's environmental agencies to require a thorough alternatives analysis and to advocate for alternatives that have less negative impact on the environment.

TGP and the utilities' goal of maximizing expansion of gas infrastructure and consumption is at odds with local, regional, and state policies to transition away from fossil fuel consumption, including the mandates of the Global Warming Solutions Act pertaining to greenhouse gas emission reductions and the Green Communities Act pertaining to energy efficiency.

Alternatives Analysis Should Consider Reductions in Capacity Requirements Due to Reductions in Gas Demand

TGP cites the Pioneer Valley Planning Commission (the "PVPC") 2015 "Plan for Progress" as justification for the expansion of gas supply in region. However, the PVPC's Pioneer Valley Climate Action and Clean Energy Plan ("PVPC Clean Energy Plan") describes two general goals for regional clean energy, in line with state mandates:

1. Reduce energy use.

2. Replace non-renewable energy sources with clean, renewable energy sources generated locally.[4]

Moreover, the PVPC is currently in the process of updating its PVPC Clean Energy Plan. Since the time that the above-mentioned PVPC documents were developed, the Commonwealth of Massachusetts has itself developed a range of incentives to promote efficient heat pumps, rather than natural gas, as the gold standard in clean space heating (and to promote electric vehicles rather than

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[2] "Eversource's gas utility is now targeting 4,700 customer conversions this year, down from an original goal of 9,372, while Avangrid's two gas utilities have revised their combined goal of 20,100 conversions to 6,000[.]" "CT's natural gas expansion plan well behind schedule," *HartfordBusiness.com*, July 16, 2018 (www.hartfordbusiness.com/article/20180716/PRINTEDITION/307129946/cts-natural-gas-expansion-plan-well-behind-schedule).

[3] *See, e.g.*, "Resolution of the City Council of the City of Northampton in Support of 100 Percent Renewable Energy," R-18.003, January 4, 2018 (*available at* northamptonma.gov/AgendaCenter/ViewFile/Item/9008?fileID=101452P); *see also* statement of Alex B. Morse, Mayor, Holyoke, Massachusetts ("Holyoke's commitment to making the transition to 100 percent renewable energy arises from our commitment to safeguard the future of the families and neighborhoods that have built our city.") (*available at* 100percentrenewable.org/post/171143663021/alex-b-morse-mayor-holyoke-massachusetts).

[4] Available at http://www.pvpc.org/sites/default/files/PVPC Climate Action Clean Energy Plan FINAL 02-18-14.pdf.

vehicles powered by compressed natural gas).[5] The industry myth that natural gas is clean or a bridge to a renewable energy future has been debunked since that 2015 PVPC plan was released. Methane – natural gas – is 86 times more potent a greenhouse gas than carbon dioxide when released into the atmosphere, if you measure the impacts over a 20-year timeframe. Methane is released not just through unintentional leaks, but as a part of regular system operations, so that the life-cycle greenhouse gas impacts of natural gas rival those of coal.[6]

In addition to evaluating alternative means of space heating that would reduce the scope of the proposed Projects, please factor in, at a minimum, energy efficiency plan goals for Columbia Gas that result from the 3-year energy efficiency plan development currently underway and soon to be evaluated by the DPU.

System Alternatives and Segmentation

The system alternatives discussed below should be considered in connection with the gas demand reduction strategies discussed above.

Longmeadow Alternative

TGP refers in its EENF to a meter station that it intends to construct in June of 2019 in Longmeadow, along the Company's existing 200 Line.[7] The purpose of the proposed Longmeadow Meter Station is to provide Columbia Gas a point of delivery ("POD") on the east side of the Connecticut River. TGP asserts that its proposed Longmeadow Meter Station is "separate and distinct" from the instant Projects. However, the proposed new Longmeadow POD is part of what Columbia Gas calls the "Longmeadow Supply Strategy Project,"[8] one of the "five integrated supporting infrastructure projects" that constitute the Springfield Area Reliability Plan. **If completed, the Longmeadow Supply Strategy Project will reroute a significant amount of the current demand away from the Agawam Lateral and could eliminate any need for the Looping Project.**

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[5] *See, e.g.*, http://www.masscec.com/residential/clean-heating-and-cooling; https://www.mass.gov/how-to/massevip-fleets. *See also Pioneer Valley Clean Energy Roadmap* (http://www.pvpc.org/sites/default/files/doc-clean-energy-roadmap2838.pdf).

[6] *See generally* Howarth, R. W. (2015), "Methane emissions and climatic warming risk from hydraulic fracturing and shale gas development: Implications for policy," *Energy Emission Control Technol.*, 3, 45–54 (available at https://www.eeb.cornell.edu/howarth/publications/f_EECT-61539-perspectives-on-air-emissions-of-methane-and-climatic-warmin_100815_27470.pdf).

[7] *See* p. 5 of EENF. Table 2-10 on p. 25 of the EENF describes the proposed Longmeadow Meter Station as "including two 8-inch taps on mainlines 200-1 and 200-2; one 4-inch and one 8-inch meter with 12-inch headers and 8-inch station piping; and access driveway."

[8] *See* supra note 1.

Columbia Gas has explained that new Longmeadow POD "supplying [its] distribution system east of the Connecticut River (including the City of Springfield and parts of Longmeadow and Chicopee) would improve the reliability of gas service for customers in this area by reducing the risk associated with a single source of supply attached to a bridge crossing the Connecticut River."[9] Columbia Gas further states: "Improvements to the distribution system include installing between 18,000 and 20,000 feet of 12" and 16" cathodically protected coated steel pipe designed to ultimately operate at 200 psig. This line will connect the new POD to the input of the Company's large diameter 10 psig cast iron loop that supplies gas to the majority of the City of Springfield and the surrounding communities. **The new system as designed when operating at full capacity will provide the backbone infrastructure to supply gas to the majority of Springfield City and the surrounding communities.**"[10]

In other words, **rather than relying upon gas from TGP's Agawam Lateral** to serve the main population center in the Columbia Gas Springfield Division, Columbia Gas proposes to to create a more direct route to supply Springfield and neighboring communities. Additionally, according to Columbia Gas, the new Longmeadow POD will enable gas to flow east to west across the Connecticut River, to "support the communities of Agawam and West Springfield in the event of supply loss from the Agawam Gate State."

Please require TGP (in consultation with Columbia Gas) to explain how much gas could be offloaded from the Agawam Lateral by completing the Longmeadow Supply Strategy Project.

Ludlow/Chicopee Alternative

A driving force behind the Springfield Area Reliability Plan is the perceived need to relieve capacity constraints on the Northampton Lateral and provide more capacity to Columbia's Northampton/ Easthampton territory by constructed new a pipeline (the proposed "Alternate Backfeed" on Columbia's map) across West Springfield to supply HG&E, so that HG&E's capacity on the Northampton Lateral can be made available to Columbia under a long-term capacity exchange agreement.[11] Columbia and HG&E have a *temporary* capacity exchange arrangement in place, whereunder Columbia provides HG&E 2,400 Dth/d of gas capacity at the Holyoke/Chicopee border, and HG&E makes that amount of capacity available to Columbia on the TGP Northampton Lateral.[12]

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[9] *Bay State Gas Company D/B/A Columbia Gas of Massachusetts 2017 Long Range Forecast and Supply Plan 2017/2018 – 2021/2022, October 30, 2017*, DPU Docket No. 17-166, 105 (available at https://eeaonline.eea.state.ma.us/EEA/FileService/FileService.Api/file/FileRoom/9172434).

[10] Columbia Gas Response to AG 3-2 in DPU Docket No. 17-172 (available at eeaonline.eea.state.ma.us/EEA/FileService/FileService.Api/file/FileRoom/9167224) (emphasis added). As of May 2018, the Columbia Gas plan also includes installing "approximately 4,000 feet of new pipe to connect the POD to its existing distribution system in Longmeadow." (Columbia communication with Longmeadow Selectboard.)

[11] *Id.* at 108-109.

[12] *Id.* at 109.

In the comprehensive alternative analysis of the Springfield Area Reliability Plan, please require analysis of system changes that would be necessary to increase capacity that Columbia could provide to HG&E at the Holyoke/Chicopee border site, rather than building a new high pressure pipeline through the entire length of West Springfield. This alternative could take advantage of LNG liquefaction and storage capacity already existing in Ludlow.

Abandoning Pipeline Segment That Bisects Condominium Complex

At the July 27, 2018, MEPA Consultation Session it was suggested that the existing pipeline segment that bisects the abutting the Longbrook Estates Condominiums be abandoned as part of the Projects and that a replacement for it be installed alongside the Looping Project that was designed to avoid the complex. Please require TGP to include in the Draft EIR an analysis of whether this is a feasible or possible improvement for the safety of the Company's 261 system. TGP should further evaluate whether the Looping Project pipe could be resized to include the capacity of the pipe that currently bisects the condominium complex, abandoning that existing pipe section and resulting in a single pipe outside Longbrook Estates rather than multiple pipes.

Greenhouse Gas Emissions & Air Quality

TGP should quantify emissions and analyze proposed mitigation in accordance with the MEPA Greenhouse Gas Emissions Policy and Protocol. Both carbon dioxide (CO2) and methane (CH4) emissions should be included in that analysis. The volume of methane should not be limited to construction and operational activity (as was done for the EENF), but be quantified from wellhead to burner tip, including planned and unanticipated blowdowns or other releases of raw methane at the compressor station, pigging stations, metering stations and all other infrastructure that releases methane as standard operating procedure.

The PVPC Clean Energy Plan[13] has two greenhouse gas reduction scenarios for the region. Both show a sharp decline in emissions from the "Building Heat" category starting in 2014. To the extent that the Company's Projects deliver increased emissions to the region starting around the estimated completion date of November 2020, the Projects are at odds with the PVPC plan and Massachusetts policy.

Please also require TGP to clarify how the HP Project operating emissions would compare to the operating emissions of the compressor station currently.

Wetland Resource Area Impacts

TGP proposes to impact 289,000 sq. ft. of Bordering Vegetated Wetlands and 7,800 sq. ft. of Isolated Vegetated Wetlands. Although TGP declares there will be no loss of wetlands as a result of the Projects, conversion of wetland resources from one category to another is a permanent loss of habitat.

[13] PVPC Clean Energy Plan, supra note 4, ch. 6 (Greenhouse Gas Reduction Scenarios For The Region), p.77.

TGP should amend the Looping Project to further minimize conversions and accelerate restoration plans if the Company continues to pursue the Looping Project.[14]

The EENF states that "the EI would determine whether or not rubber-tired equipment would damage root systems by surveying the wetland ahead of clearing equipment for degree of saturation. Where wetlands are saturated and root damage is likely, clearing will be done manually or will be completed with equipment operating on timber mats." If it could *all* be cleared manually, then it should be *required* to be cleared manually. Risking damage to the root systems within wetlands is not appropriate if it is avoidable.

If the Company continues to pursue the Looping Project, please require TGP to amend its plans for tree clearing to avoid this unnecessary risk to root systems.

Stream and Riverfront Area Impacts

TGP proposes to cross five (5) streams, which will impact 1,001 linear feet of Bank and 6,500 sq. ft. of Land Under Water. All temporary or permanent impacts to Bank and associated riparian buffers should be avoided to the maximum extent. Please require TGP to describe how each crossing will be done – proposed in the EENF as possible different forms of open trenching – and to explain why less impactful, though more costly, horizontal directional drilling is not planned. The Massachusetts River and Stream Crossing Standards should be met to the maximum extent practicable for all crossings.

Two of the five streams to be crossed are classified as Cold Water Fisheries; two are unclassified and therefore, under MassWildlife protocols, presumed to be Cold Water Fisheries as well. Cold Water Fisheries only need a one-degree temperature change to be negatively impacted. TGP should explain how the Company will guarantee that the crossing method chosen will avoid harmful temperature changes, turbidity, silt, and riparian buffer impacts.

The EENF states that impacts to the Riverfront Area are proposed to be 200,000 sq.ft., 1.6 acres (70,000 sq. ft.) of which is permanent. A formal alternatives analysis of the impacts, required by the Riverfront Protection Act, must be provided to show there is no practicable and substantially equivalent economic alternative with less adverse effects.

The Bank, LUW, and RFA impacts proposed are enough to require that TGP perform a Detailed Wildlife Habitat Evaluation (WHE).

Endangered Species and Species of Greatest Conservation Need Impacts

The proposed Projects impacts BioMap2 Core Habitat featuring Species of Conservation Concern, and Critical Natural Landscape containing Wetland Core Buffer and Landscape Block, along with Priority Habitat of Rare Species #780 and Estimated Habitat of Rare Wildlife #643 as mentioned in the EENF.

[14] The majority of the comments that follow are only applicable if the Company continues to pursue the Looping Project.

As proposed, the Projects would impact two endangered species – Eastern Box Turtle and Eastern Worm Snake - and multiple species of greatest conservation need – American Eel, White Sucker, Blacknose Dace, Tessellated Darter, Eastern Brook Trout, and Fallfish along with Brown Trout. The EENF states that the Projects will result in a "take" of rare species. TGP must prepare a State-listed Species Habitat Assessment. TGP must also create a plan that will avoid impacts to these species to the maximum extent practicable.

Temporary Work Area Impacts

TGP proposes to clear over four and a half acres of forested upland and forested wetland for temporary work areas. TGP should avoid as much tree clearing for temporary use as possible because these impacts are not as "temporary" as portrayed. Also, TGP should be required to plant substantially sized trees to accelerate restoration of these areas, rather than simply planting cover crops. TGP's suggestion – that "[t]emporary workspace that was identified as forest during the field surveys will be allowed to revert to forest; however, succession back to forested habitat may take up to 50 years to regenerate in the temporary ROW to near pre construction conditions" – is unacceptable. TGP should provide restoration plans with definitions of success and monitoring to assure a more speedy restoration of the areas that would be deforested for temporary use.

Invasive species introduction avoidance

Invasive species problems are widespread along utility easements. Purple loosestrife was noted on the short portion of the Projects seen on the July 27th MEPA Consultation Session. TGP must develop a Project-specific Invasive Species Management Plan to be implemented prior to construction and to continue for a minimum of five years post-construction. TGP should ensure that the plan includes working with abutting landowners to eradicate complete stands of invasives, not restricting its action to the bounds of their permanent and temporary easements. Wide swaths of disturbed soil are an invitation for the introduction and spread of invasive species that will hinder active and passive restoration efforts.

Road crossing impacts

The Company proposes to cross four public roadways with the Looping Project, three of which they propose to cross by boring underneath. In Sandisfield, in the recently completed Connecticut Expansion, TGP proposed road borings and then switched to open cut immediately prior to construction. How will TGP avoid similar additional impacts to traffic?

Hydrostatic Test Water

TGP proposes to store, for eventual hauling, the water used for hydrostatic testing of the Looping Project after construction. During TGP 's previous Massachusetts pipeline project just completed in November 2017, TGP managed to contaminate over half a million gallons of test water in Sandisfield

and over 16,500 gallons in Agawam. The half a million gallons of contaminated test water in Sandisfield was hauled to Maine in 7,000-gallon tankers, resulting in additional project emissions and hazards. The contaminated test water in Agawam was to be trucked to the same Maine facility but was instead illegally discharged when TGP failed to properly secure the holding tanks.[15] This was an astounding outcome, considering that TGP assured U.S. EPA and MassDEP that the water would be safe to discharge onsite at both locations. TGP must explain how it will avoid a similar calamity with the 110,000 gallons of test water proposed for the Looping Project, as that information is not outlined in the EENF. Please also require TGP to disclose the composition and source(s) of the chemicals that were involved in the Connecticut Expansion contaminations and that could lead to a repeat of such contamination.

Thank you for the opportunity to comment on the EENF. If you have any questions related to our comments, please contact us as we would be happy to discuss.

Respectfully submitted,

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Cc: Lealdon Langley, MassDEP
Tom French, NHESP

[15] CT Exp. Biweekly Report (Nov 19-Dec 2) (https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=14773108).

PIONEER VALLEY PLANNING COMMISSION
50 YEARS 1962-2012
Timothy W. Brennan, Executive Director

August 7, 2018

Mr. Matthew A. Beaton, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Attention: MEPA Unit

Reference: Review Comments on the Expanded Environmental Notification Form (EENF) for the Proposed Tennessee Gas Pipeline 261 Upgrade Projects, Agawam, Massachusetts, EEA # 15879.

Dear Secretary Beaton:

The Pioneer Valley Planning Commission (PVPC) has the following review comments on the EENF submitted for the above-cited project. As proposed, the project consists of a "Looping Project" which includes the construction of 2.1 miles of 12" diameter pipe along an existing pipeline and the "HP Replacement Project" which is intended to modernize equipment at an existing compressor station. We understand the proposed construction project will impact a 75-foot corridor for the full length of the 2.1 miles of pipeline resulting in the disturbance of existing sensitive natural environments that include:

- Crossing 5 streams in Agawam - Worthington Brook, the unnamed tributary of Worthington Brook, Tarkill Brook, Three Mile Brook, and the unnamed tributary of Three Mile Brook – which are all classified as coldwater streams that provide habitat for a variety of important fish species.
- An estimated 14 acres of inland wetlands, including an estimated 6 acres of bordering vegetated wetlands.

- A total of 0.7 miles of pipeline laid through Natural Heritage and Endangered Species priority habitat for the Eastern Box Turtle and Eastern Worm Snake.

As such, we request that additional information as summarized below be provided on the subject project as part of the Final Environmental Impact Report (FEIR).

The EENF is unclear on the actual wetland boundaries for the project. Given this, full delineation by a certified wetlands scientist is recommended to clarify this information for the FEIR. In addition, the EENF does not provide sufficient information on the specific plan to revegetate earth and wetland disturbances by the project with native plants. Experience reveals that clearing right of ways for pipelines, with the destruction of native vegetation and compaction of soils, often creates pathways for the spread of invasive species. The documents within the current expanded ENF do not yet adequately address these issues. Therefore, we suggest inclusion of an exotic and invasive species control strategy that begins with the precautions to be taken during construction and, likewise, how the disturbance area will be revegetated since both are important in considering control. We'd also suggest that the boilerplate document on Erosion Control and Revegetation that's provided in the appendixes to the EENF be amended to specifically describe how the project will integrate the use of the 2018 Natural Resource Conservation Service's Specification Guidelines for Critical Area Planting (Code 342).

Supplemental information is also requested on the plans for the ongoing control of vegetation. More specifically, the FEIR should identify if chemical or mechanical methods are planned for vegetation maintenance required for the project. The National Fish & Wildlife Service has reported that methods for maintaining the right of way oftentimes contribute to the loss of native plant species diversity and contribute to sedimentation in local waterways. Frequent maintenance can contribute to soil compaction, alteration of natural landscape topography and drainage patterns, and the disruption of normal groundwater flows. Repair and maintenance activities can also disturb wildlife, result in spills, and contribute to continued habitat loss.

We also request that the FEIR document provide additional information on the safety measures to be included as part of the construction process as the project involves laying new gas line alongside existing gas lines and in some places removing smaller inactive pipeline. We believe it will be important for the FEIR to document how the project will protect existing infrastructure from leaks and, thereby, strive to ensure public safety.

Finally, we would request that additional information be provided in the FEIR to support the statement in the EENF that construction of the project is necessary to prevent energy shortages in periods of peak demand. Correspondingly, the current EENF states that GHG emissions will occur only during the construction phase of this project. Given this, the FEIR should confirm whether there will be any impacts of the project on GHG emissions after construction has been completed.

Thank you for the opportunity to offer our comments on this proposed project.

Sincerely,

Timothy W. Brennan
Executive Director

cc: W. Sapelli, Mayor of Agawam
M. Paleologopoulos, PVPC Commissioner – Agawam
C. Elfman, PVPC Alternate – Agawam
G. Dorsey, Kinder/Morgan

Strysky, Alexander (EEA)

From: Henry Rosenberg <hwrbpt@gmail.com>
Sent: Thursday, August 09, 2018 10:40 AM
To: Strysky, Alexander (EEA)
Subject: EEA #15879. PUBLIC COMMENT

Secretary Matthew Beaton

Executive Office of Energy and Environmental Affairs

100 Cambridge St., Suite 900

Boston MA 02114

Re: Tennessee Gas Pipeline 261 Upgrade projects -Agawam

EEA # 15879

Dear Secretary Beaton:

As Western Massachusetts physicians, health professionals, and health advocates, we appeal to you to obtain an independent comprehensive health impact assessment before issuing permits for the above-captioned system expansion. We write to share our concerns concerning the risks of increasing the horsepower of compressor station No. 261 and the installation of over two miles of looping pipeline.

The gas industry promotes an image of natural gas as a clean fuel, but natural gas contains contaminants that cause illness even at low concentrations, including benzene and formaldehyde. Peer-reviewed studies have shown that living near a natural gas facility is associated with preterm births, asthma, and even leukemia. Meanwhile, methane itself, the primary component of natural gas, is a heat-trapping compound far more potent than carbon dioxide in raising global temperatures.

The Massachusetts Medical Society, the American Medical Association, the Massachusetts Nurses Association, Greater Boston Physicians for Social Responsibility, Pioneer Valley Physicians for Social Responsibility and the boards of health of 69 Massachusetts municipalities have called for comprehensive health impact assessments prior to the construction of natural gas facilities. We join these groups in asking you to undertake a comprehensive health impact assessment here in Western Massachusetts.

Sincerely yours,

Henry W. Rosenberg, M.D.

3 James Avenue

Northampton MA 01060

Electronically signed (documentation and Western Massachusetts addresses on request) by:

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Ellen Nigrosh, Ph.D.

Christine Orlen, R.N.

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