



July 18, 2016

Kris Pastoriza, Chair
Easton Conservation Commission
1060 Easton Valley Rd.
Easton NH, 03580

Re: Northern Pass Response to Comments, Wetland File No. SEC-2-15-02817

Dear Ms. Pastoriza:

On behalf of Northern Pass Transmission LLC ("NPT"), we are responding below to the comments you sent to Mr. Craig D. Rennie of the New Hampshire Department of Environmental Services ("NHDES") on May 5, 2016 related to the Northern Pass Project.

Avoidance and Minimization of Impacts

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

Blasting and Underground Construction

High voltage direct current underground construction methodologies are discussed in detail in Section 6.1.12.2 of the NHDES Wetland Permit Application ("WPA"). Blasting is also discussed in detail in Section 6.1.12.5, although the locations where blasting may be needed will be determined based on geotechnical survey, which is currently underway. Existing floodplains and groundwater resources, along with potential impacts and impact mitigation measures such as Best Management Plans ("BMPs") are detailed in Sections 2.4, 2.5, 4.4 and 4.5 of the Section 404/10 Permit application (SEC Appendix 3).

With respect to comparing the U.S. Department of Energy's draft Environmental Impact Statement ("DEIS") impact calculations to the impacts contained within the permit applications, it is important to understand the differences between the two approaches. DEIS impact calculations are general in nature and designed to make broad comparisons between alternatives and therefore the categorization of impacts in the DEIS are not appropriate for wetlands permitting purposes. Proposed impacts included within the state and federal permit applications are based on field delineated natural resources and more precise design details regarding proposed areas of disturbance. These proposed impacts are calculated based on state and federal requirements. Wetlands and streams outside of the Project footprint will be protected from impacts through compliance with legal requirements (e.g., permit conditions) and the use of BMPs, and are therefore not included in the calculations. The NPT impact categories as described in the WPA and technical wetland report were discussed with, and approved by, the appropriate state and federal agencies.

Alternate Route: I-93

NPT has provided information that the I-93 alternative is not practicable due to critical DOT restrictions and the nature of the I-93 route through sensitive, scenic, and recreational areas such as the Franconia Notch area and others. For a more detailed explanation, please see the attached comments by NPT on the DEIS.

Safety Data Sheets (SDS) for Blasting and Boring and Underground Construction

Underground and blasting methods and standards are discussed above, and covered in the Section 404 Permit application. Applicable BMPs and other safety-related protocols which meet or exceed industry standards will be followed during construction. These standards include the Hazard Communication Standard and any requirements for blasting or boring contractors to carry and have available SDSs during transport or use of chemical products. As the blasting contractors are not currently engaged in the Project, it is premature to provide specific SDS information at this time.

Management of water flow within open trenches during construction will be managed based on applicable standards and BMPs. Existing stream and river crossings will be avoided or bypassed using directional drilling and other technologies as explained in Section 6.1.12.2 of the WPA.

Society for the Protection of New Hampshire Forest Comments

NPT addressed the Forest Society's comments in a letter to DES dated April 27, 2016, and found at this SEC link: http://www.nhsec.nh.gov/projects/2015-06/letter-memos-correspondance/2015-06_2016-04-27_ltr_des_reply_spnhf_comments.pdf

We believe the information provided 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.

CC: Mr. Collis Adams (collis.adams@des.nh.gov)
Mr. Craig Rennie (craig.rennie@des.nh.gov)
Ms. Darlene Forst (darlene.forst@des.nh.gov)
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Ms. Pamela Monroe, Administrator- NH Site Evaluation Committee
(pamela.monroe@sec.nh.gov)

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
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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).

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jan 11, 2016

ID: 8659

Date Entered: Jan 11, 2016

Source: Website

Topics: Alternatives

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Organization: Hogan Lovells US LLC

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Comment:

COMMENT OF NORTHERN PASS TRANSMISSION LLC
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

In its Draft Environmental Impact Statement (“DEIS”), the U.S. Department of Energy (“DOE”) concluded that 11 alternatives warranted detailed consideration. Northern Pass Transmission LLC (“Northern Pass” or the “Project”) submits this comment for the purpose of identifying considerations that Northern Pass has determined render some of those alternatives infeasible – considerations that Northern Pass believes were not adequately weighed in DOE’s determination of which alternatives warranted detailed consideration. Accordingly, Northern Pass urges DOE to be clear in the Final Environmental Impact Statement (“FEIS”) with respect to the considerations described below that render infeasible in any practical or legal sense certain of the alternatives evaluated in the DEIS. Northern Pass notes that the alternatives that it believes have such “fatal flaws” are not alternatives that appear to enjoy any particular public support.

Alternative 3 – Underground along the Route Analyzed Under Alternative 2

As described in the DEIS, Alternative 3 would be a completely underground alternative that would follow the same alignment as Alternative 2 except for a slight deviation to accommodate locating the converter station at the intersection of the existing PSNH transmission right-of-way (“ROW”) and North Road in Deerfield. DEIS at 2-15. The DEIS notes that this would entail underground placement along a portion of the existing PSNH ROW that is subject to 644 easements, many of which do not authorize an underground transmission line. The DEIS acknowledges that all easements that do not permit underground transmission would have to be renegotiated and suggests that this may be “challenging” to accomplish. Id. Northern Pass believes that including this option among the reasonable alternatives seriously underestimates the challenge associated with amending the easements.

Northern Pass has carefully analyzed the situation with the easements governing the ROW. It has determined that it was not the practice of PSNH or its predecessor companies to seek authorization for underground transmission in the easements it obtained prior to 1960. As a result, the overwhelming majority of the 644 easements for the ROW do not permit underground transmission lines. To renegotiate hundreds of easements, where a failure to achieve the amendment of even a single easement would preclude that alternative (and where each property owner would clearly understand the leverage he or she held) makes it very clear to Northern Pass that this alternative is not in any meaningful sense a reasonable alternative, neither practically nor economically.

Alternatives 4A, 5A and 6A – Underground along the I-93 Corridor

Three of the 11 alternatives evaluated in the DEIS propose construction of the Project underground along the I-93 corridor, including through the White Mountain National Forest (“WMNF”) and Franconia Notch State Park. The DEIS acknowledges that burial of the cable underneath the pavement or in the median of I-93 would not be permitted, but the DEIS posits that the cable could be buried on either the east side of the northbound lane or the west side of the southbound lane. However, as far as Northern Pass can determine, the DEIS does not build into its analysis of the construction the impacts associated with the particular restrictions under federal and state law that would apply to construction along I-93. Northern Pass believes that those restrictions make the I-93 alternatives completely infeasible. Among other things, the legal and practical challenges associated with such an undertaking are insurmountable; the route entails unanalyzed, but potentially significant adverse, environmental consequences in one of New Hampshire’s most treasured locations; and the I-93 alternatives offer no offsetting environmental benefits that might make those alternatives worth the challenge of pursuing them. In short, constructing Northern Pass along the I-93 corridor is not a reasonable alternative.

The DEIS describes the anticipated approach to burial along roadways in Section 2.3.2.5. In doing so, it does not differentiate among the various roadway options it considers. Compare Sections 2.3.7.5 and 2.3.9.5 (incorporating by reference the discussion in Section 2.3.2.5). Thus, for all underground roadway options, the DEIS describes the construction process as follows:

"Short-term disturbance for the trench and construction activities is assumed to be 10 feet (3 m) wide, with the majority of disturbance limited to the road surface (approximately 30 feet [9 m] wide) and adjacent, previously disturbed areas. One lane of the road would be temporarily closed to traffic to accommodate construction activities. Construction and installation of the underground cables associated with the Project would be scheduled to meet local requirements regarding noise

limitations, construction work hours, etc. and to minimize the impact on local traffic, residents, and businesses. Lane closures would be in effect for days to weeks and for short segments of road along the route."

DEIS at 2-11 emphasis added).

The DEIS also describes what would be involved for a "new transmission route (rather than within an existing roadway)," which may more accurately describe the impacts that would be involved for construction along the I-93 corridor, given that, as explained below, any such construction would have to occur at the outer edge of the I-93 Limited Access Right of Way ("LAROW"):

"It is assumed that an area approximately 40 feet (12 m) wide would be cleared of vegetation to accommodate this construction. Future vegetation growth would need to be limited in this 40-foot-wide corridor to prevent disturbance of the cables by roots. The area of direct, short-term disturbance for installation of the trench would be 10 feet (3 m) wide."

Id.

Finally, the DEIS describes the splice pads that would be necessary for any underground installation:

"Cable splice pads would be utilized for the installation and joining of underground cable segments. The cable splice pads would be temporary areas within which splicing would be conducted. Upon completion of a necessary splice, the area would be backfilled and no longer present. The splice pad areas would be necessary approximately every 1,800 feet (549 m). The distance between splice pads is dependent on many factors, including: (i) local conditions, including site conditions and local road load and other limits; (ii) the maximum size of cable reels that can be transported to a particular location; and (iii) the bending radius of the cable."

Id.

In short, according to the DEIS, underground construction along roadways, including I-93, would entail short-term lane closures and significant construction activity, along with the associated disruptions to traffic. It would also entail some permanent impacts on vegetation.

These descriptions in the DEIS accurately capture the construction techniques and impacts associated with underground burial along most public roads and areas of new underground construction in New Hampshire. However, these descriptions do not take into account the restrictions that would apply to efforts to construct Northern Pass underground along I-93, particularly through Franconia Notch. Specifically, the DEIS assumes that: i) construction could occur in the roadways and immediately adjacent previously disturbed areas; ii) lane closures would be possible; iii) only previously disturbed areas would be involved; and iv) future vegetation could be restricted in a 40-foot wide area. Northern Pass does not believe that these assumptions can be permissibly applied to the I-93 corridor.

Unlike the more traditional public highways where Northern Pass proposes to construct the Project, I-93 is governed by a separate and more stringent set of principles that are applicable to longitudinal utility installations along interstate highways. While not expressly prohibiting longitudinal utility installations, if states choose to permit them within interstate highways, federal law requires approval of an "accommodation plan" from the Federal Highway Administration to insure the "safe and efficient use of the highways". 23 C.F.R. §645.209(c). Any such plan must, among other requirements, establish a utility strip "along the outer edge of the right-of-way by locating a utility access control line

between the proposed utility installation and the through roadway and ramps.” 23 C.F.R. §645.209(c)(2)(v) (emphasis added).

The New Hampshire Department of Transportation (“NHDOT”) has adopted, and the Federal Highway Administration has approved, the Utility Accommodation Manual, Bureau of Highway Design, New Hampshire Department of Transportation, February 2010 (“UAM”). This document governs the use of New Hampshire highways for utilities. The UAM makes it clear that freeways like I-93 “are dedicated to allow for optimum mobility and safety of through traffic. The basic element in the design and operation of these highways to achieve this end is the limiting of access to the highway.” UAM § XIII.A. In accordance with this objective, NHDOT has adopted strict requirements governing any proposed longitudinal use of freeways like I-93 beyond those applicable to the standards for other highways.

Addressing new underground utility installations along freeways, the UAM states clearly: “Longitudinal installations are not permitted within the LAROW lines parallel to either the through roadway or its ramps.” UAM, § XIII.B.4 (emphasis added). While the Commissioner may grant a design exception from this prohibition, to be eligible for a design exception, an applicant must demonstrate “extreme hardship.” To meet this requirement, the applicant must show, among other things, that “[a]lternate locations are not available or cannot be implemented at reasonable cost,” and that the accommodation requested “will not adversely affect the safety, design, construction, operation, maintenance, or stability of the freeway.” UAM, § XIII.B.6(a) and (c). As shown by the DEIS and by the route along state roads that Northern Pass supports, the Project plainly has other viable alternatives. Specifically, there are public roadway options other than I-93. Moreover, construction along the I-93 corridor would affect operation of the highway for the period of construction. Therefore, Northern Pass cannot plausibly meet the UAM-prescribed standard for a design exception.

Further, in the unlikely event Northern Pass were to obtain a hardship exception, NHDOT policy reflects the federal requirement that longitudinal utilities be placed at the outer limits of the ROW. The UAM states: “In general, utilities are to be located and designed in such a manner that they can be constructed and/or serviced without direct access from the through roadways or connecting ramps.” UAM, § XIII.B.6(e)(1) (emphasis added). The UAM suggests that any accommodation plan should limit access for construction and servicing to frontage roads, where available, nearby public roads and streets, or trails that connect to the outer edge of the LAROW. UAM, § XIII. B.6(e)(2). In short, the UAM prohibits access from the highway itself except in extreme circumstances.

The DEIS does not consider how feasible the approaches to construction prescribed by the UAM would be for underground construction of Northern Pass along I-93. However, having analyzed the issue, it is the strong view of Northern Pass that, along the relevant portion of I-93 through the White Mountain National Forest and Franconia State Park, the UAM-prescribed access options are not available to accommodate the kind of construction activities that would be required for Northern Pass, particularly without considerable disturbance of previously undisturbed areas that the DEIS does not evaluate and that Northern Pass deems wholly unnecessary.

More specifically, based on its visual examination of the relevant area, Northern Pass has concluded that, except for a narrow shoulder, the area between the I-93 roadway and the outer edge of the I-93 ROW is undisturbed. To construct Northern Pass in that area would require extensive tree, vegetation and ledge removal, measures that are largely unnecessary along the state roads Northern Pass has designated in its project design in the area of the WMNF. Wetland areas likewise also appear to be located along the outer edge of the LAROW and would be impacted as well. Finally, the required clearing and terrain alteration would likely permanently alter the experience of travelers along the I-93 corridor without achieving any benefits that could not be achieved using the state roads Northern

Pass has proposed, where the environmental impacts would be temporary and much reduced. For these reasons, Northern Pass believes it is both unrealistic and unwise to pursue the I-93 corridor as an option for underground construction of the proposed transmission line.

Entirely separate barriers to the use of the I-93 corridor by Northern Pass that are of equal or greater significance arise under a 1977 Memorandum of Agreement (“MOA”) that led to a Stipulated Order of Dismissal in Appalachian Mountain Club (“AMC”) v. Adams, Case No. 74-208 (D.N.H.), a case that entailed extended litigation over the construction of I-93 through Franconia Notch. Like those posed by the state and federal regulations governing underground utility construction along I-93, the barriers to construction that are reflected in the MOA do not appear to be accounted for in the DEIS.

The MOA, which was signed by seven state and non-governmental parties, embodied an agreement for the design of I-93 through Franconia Notch State Park. Among other things, the MOA provided that “there will be no additional lanes or major construction within the Park.” MOA at ¶IV.2.2 (emphasis added). Changes as minor as the addition of a median divider, which was proposed to reduce highway fatalities along that stretch of I-93, required amendment of the MOA and judicial approval. AMC v. Adams, supra, Motion to Modify Stipulated Order (April 1, 1993). It is reasonable to anticipate that some of the parties to that MOA who have also been active in this NEPA process would contend that construction of an underground transmission line, even at the outer edge of the I-93 LAROW, is an activity that is not permitted under the MOA.

While Northern Pass is not a highway construction project, the parties who were important to the agreement reflected in the MOA may well contend that the MOA is not limited to highway construction projects, but rather covers all construction within the LAROW. Moreover, it is reasonable to expect that NHDOT would want to limit any amendments to the MOA to changes that support highway safety. Given these considerations and the availability of other roadway burial options for Northern Pass, there would seem to be no justification for testing the limits of the MOA, especially in light of the strong cultural and environmental values associated with Franconia Notch.

Alternatives 6A and 6B – Co-located AC Lines from Franklin to Deerfield

Two of the alternatives addressed in the DEIS, Alternatives 6A and 6B, involve co-locating the existing 115 kV AC line with the new 345 kV AC line from the proposed converter station at Franklin to Deerfield. The DEIS acknowledges that this approach has not undergone technical design, but “it is assumed that the structures supporting the co-located lines would generally resemble the structures in the Proposed Action, and would be of comparable height.” DEIS at 2-29. Northern Pass has likewise not performed a detailed technical analysis of such a design. However, even without such an analysis, it can identify several reliability-related concerns with such a design. More fundamentally, it does not believe that it can be assumed that the structure heights could be as indicated in Figure 2-7.

The structure drawings shown on the top right and bottom of Figure 2-7 do not appear to take into account all electrical clearances necessary for the various conditions that each circuit may encounter. In order to reduce the structure heights for the 345 kV portion of the line, Northern Pass designed the Project to relocate and rebuild the existing 115 kV line and to place the 345 kV line on H-frame structures, which permit a lower height. However, if the 345 and 115 kV lines were co-located on the same structures, at a minimum, the H-frame structures would have to be taller than the one depicted in Figure 2-7 in order to achieve the necessary electrical separation. In addition, easement restrictions applicable to certain portions of the Alternative 3 route would preclude using H-frame structures because electrical clearance requirements could not be satisfied. The taller lattice structures shown on the upper left of Figure 2-7 would likely be sufficient to accommodate the required electrical separations, although that would have to be confirmed. However, if the goal of Alternatives 6A and 6B

is to reduce visibility of the Project, that will not be achievable anywhere the H-frame structures are assumed in the Northern Pass design from Franklin to Deerfield. The potentially reduced visibility of the narrower corridor permitted by co-locating circuits on a single structure will likely be more than offset by the taller structures that would be required to achieve the necessary electrical separation.

Co-locating two sets of AC circuits on a single structure would also affect system electrical reliability in at least two distinct ways. First, putting two circuits on any single structure results in a condition that would have to be studied by ISO-NE under the standards of the Northeast Power Coordinating Council, which is the Regional Reliability Authority. Specifically, ISO-NE would have to evaluate the simultaneous loss of two adjacent transmission circuits on a multiple circuit tower as a single event and determine the impact to the grid associated with such a design. ISO-NE has not studied this design configuration, and thus new, potentially time-consuming studies would have to be performed to determine whether additional electrical infrastructure would be required to accommodate this design.

Additionally, in order to protect the safety of the linemen performing maintenance on the 345 kV line, at a minimum for the lattice structure design shown on the top right of Figure 2-7 and the H-frame structure design shown on the bottom of that figure, it would likely be necessary to de-energize the 115 kV line located below it when service is being performed. Turning off the power to two different lines when only one requires service would obviously decrease the reliability of the resulting service.

**COMMENTS OF NORTHERN PASS TRANSMISSION LLC
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT
WHITE MOUNTAIN NATIONAL FOREST
AND FRANCONIA NOTCH**

In October 2015, Northern Pass Transmission, LLC (“Northern Pass” or the “Project”) advised the U.S. Department of Energy (“DOE”) and the U.S. Forest Service (“Forest Service”) that its now proposed transmission route through the White Mountain National Forest (“WMNF” or “Forest”) is the route that has been designated Alternative 7 in the Supplement to the Draft Environmental Impact Statement (“Supplement”). Northern Pass supports Alternative 7 in lieu of its previously proposed route design, which the Draft Environmental Impact Statement (“DEIS”) designates as Alternative 2. Northern Pass is no longer pursuing Alternative 2. Under Alternative 7, within the WMNF, the transmission line would be located aboveground for less than a mile in an existing transmission line corridor held by Public Service Company of New Hampshire dba Eversource Energy (“PSNH”), near Stark, and underground within the New Hampshire Route 112 and Route 116 corridors for the remainder of the route through the WMNF. The purpose of this Comment is to address those matters in the DEIS and the Supplement that relate specifically to the portion of the Project that is proposed to be located within the Forest.

A. Alternative 7 of the Supplement Should Be the Forest Service’s and DOE’s Preferred Alternative Through the WMNF

1. Alternative 7 Is Consistent with the WMNF Forest Plan

Alternative 7 should be the Forest Service’s preferred alternative for the Project because Alternative 7 is consistent with the WMNF Forest Plan. The same cannot be said of many of the other alternatives, which would require either amendments to the WMNF Forest Plan or revisions to the alternative in order for the Forest Service to adopt the alternative. Specifically, within the WMNF, the route alignment for Alternative 7 is almost entirely underground along an existing right-of-way (“ROW”) containing public highways and has only a small portion located aboveground within an existing ROW held by PSNH in Stark, New Hampshire. Thus, Alternative 7 is consistent with the requirements of the WMNF Forest Plan’s Management Standards (“Management Standards”), including those regarding recreation,¹ because: (i) activities and uses within the existing PSNH ROW are subject only to the deed restrictions that pre-date the WMNF; and (ii) Management Standard S-3, which relates to traversing the Appalachian Trail (“AT”), does not apply to an *underground* utility line in an existing roadway that does not impair or implicate the aesthetic and recreational experience of the AT.

¹ See Recreation General Standard S-2 and Management Standard S-3 (specific to traversing the AT, including those under Management Area 8.3 (“MA 8.3”). Compare Supplement at 11; DEIS Appendix F at F-27–30.

i. Management Standards Do Not Apply in the Area of the Existing PSNH ROW

Northern Pass agrees with the conclusion in the DEIS that Management Standards do not apply to the portion of the Project that would be located in the area of the existing, private PSNH ROW – i.e., the portion of the proposed transmission line near Stark. The Forest Service purchased the WMNF pursuant to its Weeks Act authority, and under the Weeks Act, the Forest Service cannot regulate activities within the scope of an outstanding right. An outstanding right is a right that existed prior to the time of the Forest Service’s acquisition of the relevant lands. *See Minard Run Oil Co. v. United States Forest Service*, 670 F.3d 236, 251 (3d Cir. 2011); *see also* Forest Service Manual 2734.2 (“[t]he holder of outstanding rights perfected on acquired land prior to Forest Service acquisition . . . may exercise those rights without obtaining a special use authorization, unless the document creating the rights provides for an additional authorization”).

Because the PSNH ROW, a private interest held by PSNH, pre-dates the United States’ acquisition of the WMNF under the Weeks Act and the creation of the WMNF Forest Plan, all activities and uses occurring within the ROW are governed by the existing deed or other governing document. *See* DEIS at 3-115; *see also* DEIS at F-27 (stating that portions of the existing PSNH transmission route are managed consistent with deed transfer language, not with Management Standards). Northern Pass agrees with the Forest Service that, when an “existing line was constructed on private land that subsequently was purchased by the Federal government to become part of the [National Forest Service] . . . the line is an easement (property right) that remains in effect,” and the “standards and guidelines in the Forest Plan would not apply.” DEIS at F-1.

ii. As the DEIS Acknowledges, Management Standard S-3 Related to the AT Does Not Apply to An Underground Utility

In developing the WMNF Forest Plan Management Standards, the Forest Service crafted Management Standards applicable to the AT (e.g., MA 8.3) with the purpose of maintaining the recreational experience and visual character of the setting.² Specifically, the Forest Service’s purpose in developing the specific Management Standards applicable to the AT was to “[p]rovide for the conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the land through which the trail passes; [p]rovide opportunities for high quality outdoor recreation experiences, including a sense of remoteness and solitude; and [r]ecognize and strengthen the level of partnership, cooperation and volunteer efforts integral to AT management.”³

² WMNF Forest Plan at 3-45; *see also* MA 8.3, Management Standard S-1, S-2, S-3.

³ *See* WMNF Forest Plan at 3-45.

To effectuate this purpose, the Forest Service manages the AT to maintain the desired condition of the lands by assessing the appropriate “development levels and levels of use” on a case-by-case basis. *See id.* (“Development levels and levels of use will vary by location, but the management area will emphasize a remote backcountry recreation experience in a predominantly natural or natural-appearing landscape.”). With respect to utility development, the WMNF Forest Plan states that “new utility lines or rights-of-way are prohibited [in WMNF MA 8.3] unless they represent the only feasible and prudent alternative to meet an overriding public need.”⁴ Importantly, however, as the Forest Service itself noted in the DEIS, the Forest Service’s intended purpose behind Management Standard S-3 “is to maintain the recreational experience and visual character of the *setting and therefore it only relates to aboveground utility lines and clearing of rights-of-way.*” DEIS at F-28 (emphasis added); *see* WMNF Forest Plan, at 3-46 (“Recreation impacts will be managed to protect cultural and natural resources and to minimize visual disturbance.”). By ensuring “burial on the WMNF,” and by ensuring that any “aboveground portions would be in areas authorized under an existing easement that gives the easement holder the right to construct new utility lines,” Alternative 7 will not permanently alter or disturb the landscape, and thus Management Standard S-3 does not apply. DEIS at F-28.

Importantly, the underground utility line will be located in an existing ROW, not a new one. Following construction, the underground utility line will not be visible, and the appearance of the existing roadway corridor will be restored to pre-construction conditions. Thus, any construction impacts will be of limited duration and occur in an existing roadway with existing traffic and its related impacts to the recreational and aesthetic benefits of the AT. For these reasons, as noted in the DEIS, Management Standard S-3 does not apply to Alternative 7. DEIS at F-30.

⁴ WMNF Forest Plan, at 3-48 (Management Standard S-3). As Northern Pass has previously explained, even if Management Standard S-3 applied, the Project would satisfy the Standard because an overriding public need exists to provide clean, reliable, and low-carbon energy to New England. Alternative 7 will provide 1,090 megawatts (“MW”) of clean, low-carbon, base-load power to New England. The 1,090 MW of power the Project will be able to deliver is approximately 98 percent hydropower. Thus, the Project will reduce New England’s GHG emissions by reducing the region’s reliance on fossil fuel-fired power. DEIS at S-4. Additionally, Alternative 7 will provide reliably sourced, diversified baseload power to the New England electric grid,⁴ reducing congestion, mitigating overloads, and diversifying power resources. *High Sierra Hikers Assn. v. Weingardt*, 521 F. Supp. 2d 1065, 1079 (N.D. Cal. 2007); *Northern Pass Transmission LLC*, 134 FERC ¶ 61,095 at P26, Dkt. No. ER11-2377-000 (2011). *See also First Iowa Hydro-Electric Cooperative v. FPC*, 328 U.S. 152, 171–74, 180 (1946) (holding that there was an overriding public interest in implementing the Federal Power Act, and the federal interests identified in the Act included reduced energy costs); 33 C.F.R. § 320.4(j)(2) (identifying “national energy needs” as a significant issue of overriding national importance for the U.S. Army Corps of Engineers).

B. Alternative 7 Has the Same or Lower Potential Impacts in the WMNF As Many of the Other Alternatives

As noted above (and discussed in further detail below), among the reasonable alternatives,⁵ Alternative 7 is the most environmentally protective.

Visual impact reductions. In its separately submitted Comment on the Visual Impact Analysis contained in the DEIS, Northern Pass has outlined the many ways in which the DEIS and the Supplement overstate the visual impact of the Project. This is particularly true with respect to Alternative 7 as it affects the WMNF given that Alternative 7 entails placing virtually the entire portion of the line that passes through the WMNF underground. This all but eliminates any meaningful visual impact in the Forest. As the DEIS and Supplement recognize, Alternative 7 is “consistent with all [Scenery Integrity Objectives] because it would be buried within the WMNF,” significantly decreasing the Project’s impact in the WMNF and near the AT. See DEIS at 4-370; see also Supplement, Table 2, at 5.

Land Use Impacts. Impacts on land use under Alternative 7 would be “similar to or less than” the impacts of the other Alternatives. Supplement at 11. Northern Pass agrees with the DEIS that, in the WMNF, there would be no long-term impacts on land use because Alternative 7 “would traverse the WMNF within roadway corridors” and “these areas would be restored to their pre-construction condition and would continue their existing use as roadway corridors.” DEIS at 4-402 (discussing the same route under Alternative 4b through the WMNF); see also Supplement at 11. Alternative 7 also eliminates the need to construct a helicopter landing pad in the WMNF to facilitate construction and maintenance of the Project.⁶ The projected number of acres subject to land use conversion under Alternative 7 is identical to that projected under five (5) of the other Alternatives. Supplement, Table 9. Further, Alternative 7 is consistent with the Management Standards for the WMNF. Supplement, Table 9, at 11. Northern Pass likewise agrees with the conclusion of the DEIS that Alternative 7 would have no impacts on conservation lands or protected rivers. DEIS at 4-402 (discussing the same route under Alternative 4b through the WMNF).

Recreation impact reductions. Recreational impacts under Alternative 7 would be “similar to or less than” the impacts of the other Alternatives. Supplement at 7. Alternative 7 includes a greater length of underground cable, resulting in a reduced above-ground effect on recreational sites and activities. Overall, other proposed Alternatives – including Alternatives 3, 5a, 5b and 5c – would have significantly greater impacts across-the-board, including increased potential for short-term construction impacts and long-term visual impacts from an increased number of above-ground structures. Supplement, Tables 5 and 6, at 8. Again, because the

⁵ As Northern Pass has explained on numerous occasions, an all-underground option is not financially feasible.

⁶ Compare, e.g., DEIS at 2-14, 4-2, 4-91, 4-219, 4-226.

Project will be underground in public roadways through the WMNF, there will be no meaningful impact on recreation, other than a potential short-term impact during construction.

AT impact reductions. Alternative 7's impact on the AT would be "similar to or less than" the impacts of the other Alternatives. Supplement at 7. Alternative 7's minimally invasive underground cable would only impact small portions of the AT, and even those areas of limited disturbance would be appropriately co-located within already-impacted areas. *See* DEIS at 4-383, F-29 (requiring new utility lines to be "co-located" with areas already impacted by roads and utility lines). The construction impacts on the AT from Alternative 7 would be short-term and identical to the impacts of all other Alternatives. Supplement, Table 5, at 8.

Other environmental considerations/reduced impacts. Other environmental impacts under Alternative 7 are likewise similar to or less than those under several of the other Alternatives. For example, Alternative 7's increased use of underground cables reduces impacts on wildlife and vegetation when compared to other alternatives. Supplement at 16–17. Additionally, out of all the alternatives, Alternative 7's underground lines provide the least amount of impairment to river crossings and vernal pools. Supplement, Table 19, at 21. Further, the underground cable would produce no corona noise. Supplement at 12. Importantly, Alternative 7 also provides CO₂ reductions related to operations that identical to all but two of the other action Alternatives (both of which are overhead alternatives and would cause more impacts to recreation, visual aesthetics, and the AT than Alternative 7), while simultaneously imposing significantly less construction emissions of NO_x, CO, and CO₂ than other alternatives. Supplement, Table 14, at 15. Overall, the underground portions of Alternative 7 "would impose the fewest environmental impacts due to the lack of visual impacts and use of previously-disturbed roadways." Supplement at 23.

In short, Northern Pass agrees with and supports the conclusion in the Supplement that "[t]he portions of Alternative 7 that would be constructed underground along existing roadways [within the WMNF] would impose the fewest environmental impacts due to the lack of visual impacts and use of previously-disturbed roadway corridors." Supplement at 23.

C. Alternatives Involving Construction Along I-93 Should Not Be Selected

Certain stakeholders have argued that, if the Project is approved, DOE and the Forest Service should select Alternative 4a, 5a, or 6a, each of which places the transmission line underground along existing route I-93 through the Franconia Notch (the "Franconia Notch Parkway"). This routing is not feasible, would impose higher impacts, and should not be selected.

As Northern Pass explained in detail in a previously submitted Comment, the Franconia Notch Parkway alternatives suffer from multiple significant flaws:

- The Franconia Notch Parkway is governed by a 1977 Consent Decree that expressly prohibits “additional major construction” through the Parkway, without approval of the many signatories to the Consent Decree.⁷ Northern Pass is confident that such approval could not be obtained for underground placement of transmission. Thus, selection of this alternative would result in an inability to construct the Project.
- Construction along the Franconia Notch Parkway would have significant impacts on roadside vegetation, scenic pull offs, parking areas, traffic, wetlands, scenic qualities and overall aesthetics of the Notch, which is a profoundly sensitive cultural and environmental area. Northern Pass does not support imposing such impacts. And, even if directional drilling were employed, as some have proposed, it is estimated that 20 to 30 jacking and receiving stations along the Franconia Notch Parkway would be required to accommodate the construction. Construction of these stations alone would have major impacts on the Franconia Notch area.
- The New Hampshire Department of Transportation (“NHDOT”) prohibits construction of utilities within I-93 absent a showing of “extreme hardship,” which includes demonstrating that no other alternatives exist. Alternative 7 plainly establishes that there is an alternative to I-93.
- NHDOT standards would require installation of any transmission line to occur outside the roadway near the edge of the right of way, causing additional environmental impacts. The impact on wetlands, trees, vegetation and scenic aesthetics from construction of any transmission line would be unacceptably large, requiring permanent road access sufficient for necessary maintenance.

For all these reasons, alternatives involving the use of I-93 are substantially inferior to the proposed action, Alternative 7.

⁷ Previously, even the placement of guard rails essential to public safety was deemed “additional major construction,” the approval of which was difficult to obtain.