# **Northern Pass EIS Website Comment Receipt**

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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"):

"t 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."

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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 slice, the area would be backfilled and no longer present. The splice pads 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."

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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]Iternate 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 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.