



July 18, 2016

Harold Lamos, Secretary  
Kathleen DeWolfe  
Ashland Conservation Commission  
P.O. Box 517  
Ashland, NH 03217

Re: Ashland Conservation Commission comments on Northern Pass Transmission, LLC and Public Service Company of New Hampshire Applications - Wetlands File No. SEC-2-15-02817, Shoreland File No's. 2015-02828 & 2015-02859, and AoT File No. 20151020-171

Dear Mr. Lamos and Ms. DeWolfe:

On behalf of Northern Pass Transmission LLC ("NPT"), we are responding to your May 3, 2016 comments on the permit applications referenced above. We respectfully disagree with your assessment that the wetlands permit application is incomplete, and that the application should be denied by New Hampshire Department of Environmental Services ("NHDES"). We offer the following responses to your comments.

*Land ownership*

As the Project has explained in detail in various filings with NHDES and with the New Hampshire Site Evaluation Committee ("NHSEC"), the PSNH easements grant the necessary rights to construct, maintain, and operate transmission lines within the right of way ("ROW"), and PSNH will, subject to approval by the New Hampshire Public Utilities Commission ("NHPUC"), lease a portion of the ROW to Northern Pass for this Project. A petition for the approval of that lease is pending before the NHPUC.

*Site-Specific Plans for Review, and Temporary and Permanent Construction Impacts*

Wetland impacts are shown on the wetland permitting plans (Appendix 47 to the SEC Application, and Appendix I to the NHDES Wetlands Application ("WPA"), which have a table with total impacts by permanent, temporary, and secondary impact type. The plans in this form, including the scale and features shown, were requested by NHDES and were modeled on plans submitted for previous transmission line projects. Drafts were shared with NHDES on several occasions to elicit guidance before finalizing them for inclusion in the WPA. These plans show all known temporary storage and staging areas (laydown areas) and on and off-ROW access roads, including any wide turning radii. Temporary Storage and Staging Areas are discussed in Sections 6.1.15 and 6.1.16 of the NHDES WPA. ORARs and laydown yards are discussed in Sections 3.4 and 3.5 of the 404/10 Permit application (SEC Appendix 3) with any proposed impacts included in Section 4. However, sites that may be identified in the future or where a formal agreement for use

has not been completed or does not exist have not been included in the WPA. Any access roads or storage and staging areas identified in the future will be subject to the same avoidance and minimization standards and protocols that have been applied to the remainder of the Project; and no impacts will be allowed unless explicitly permitted by NHDES.

All tree removal associated with the Project is also shown on the plans. The Project is not proposing any significant tree removal for access roads and laydown areas outside of the ROW.

The wetland application materials include a Natural Resource Mitigation Plan (Appendix G to the WPA). Section 4 of that document describes the restoration of temporarily impacted construction areas, and Section 5 describes the compensatory mitigation planned for unavoidable permanent and secondary impacts. The compensatory mitigation approach complies with the requirements of the NHDES Wetlands Bureau and the US Army Corps of Engineers, which do not include any provisions for making cash payments to landowners or towns. Should impacts exceed the permitted amount for any reason, then a permit amendment with any required additional fee must be submitted to NHDES and further restoration and sufficient compensatory mitigation must be provided.

#### *Municipal Water Supply Wellhead Protection Area*

As explained in the WPA, Alteration of Terrain (“AoT”), 401 Water Quality Certification, and Section 404/10 applications, NPT will follow applicable state and federal rules and guidelines and a suite of BMPs during construction to actively manage various work activities and limit the potential for construction related impacts to surface and ground water quality. In addition, NPT will register for the National Pollutant Discharge Elimination System (NPDES) General Permit (GP), and file a Stormwater Pollution Prevention Plan (SWPPP) prior to commencing construction, and will comply with all of the requirements of the GP and provisions of the SWPPP. NPT has also committed to develop specific work methods in this area and has discussed this with Ashland Water & Sewer. No hazardous materials would be stored within a Wellhead Protection Area and no impacts to the well itself or aquifer will occur.

#### *Municipal Wastewater Treatment Area*

NPT is working with the Town of Ashland Water and Sewer Department (the “Department”) to ensure that the construction of the Project does not negatively affect the Department’s facilities. The Project has committed to contract for an independent study of the sewage lagoons to ascertain their current condition and monitor the construction work to insure no damage occurs as the result of construction. NPT has also committed to working with the Department to develop specific construction techniques for the site to insure no damage to the facilities or water supply, and no impact to daily operations. NPT has ongoing meetings with the Department on this topic. Both parties are committed to working toward a solution that will allow for the safe construction of the Project without damaging any of the Department’s infrastructures.

#### *Discovery of Contaminated Soils & Buried Solid Waste*

In the unlikely event that buried solid waste, contaminated soil, or hazardous material is encountered during the construction process, the Project will characterize the material and dispose of it at an approved disposal facility. Material handling guidelines will be prepared prior to the start of construction in cooperation with NHDES.

#### *Avoidance of Impacts to Nesting Ospreys*

The Project will avoid impacts to raptors by suspending construction activities within ¼ mile of any active raptor nest between March 1<sup>st</sup> and July 31<sup>st</sup>, as required by NHDES and in compliance with the Migratory Bird Treaty Act (“MBTA”). Northern Pass conducted a flydown of the transmission line by helicopter to help identify the location of raptor nests, and will do so again prior to construction. Additional Best Management Practices (BMPs) and impact avoidance and minimization measures are described in the Natural Resource Mitigation Plan (SEC Appendix 32). The ospreys currently nesting across from the Transition Station #6 site are acclimated to the presence of the human infrastructure and activity currently ongoing in the area, including avoiding the transmission lines that currently cross the Pemigewasset River. These ospreys are expected to readily adapt to the conditions of the area after Project construction is complete. Ospreys in general are widely known to be tolerant of and adaptable to human activity and infrastructure<sup>1</sup>.

#### *Future Use of Town Property Within the Project Path*

As stated above, the PSNH easements for the existing transmission ROW allow construction, operation and maintenance of transmission structures and line. Like the Town of Ashland, NPT supports making renewable energy available for the benefit of the citizens of New Hampshire, including those living in Ashland, reducing energy costs and providing cleaner air by displacing fossil-fuel based energy sources. We appreciate the Town’s commitment to the development of a solar farm, and do not believe that one or two transmission structures spaced widely apart would have any effect on the solar farm’s operating capacity.

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<sup>1</sup> As summarized in Poole, Alan F., Rob O. Bierregaard and Mark S. Martell. 2002. Osprey (*Pandion haliaetus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/683doi:10.2173/bna.683>, ospreys are:

“Generally tolerant of land development; e.g., Florida Keys population is thriving, despite widespread development there; likewise in Baja California, Mexico, where pairs now nest on platforms, highway signals, and channel markers in close proximity to boat and vehicular traffic, in towns and industrial areas. In southern New England, Ospreys often nest in locations with high levels of human activity ,”and “[Habituate] easily to human activity nearby. Pairs that begin nesting near humans usually develop high tolerance; those nesting away from disturbance may be sensitive to human presence. In coastal New York and New England, coexistence of humans and Ospreys is firmly established...”

*Demonstration of Least Adverse Impacts*

The Project fully explained how it avoided and minimized impact in accordance with DES rules, and it recently provided DES with additional information. Please see the attached document.

**Pemigewasset River Shoreland Permit Application Comment  
(No. 2015-02828)**

*Site Identification*

The shoreland activity locations in the NHDES Shoreland Applications for the Pemigewasset River were grouped the way the NHDES Shoreland Program requested – by waterbody and town (Ashland, Bridgewater, Bristol, Campton, Hill, New Hampton, Woodstock, Thornton and Plymouth). The application forms were designed to accommodate a street address for a single parcel, not a description of extended locations along a ROW, and therefore “multiple” was entered. However, all work locations can be found in the USGS maps and Project plans in each application.

*Removal of Vegetation*

The additional tree removal proposed within the existing ROW is not substantial, and will only involve trees, not groundcover. However, we agree that care must be exercised with any tree removal within the buffer of the Pemigewasset to avoid the loss of soil-stabilizing ground cover and root base. Care will be taken to minimize this risk, and shrubs and seed added if needed to revegetate such areas. The effects of wind, rain and stormwater will be similar to what occurs now in the existing ROW, and to what occurs anywhere that trees are removed for any reason. Once restored, the ROW will remain pervious and vegetated. That natural state would not contribute to stormwater runoff or climate change. Although some tree removal is necessary, the removal will allow the expansion of meadows, shrublands, and early successional forest that already exist and are maintained in the ROW. Such habitat is of high value to many wildlife species that are rare or are becoming rare as these early successional habitats disappear from our landscape.

*Construction Activities Occurring Upstream*

Any hazardous waste encountered during construction must be handled and disposed of according to specific rules and requirements. The numerous BMPs as identified in Section 4.5 of the AoT application (Appendix 6 of the SEC Application) for surface water protection that will be in place during Project construction will help prevent any surface transport of contaminants.

**Squam River Shoreland Permit Application  
(File No. 2015-02859)**

*Site Identification*

We apologize for identifying the location of this crossing incorrectly as Depot Street. That is the address associated with one of the Town parcels mapped at the Squam River crossing. The crossing at this location is more accurately described as occurring near 137 Collins Street.

*Construction Access*

The Squam River crossing is not likely to be construction matting. The contractors will determine what type of structures they have that will be employed at each location. In this case, some type of temporary bridge is likely.

*Removal of Vegetation*

Please see the discussion above regarding the clearing of trees in the protected shoreland. No additional impervious surface will be added in the Squam River shoreland in Ashland, as the nearest structure is over 375 feet from the riverbank.

**Alteration of Terrain Permit Application  
(File No. 20151020-171)**

*Site Specific Plans for Review*

Northern Pass provided all of the plans required by the NHDES AoT Bureau as discussed in pre-application meetings. The work in Ashland is all within the existing ROW; AoT determined that detailed site specific development plans were not required for the transmission because the work entails only installation of structures that are spaced hundreds of feet apart. AoT did require detailed development plans for the six transition stations, the two substation expansions, and the converter terminal.

We believe the foregoing addresses your comments, and appreciate the time and effort your Commission has expended so far on the review of this Project.

Sincerely,



Lee E. Carbonneau  
As agent for Northern Pass Transmission, LLC.  
Senior Principal Scientist  
Normandeau Associates, Inc.

Attach.

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## Excerpt from Northern Pass Transmission LLC Response to Questions from NH Department of Environmental Services

Response to Q1.

From the exchange of e-mails on May 17 & 19, 2016 on this question between Dana Bisbee on behalf of NPT and Collis Adams, we understand that in essence DES is requesting more information from Northern Pass to explain how NPT has avoided and minimized wetlands impact to the maximum extent practicable in the northern section of the route. The application provides a robust discussion of NPT's efforts to avoid and minimize impacts on pp. 66-72, 86-89, and 95-96 of the application narrative, as well as in Appendix G. The wetland rules at Env-Wt 302.03(a) require a description of the impact of the proposed project design and a demonstration that potential impacts have been avoided to the maximum extent practicable and that unavoidable impacts have been minimized. The applicant is not required to include an impact assessment of an alternative project on a site it cannot access, or in another state with different laws, or for a different design that is not practicable. Avoidance and minimization review for DES wetlands application purposes focuses on the applicant's design within the site, for which NPT has provided DES complete information. This is different from the alternatives analysis that NEPA requires. As explained in detail in the application and further in answer to Question 2 below, NPT has minimized impact to the "maximum extent practicable" for the selected route. The 40 miles of the northern section of the route includes approximately 8 miles along public highway ROWs and approximately 24 miles within the Wagner Forest, an area that experiences regular industrial-level logging operations. And, along the route corridor itself, NPT has designed the line to avoid wetlands impacts where practicable.

DES's question on the Route 3 alternative on its face would require an entire new design and plans for some 40 miles of new corridor, but as the e-mail exchange mentioned above clarified, that is not the actual intent of the request. Rather, it calls upon the Applicant to provide more information on its efforts to avoid wetlands impact to the maximum extent practicable. The Route 3 alternative suggestion is not practicable, as explained in greater detail below. Northern Pass provided the explanation set forth below in response to a data request in the SEC proceeding. While it specifically addresses the question of why it is impracticable to construct all of the line underground, the analysis of that question applies strongly to the alternative route of a buried line from Pittsburg to Northumberland, a distance of some 40 miles. Having accepted an additional \$500M in project costs to place 52 additional miles underground, Northern Pass has avoided wetlands impacts to the "maximum extent practicable", as required by Env-Wt 302.03(a)(1). When placed in service, this will be the longest stretch of underground cable in the United States. Adding the hundreds of millions of dollars of additional cost to require burial of 40 more miles of the line is not practicable and technically challenging.

### Data Request Response to Question from the Environmental Organization Group

In order to be economically feasible or viable, a project such as NPT must be able to attract investment from a market participant – in this case Hydro Québec (HQ). For its part, HQ's investment decision will be based on the prospect of being able to recoup its investment, plus an acceptable return.

Since the project was conceived in 2008, NPT has made changes to the line's proposed route and construction approach in order to respond to concerns expressed by New Hampshire stakeholders. In doing so, NPT believes it has struck the right balance between addressing these concerns and ensuring that the project remains both technically and economically feasible.

NPT's cost has increased by over \$500 million, from \$1.1 billion to \$1.6 billion. The primary driver of this increase is the addition of underground transmission cable. Almost one third of the project, or a little more than 60 miles of its overall length of 192 miles, will be placed underground, including approximately 52 miles in and around the White Mountain National Forest and Franconia Notch and another 8 miles in the North Country. Construction of the remaining two-thirds of the project underground would add a further \$1 billion to the project cost, for a total of \$2.6 billion.

In addition to increasing the project cost, the underground initiative has also reduced the NPT line's capacity. A change in technology was required to enable this new long length of underground



## Excerpt from Northern Pass Transmission LLC Response to Questions from NH Department of Environmental Services

construction, which resulted in a reduction of the line's capacity from 1200 MW to 1090 MW. That reduced capacity means that there is a corresponding reduction in revenue that can be derived from potential electricity sales.

The dramatic increase in required project investment has been accompanied by an equally dramatic decrease in its expected revenues – at least in its early years. Roughly 50% of New England's electricity demands are being met by natural gas fueled generators, and natural gas prices have been in sharp decline as a result of increased gas supply. As a result, the price of electricity in the New England wholesale energy market has dropped by 48% since the project's inception. Low gas prices are expected to persist at least into the early years of NPT's operation. The expected energy price in New England in 2019, the first year of operations for the project, is just over \$40 per megawatt hour. Thus, the wholesale energy price expected when NPT enters service will be about 50% of that which prevailed when HQ made its initial investment decision; HQ will be able to deliver 10% less energy than it expected; and the U.S. transmission cost of those deliveries will have increased by about 50%. At \$40 MWh, energy revenues HQ receives from deliveries over the line will not cover its cost of NPT's revenue requirement, which HQ would be required to pay regardless of the revenues it earns from sales over the line. While HQ would seek to cover the shortfall with other sources of revenue, such as participation in the forward capacity market, it would face a more significant risk of loss.

Given these project and market developments, even with no further project cost increases, NPT and HQ need to explore new market opportunities, which necessarily requires a cost competitive profile. For example, NPT has submitted a proposal in response to the New England Clean Energy Request For Proposal (RFP). The New England Clean Energy RFP and related documents referenced here are available at <https://cleanenergyrfp.com>. The RFP requires NPT to compete with other clean energy projects on an equal footing. That competitive approach to new transmission and generation projects reflects a fundamental shift in the industry, and NPT and HQ will be measured against competitors in order to successfully compete for market opportunities (including the RFP).

The addition of \$1 billion of project cost would handicap the NPT proposal in response to the RFP, even if the proposal could be increased to cover the additional cost, which it cannot. On January 28, 2016, NPT submitted a fixed price proposal in response to the RFP, based upon a project with 60 miles of underground construction. The RFP cautions that "Bidders will not be offered the opportunity to refresh their pricing." (RFP § 2.3.2.1) But, assuming that NPT were able to "refresh" its proposal to reflect an additional billion dollars in construction costs, it is reasonable to expect that the RFP decision makers would view the required investment relative to the economics of competitive proposals, certainly increasing the likelihood that NPT will be evaluated as uneconomic.

The investment decisions in the RFP process will be made on behalf of electric distribution companies (EDCs) in Connecticut, Massachusetts and Rhode Island by the EDCs and by representatives of state regulatory agencies serving on Evaluation and Selection Teams. Although the RFP seeks to advance the participating States' clean energy goals, only projects deemed to be "economically competitive" will be selected. Bids that are not eliminated as uneconomic in a preliminary review will be evaluated in separate quantitative and qualitative evaluations. The quantitative evaluation will be given a 75% weight in this process, and will be based on "the benefit to cost ratios of projects, based on the combination of direct and indirect benefits divided by the payments required by the project." (RFP § 2.3.1.3) While the economic objectives of the participating States differ from those of a for-profit investor, both must determine whether the likely benefits of the investment are worth the price and the uncertain risks. This determination is a matter of judgment by the entity who will pay (or, in the case of the RFP, the entities that represent those who will pay), but any substantial increase in the cost of the project significantly reduces the likelihood that a market participant would undertake such an investment.

For its part, NPT must judge where the tolerance of potential investors for increased cost and risk will be exhausted. Its senior management believes that the project is at or near that point by virtue of acceptance of an additional \$500 million in project costs for the construction of 60 miles of underground line to avoid visual effects in most areas of special scenic and recreational value. In incorporating these



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changes, NPT believes it has struck the appropriate balance – addressing the key concerns of New Hampshire stakeholders and ensuring the project remains commercially viable.

Detailed cost estimates have been prepared regarding this route and are confidential in nature. The Applicants are providing a redacted copy of “An Evaluation of All UG Alternatives for the Northern Pass Transmission Project” dated 5-31-16, which has been uploaded to the ShareFile Site in response to this request.

To the extent the request calls for the confidential information, the Applicants will make this confidential information available as requested as soon as the requesting party complies with the requirements of an SEC order governing confidential documents in this proceeding.

Response to Q2.

The re-routing of the original Project route in northern Coos County that took place in 2011 in response to public comment included a concerted effort to locate the line in less populated areas where visual impacts would be of less concern. Complete underground construction was not considered a practicable option, as described in the response to question 1, above. A landscape-level analysis of sensitive natural resources along approximately 38 alternative route segments proposed by the NP team (A through MM) was conducted. The routes were evaluated based on their intersection with conservation lands, rivers and streams, lakes and ponds, NWI wetlands, hydric soils, and Tier 1 and 2 Ranked Wildlife Habitat from WAP maps.

Property acquisition efforts commenced for the best alternatives, and the route was revised based on the successful acquisition of property rights. Normandeau provided “hot-spot” mapping and GIS modeling within 3 miles of the entire proposed Project route in 2012 to identify locations with the greatest sensitivity and permitting concerns. The model included the natural features mentioned above, along with: ridgetops/mountaintops, where headwater streams, fragile soils, wildlife corridors and unique habitats are present and ROW maintenance issues may be greater; calcareous soils and excessively drained soils where rare plants may be more abundant; known threatened and endangered species/habitat locations (plants, lynx, marten, snakes, turtles, etc.); known deer yards; archeologically sensitive areas; streams and rivers with added regulations (SWQPAs, ORWs, Class A, Designated).

A similar desktop and field reconnaissance evaluation was completed in 2013 for the northern underground route options, which became necessary when completion of an overhead route became difficult. Two alternative routes in Clarksville and Stewartstown, the B and C routes, were then evaluated. The decision was made to proceed with the B route based on the lower impacts to wetlands and conservation lands.

The route through Wagner Forest (Bayroot properties), and selection of off-ROW construction access roads were also evaluated. Shifts were made to the route, structures, and access roads as possible to minimize resource impacts. The resulting route in the northern section of the project, located on parcels where construction rights were acquired, is generally situated along the mid-slope landscape position, avoiding to the extent possible the sensitive high elevation areas (which are also potentially more visible) as well as the valleys where streams, wetlands, riparian corridors, archeological resources and highest ranked habitats are most abundant. These mid-slope landscape positions are generally comparable with respect to wetlands attributes throughout this region. Given the desktop analysis of natural resources which informed the route selection, the field work conducted, and the iterative design process within the selected ROW, the work complies with Env-Wt 302.04(a)(2).