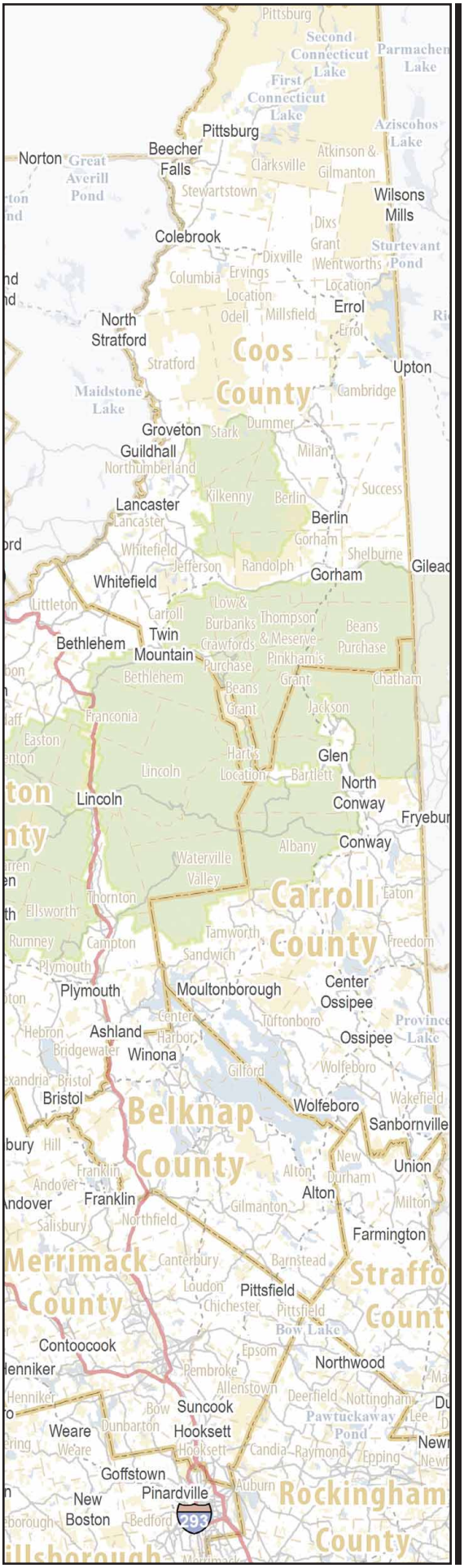


DOE/EIS-0463

FINAL

NORTHERN PASS TRANSMISSION LINE PROJECT ENVIRONMENTAL IMPACT STATEMENT

VOLUME 3: APPENDIX L

U.S. DEPARTMENT OF ENERGY
OFFICE OF ELECTRICITY DELIVERY
AND ENERGY RELIABILITY
WASHINGTON, DC

AUGUST 2017

Department of Energy
Washington, DC 20585
August 2017

Dear Sir/Madam:

Enclosed is the final *Northern Pass Transmission Line Project Environmental Impact Statement* (DOE/EIS-0463) prepared by the Department of Energy (DOE) pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations.

The United States Forest Service (USFS) – White Mountain National Forest, United States Environmental Protection Agency (EPA) – Region 1, United States Army Corps of Engineers (USACE) – New England District, and the New Hampshire Office of Energy and Planning (NHOEP) are cooperating agencies in the preparation of the EIS.

The proposed DOE action in the final EIS is to issue a Presidential permit to the Applicant, Northern Pass LLC, to construct, operate, maintain, and connect a new electric transmission line across the U.S./Canada border in northern New Hampshire (NH).

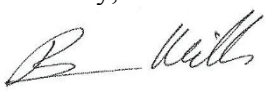
DOE has prepared this final EIS to evaluate the potential environmental impacts in the United States of the proposed action and the range of reasonable alternatives, including the No Action alternative. Under the No Action alternative, the Presidential permit would not be granted, and the proposed transmission line would not cross the U.S./Canada border.

In addition to its Presidential permit application to DOE, Northern Pass LLC applied to the USFS for a special use permit that would authorize Northern Pass LCC to construct, own, operate and maintain an electric transmission line to cross portions of the White Mountain National Forest under its jurisdiction. The final EIS will be used by the Forest Supervisor of the White Mountain National Forest to inform the Record of Decision in regard to this requested use.

DOE will use the EIS to ensure that it has the information it needs for informed decision-making.

The final EIS will also be posted on the project EIS website, http://www.northernpasseis.us/ and DOE's NEPA website at https://energy.gov/nepa/listings/environmental-impact-statements-eis.

Sincerely,



Brian Mills
Transmission Permitting and Technical Assistance,
Office of Electricity Delivery and Energy Reliability
U.S. Department of Energy

FINAL

NORTHERN PASS TRANSMISSION LINE PROJECT
ENVIRONMENTAL IMPACT STATEMENT
DOE/EIS-0463

Volume 3: Appendix L. Comment Response Document

U.S. DEPARTMENT OF ENERGY
OFFICE OF ELECTRICITY DELIVERY
AND ENERGY RELIABILITY

COOPERATING AGENCIES

United States Forest Service – White Mountain National Forest
United States Environmental Protection Agency– Region 1
United States Army Corps of Engineers – New England District
New Hampshire Office of Energy and Planning

August 2017

COVER SHEET

RESPONSIBLE FEDERAL AGENCY: U.S. Department of Energy (DOE), Office of Electricity Delivery and Energy Reliability

COOPERATING AGENCIES: United States Forest Service (USFS) – White Mountain National Forest (WMNF); United States Environmental Protection Agency (EPA) – Region 1; United States Army Corps of Engineers (USACE) – New England District; and New Hampshire Office of Energy and Planning (NHOEP)

TITLE: Northern Pass Transmission Line Project Environmental Impact Statement (DOE/EIS-0463)

LOCATION: Coös, Grafton, Belknap, Merrimack, and Rockingham counties in New Hampshire

CONTACTS: For additional information on this Environmental Impact Statement (EIS) contact:

Mr. Brian Mills, National Environmental Policy Act (NEPA) Document Manager
Office of Electricity Delivery and Energy Reliability, OE-20
U.S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585
Telephone: (202) 586-8267
Brian.Mills@hq.doe.gov

For general information on the DOE NEPA process, please write or call:

Mr. Brian Costner, Acting Director
Office of NEPA Policy and Compliance, GC-54
U.S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585
askNEPA@hq.doe.gov
Telephone: (202) 586-4600 or leave a message at (800) 472-2756

ABSTRACT: Northern Pass Transmission, LLC (Northern Pass) has applied to the DOE for a Presidential permit to construct, operate, maintain, and connect a 192-mile (309-km) electric transmission line across the United States (U.S.)/Canada border in northern New Hampshire (NH). This final EIS addresses the potential environmental impacts of the Project (Proposed Action), the No Action Alternative, and ten additional action alternatives (Alternatives 2 through 6, with variations). The NH portion of the Project would be a single circuit ±320 kilovolt (kV) high voltage direct current (HVDC) transmission line running approximately 158 miles (254 km) from the U.S. border crossing with Canada in Pittsburg, NH, to a new direct current-to-alternating current (DC-to-AC) converter station to be constructed in Franklin, NH. From Franklin, NH, to the Project terminus at the Public Service of New Hampshire's existing Deerfield Substation located in Deerfield, NH, the Project would consist of 34 miles (55 km) of 345 kV AC electric transmission line. The total length of the Project would be approximately 192 miles (309 km).

PUBLIC COMMENTS: In preparing this final EIS, DOE considered comments received during the scoping period, which extended from February 11, 2011 to June 14, 2011, and was reopened from June 15, 2011 to November 5, 2013 (DOE accepted and considered all comments during the scoping period from February 11, 2011 to November 5, 2013), and the public comment period on the draft EIS (July 31, 2015 through April 4, 2016). Comments on the draft EIS were accepted during the 45-day period

following publication of EPA's Notice of Availability (NOA) in the *Federal Register* on July 31, 2015; the public comment period was extended until April 4, 2016 following publication of EPA's NOA of the supplement in the *Federal Register* on November 20, 2015. DOE held four public meetings on the draft EIS in Colebrook, NH on March 7, 2016; Waterville Valley, NH on March 9, 2016; Concord, NH on March 10, 2016; and Whitefield, NH on March 11, 2016. All comments were considered during preparation of this final EIS. Appendix L in Volume 3 of this EIS contains the comments received on the draft EIS and DOE's responses to these comments. This final EIS contains revisions and new information based in part on comments received on the draft EIS. Vertical bars in the margins marking changed text indicate the locations of these revisions and new information. Deletions are not indicated. Appendices J and K in Volume 2 and Appendix L in Volume 3 are entirely new parts of this EIS; therefore, they do not contain bars indicating changes from the draft EIS.

The EIS analyzes the potential environmental impacts of DOE issuing a Presidential permit for the proposed Northern Pass Project, which is DOE's proposed federal action. DOE will use the EIS to inform its decision on whether to issue a Presidential permit. Additionally, Northern Pass has applied to the USFS for a special use permit (SUP) authorizing Northern Pass to construct, operate, and maintain an electric power transmission line crossing portions of the WMNF. The WMNF Forest Supervisor will use the EIS to inform its decision regarding: 1) whether to issue a SUP under the Federal Land Policy and Management Act; 2) the selection of an alternative; 3) any need to amend the Forest Plan; and 4) what specific terms and conditions should apply if a SUP is issued.

Copies of the final EIS are available for public review at 30 local libraries and town halls, or a copy can be requested from Mr. Brian Mills. The EIS is also available on the Northern Pass EIS website (http://www.northernpasseis.us/). DOE will announce its decision on the Proposed Action in a Record of Decision (ROD) in the *Federal Register* no sooner than 30 days after the EPA publishes the NOA of the final EIS. The USFS will announce its draft decision on the Proposed Action in a draft ROD in the *Federal Register* shortly after the EPA publishes the NOA of the final EIS.

APPENDIX L
COMMENT RESPONSE DOCUMENT

Attachment C.
Response to All Comments on the Draft EIS

Alan Robert Baker
Attorney at Law
481 Meriden Hill Rd.
North Stratford NH 03590
Tel. 603-922-5571
Cell: 860-836-6094

Email: abobbaker@aol.com

MARCH 7, 2016 STATEMENT OF ALAN ROBERT BAKER BEFORE JOINT MEETING OF THE U.S. DEPARTMENT OF ENERGY AND THE NEW HAMPSHIRE SITE EVALUATION COMMITTEE RE NORTHERN PASS TRANSMISSION LLC

Good evening. My name is Bob Baker and I am an almost retired lawyer living in Columbia, New Hampshire. I moved here some years ago because of the majestic environment of the Great North Woods. The beauty and serenity of this area is enchanting; but it would not be the same if the Northern Pass project is permitted and built as currently designed.

I say that I am almost retired because I still have a few active cases involving the Northern Pass project. I will be representing some intervenors before the Site Evaluation Committee. They have their own story to tell and cases to resolve, but I will leave those matters for future proceedings before these tribunals and, if necessary, the courts.

I speak tonight for my own part, as a resident of Coos County. I find this project to be an ugly, unnecessary commercial intrusion into the region that will damage, if not destroy the most significant asset that we all possess: Our hearts and souls which are bound to this beautiful place. The very ethos of the people is at stake. If this project is built with its above ground structures and transmission lines and strings of insulators hanging over our land, we will never be the same. We will never feel the same way about ourselves and who we are.

I beg you, stop this madness. It has been going on far too long and it is not wanted by any of our Coos County communities where it is planned to be constructed. Don't the voices of the people count for something? Do they matter at all?

But it is not just impacting our New Hampshire towns like Pittsburg, Stewartstown, Clarksville, Dummer, Stark and Northumberland. It is also impacting another important town in our region. That town is Canaan Vermont. The towers that Northern Pass plans to erect on concrete foundations and towers across the southern part of Pittsburg will be built over Halls Stream from Canada and then climb high above the Connecticut River on structures that will be visible from all of the Beecher Falls section of Canaan as well as many other viewpoints in Canaan. In order to build those towers, Northern Pass will literally cut a clear cuts swath 120 feet wide across Pittsburg and build a road on what is now forested mountain sides just 200 yards north of the Canaan, Vermont border.

I have some questions for the DOE: Why hasn't Canaan and the State of Vermont been involved in the Section 106 process? Why hasn't the Vermont Division for Historic Preservation been contacted? Why hasn't Northern Pass filled out the required applications in Vermont for the Section 106 process to be conducted there? Portions of the Town of Canaan are well within the defined Area of Potential Effect of the project but nothing is shown on the Section 106 maps

0001-1
Thank you for your comment. The Visual Impact Assessment Technical Report and final EIS have been updated to include an analysis of impacts in the area around Canaan, Vermont including the Connecticut River and its tributary, Halls Stream, in Pittsburg, NH (see Section 4.2.1 of the EIS). Comparable data to that used in the landscape assessment in New Hampshire is not available in Vermont, but impacts are analyzed through visibility and visual magnitude. Additionally, photographs were captured in this area of Vermont to help inform the understanding of the landscape and potential visibility. Potential visibility from the Connecticut River is considered in the landscape assessment.

0001-2
Thank you for your comment. Although NPT has not proposed any construction within the state of Vermont, the proposed U.S. international border crossing in Pittsburg, NH that is being currently being considered by DOE is in close proximity to the New Hampshire-Vermont border in the vicinity of Beecher Falls, NH. As a result, a portion of the indirect area of potential effects ("APE") [36 C.F.R. Section 800.16(d)] for the proposed Northern Pass Project that has been defined for the project (see EIS Section 3.1.8.2) extends into the Town of Canaan in Essex County, VT. The portion of the indirect APE for potential visual effects to historic resources in Vermont is approximately 1.25 square miles. DOE initiated its Section 106 consultation with the Vermont Division of Historic Properties (VT DHP) on June 22, 2016, and the VT DHP agreed to consult with DOE on the proposed Northern Pass Project in its role as the VT state historic preservation officer (SHPO) and in accordance with Section 106. VT DHP has provided input to DOE's on-going Section 106 consultation process, for example on June 29, 2016 in person and on September 9, 2016 through concurrence with DOE's proposed scope of work for identification efforts in Vermont, and also including the development of the Section 106 programmatic agreement for the proposed Northern Pass project, to ensure that DOE's Section 106 process appropriately addresses historic properties that are located within the 1.25 square miles of the indirect APE that extends into the state of Vermont near the town of Canaan. Section 3.1.8.2 of the EIS has been updated to incorporate the area of the indirect APE in VT. Section 1.4.7 in the Cultural Resources Technical Report has been added to reflect the state Division of Historical Resources' scope of work for addressing cultural landscapes in the vicinity of Canaan, VT. Additionally, Appendix B in the Technical Report has been revised to include stipulations in the programmatic agreement that address the additional investigations to identify historic

properties, assess potential adverse effects, and avoid, minimize, or mitigate those effects.

for anything in the State of Vermont that is well within the APE. It has been left blank. The same is true of the Draft EIS. There is nothing in the EIS that I can find showing the environmental impact of this project on Vermont. This needs to be corrected.

The same questions apply to the New Hampshire Site Evaluation Committee. This project, if built, will be building roads and pouring concrete foundations 200 yards north of the Vermont border and will be damaging wetlands and affecting streams and river drainage areas that run into the State of Vermont. Aren't there permits that the Applicants will need from the Vermont Department of Environmental Conservation in order to do this work? What evidence does the SEC have that the Applicants have even applied in Vermont for these permits? Without these applications having been filed and processed in Vermont, isn't the Application before the New Hampshire SEC incomplete?

Also, aren't the Applicants likely to need to use the roads in Beecher Falls, Vermont? You can't get to the border crossing area and Halls Stream Road in Pittsburg without using Vermont roads. Does the Vermont Department of Transportation need to permit the use of those roads for this project? Have there been any applications made for road use? How can the Application before the SEC be deemed complete without these permits?

Finally, what kind of neighbors are we? Canaan is as much a part of our region as any of our northern New Hampshire towns. What efforts have been made by the Applicants to let the Town of Canaan know what it is facing and what it will be enduring and looking at if this project is permitted? What information sessions and meetings have been held in Vermont? I believe you will find that the answer is none.

I look forward to having the Applicants answer these questions and to your agencies withholding further action until all necessary steps and pre-conditions have been implemented. Thank you for your anticipated cooperation.

0001-2
Continued

My name is Gail Matson. I'm the Ward 8 City Councilor. Also the chair for the subcommittee for Northern Pass here. Our subcommittee gathered information from Eversource and other stakeholders to determine the impact of the proposed project in Concord. The report submitted to Council, they voted unanimously to file a Petition to Intervene and recommend burial of the lines in our city. We request for burial of the lines is based upon the project's current proposed aerial path and subsequent impacts to character, property values and as well as visual and audio impacts due to the close proximity to residences. Concord has spent nearly two million to bury utility lines in the downtown area of Concord and is considering burial of the lines on South Main Street. Currently, our city regulations require that new subdivisions bury title lines. The proposed route of the Northern Pass passes through 31 communities using the two 2010 census, slightly more than 117,000 people live in those communities. Concord's population is 42,695 which is slightly more than 36 percent of the entire affected population. There are 8.1 miles of overhead lines proposed for Concord; approximately, 6 percent of the total overhead route, and per the Northern Pass, the most common height of the existing structures in the right-of-way in Concord are 43 feet. The height of structures being relocated for the project will increase from 43 to 88 feet. The October 14th Northern Pass project map indicates that there are 120 structures over 90 feet in Concord. Sixty of those 120 will be between 100 and 125 feet. For perspective, the Capitol dome is 150 feet. Northern Pass claims the average scenic impact is 1.79 on a scale of 0 to 5 which is low to very low. However, for the southern section which includes Concord, the impact rises from 1.92 to 2.92 with additional 6 square miles of the viewshed rating high or very high. The view from roads will increase from low to moderate to moderate to high. In the DOE draft Environmental Impact Statement in July 2015, sites two areas in Concord with strong aesthetic visual impacts. Loudon Road increases from moderate to severe. And Turtle Town Pond increases from moderate to strong. Clearly, the visual impact to Concord will be significant. In our subcommittee meetings, Brian Bosse of Eversource has told us that the cost of aerial installation was approximately three million per mile and the cost of underground installation was between 8 to 13 million per mile which is quite a range. The subcommittee councilors asked on varying occasions for cost estimate breakdowns due to a variety of soil conditions and this information was never provided. Citizens of Concord have been clear and consistent in their position on the Northern Pass. Aerial installation will have lasting negative effects on individuals and the city as a whole with respect to quality of life and economic development. Therefore, we request burial of lines throughout the city of Concord. Thank you.

0002-1

0002-1
Thank you for your comment. Visual impacts in Concord are discussed in the EIS (Section 4.4.1). Potential visual impacts in urban areas were overstated in the draft EIS. Because the Concord area is urban, there was no estimation of screening from land cover which leads to an overstatement of visibility in the developed areas of Concord. The analysis has been updated for the final EIS to include additional data reflecting the height of land cover in Concord which better represents the visibility of the Project.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Nov 23, 2015

ID: 8539

Date Entered: Nov 23, 2015

Source: Website

Topics: Viewshed/Scenery, Private Property/Land Use, Taxes

Name: Carl Martland

Organization:

Email: martlan@mit.edu

Mailing Address: 16 Post Road

City: Sugar Hill

State: NH

Zip: 03586

Country: US

Comment: Comments on Methodology Used in the draft EIS to Assess the Effect of the Proposed Northern Pass Project on Property Values in New Hampshire

The overall conclusion supported by the attached paper is that property values would decline, not by less than $10 million, but by more than $100 million as a result of implementing the proposed Northern Pass route that was examined as Alternative 2 in the draft EIS. The analysis of property values in the draft EIS is both deeply flawed and largely inappropriate for the rural areas that will be affected by the proposed transmission lines.

Using this methodology, the Department of Energy (DOE) estimated that implementation of the proposed transmission lines “could result in a reduction in taxable assessed residential property values of approximately $9.6 million,” (p. 4-13). This number, which amounts to less than $500 per acre , is greatly underestimated.

Given the many comments expressed by people trying to sell property, realtors, and developers at community meetings, Northern Pass open houses, and DOE hearings, it is clear that many people believe their potential losses to be far greater. One developer, Tom Mullen, has stated at various hearings related to Northern Pass that he alone has already lost more than $9 million because the proposed project caused his Owl Nest development in Campton to go bankrupt. Many others have

0003-1

0003-1
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

tried unsuccessfully for years to sell their properties, because there would be direct views of the towers.

The next section of the paper examines the DOE methodology to determine why its estimates of declines in property values are so much lower than what the public perceives. The paper focusses on two key assumptions used in the draft EIS:

1. The potentially affected area extends only 500 feet from the center line of the transmission lines.
2. The average decline in value will only be 3.5%.

Both assumption are too low. A proper interpretation of the literature indicates that the potentially affected area could be well over 1000 feet in rural areas and that the average decline in housing values could be 10 to 15%, not merely 3.5%.

The third section of the paper summarizes the results of the Key Observation Point (KOP) analysis that was conducted as part of the draft EIS. By simulating the visual appearance of the proposed transportation towers from 15 vantage points, the KOP analysis confirmed that visual impacts would likely be “severe” for distances less than 800 feet and “strong for distances up to 1800 feet, thereby supporting an extension of the potentially affected area to well over 1000 feet. These KOP results should be considered when determining which properties would potentially be affected by the proposed power lines.

The fourth section of the paper takes a close look at the effect of the existing transmission lines on property values in Sugar Hill. Properties on or close to the existing right-of-way are valued less than other properties in the town, and residential development close to the existing transmission lines has proceeded only where views of the lines have been obscured by the re-growth of forests in the fields that were originally crossed by the power lines. Nearly 40% of the lots in Sugar Hill that are available for residential development would suffer adverse visual impacts from the construction of the originally proposed Northern Pass.

0003-2

0003-3

0003-4

0003-2
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

0003-3
Thank you for your comment. Section 4.1.2 of the EIS addresses the potential for impact to property values as a function of proximity of the Project to private property. Adjustments to the original analysis presented in the draft EIS have been updated in the final EIS to reflect comments on the methodology and assumptions.

0003-4
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS. Impacts to property values in the Central Section, where Sugar Hill is located, are discussed in Section 4.3.2 of the EIS.

Comments on Methodology Used in the draft EIS to Assess the Effect of the Proposed Northern Pass Project on Property Values in New Hampshire

Carl D. Martland

September 20, 2015

1. Overview

The overall conclusion supported by this paper is that property values would decline, not by less than $10 million, but by more than $100 million as a result of implementing the proposed Northern Pass route that was examined as Alternative 2 in the draft EIS. The analysis of property values in the draft EIS is both deeply flawed and largely inappropriate for the rural areas that will be affected by the proposed transmission lines.

Using this methodology, the Department of Energy (DOE) estimated that implementation of the proposed transmission lines "could result in a reduction in taxable assessed residential property values of approximately $9.6 million," (p. 4-13). This number, which amounts to less than $500 per acre[1], is greatly underestimated.

Given the many comments expressed by people trying to sell property, realtors, and developers at community meetings, Northern Pass open houses, and DOE hearings, it is clear that many people believe their potential losses to be far greater. One developer, Tom Mullen, has stated at various hearings related to Northern Pass that he alone has already lost more than $9 million because the proposed project caused his Owl Nest development in Campton to go bankrupt. Many others have tried unsuccessfully for years to sell their properties, because there would be direct views of the towers.

The next section of this paper examines the DOE methodology to determine why its estimates of declines in property values are so much lower than what the public perceives. The paper focusses on two key assumptions used in the draft EIS:

1. The potentially affected area extends only 500 feet from the center line of the transmission lines.
2. The average decline in value will only be 3.5%.

Both assumption are too low. A proper interpretation of the literature indicates that the potentially affected area could be well over 1000 feet in rural areas and that the average decline in housing values could be 10 to 15%, not merely 3.5%.

The third section of this paper summarizes the results of the Key Observation Point (KOP) analysis that was conducted as part of the draft EIS. By simulating the visual appearance of the proposed transportation towers from 15 vantage points, the KOP analysis confirmed that visual impacts would likely be "severe" for distances less than 800 feet and "strong for distances up to 1800 feet, thereby supporting an extension

[1] The proposed project included 179 miles of overhead lines. The area within 500' of the center line of the project would be approximately 33.9 square miles (179 miles x 1000 ft. / 5280 ft/mile) or 21.7 thousand acres. Thus, DOE estimates that the average impact on property values would be less than $500 per acre ($9.6 million/21,700 acres = $442/acre).

of the potentially affected area to well over 1000 feet. These KOP results should be considered when determining which properties would potentially be affected by the proposed power lines.

The fourth section of the paper takes a close look at the effect of the existing transmission lines on property values in Sugar Hill. Properties on or close to the existing right-of-way are valued less than other properties in the town, and residential development close to the existing transmission lines has proceeded only where views of the lines have been obscured by the re-growth of forests in the fields that were originally crossed by the power lines. Nearly 40% of the lots in Sugar Hill that are available for residential development would suffer adverse visual impacts from the construction of the originally proposed Northern Pass.

2. The Draft EIS Misinterprets the Literature

The draft EIS used the following methodology to estimate the impact of the proposed transmission lines on property values (p. 4-12):

1. Calculate the area of land (square miles) in each town within 500 feet of the center line of the transmission lines.
2. Estimate the average value of residential property per square mile for each town.
3. Multiply the area of land by the average value to estimate the value of properties potentially impacted by the project.
4. Escalate the total value of land to 2019 to estimate the value of these properties if the project were not built.
5. Based upon prior studies, estimate the impact of constructing towers as 3.5% of the 2019 values calculated in step 4.

This section examines the logic used in the draft EIS to quantify the two critical parameters in their property value analysis:

- Their estimate of only a 3.5% decline in property values.
- Their estimate that property value impacts would be negligible beyond 500 feet.

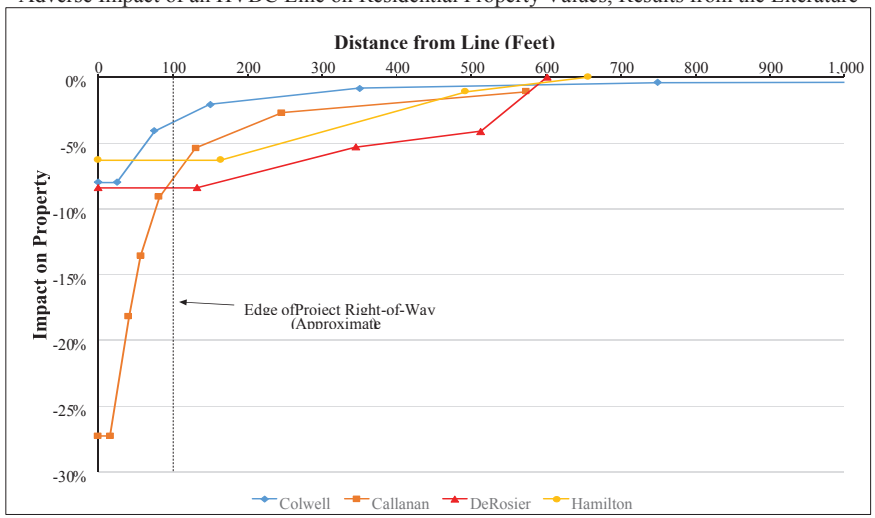
These two critical assumptions were based upon a literature review, not upon analysis of any properties that would be affected by the project. In fact, these two assumptions were based upon selected results from just four studies. These studies were selected because they used multiple regressions that included distance from the line as well as the usual housing characteristics that might be used by an appraisers. The results from the four studies were combined into Chart 4-1 in the draft EIS, which is reproduced here as Figure 1.

0003-5

0003-5
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

0003-5
Continued

Figure 1: the basis for the estimated decline in property values in the draft EIS
Adverse Impact of an HVDC Line on Residential Property Values, Results from the Literature



Sources: Callanan and Hargreaves (1995), Des Rosiers (2002), Hamilton and Schwann (1995), and Colwell (1990)

The chart shows declines in property values as a function of distance from the line. This chart does appear to support the two key assumptions, as the impact on property values does seem to average about 3.5% for properties located between 100 and 500 feet from the centerline of the transmission lines, and there is little or no impact beyond 500 feet. However, examination of the cited studies reveals that this chart is seriously flawed.

Colwell, Peter F., "*Power lines and Land Value*," **Journal of Real Estate Research**, Spring 1990, pp. 117-127

This study examines the effects of proximity to power lines on the sale prices of two sub-divisions in Decatur Illinois between 1968 and 1978. The study considered 200 sales of homes, all of which were within 400 feet of the center of electric transmission lines. The regression results were plotted in two curves, one of which predicted the effect of proximity to the line on sales prices at the beginning of the survey and another that predicted the impact on sale prices ten years later, at the end of the study period. The study concluded:

> *"Models 1 and 2 clearly establish that proximity to a power line is associated with diminished selling prices. Both models, however, show that the impact ... is diminished through time perhaps as the growth of trees obscures the view of the electric lines or perhaps for other reasons. Additionally, there may be a negative value impact of proximity to towers, but this impact showed no significant signs of diminishing through time."* (pp. 126-127)

0003-5 cont'd

0003-5
Continued

The draft EIS shows only one of these curves, the one that shows the price effects after 10 years. The other curve, which shows price effects at the beginning of the study period, would be far more relevant to the proposed Northern Pass project, because people are concerned with the impact of the project on property values today, not at some point in the distant future, many years after the project is built. The curve included in the draft EIS shows at most an 8% reduction in value for houses located within about 30 feet of the line; the other curve, shows a 30% reduction in value. Both curves go to zero at 400 feet – but only because the study did not consider any sales for homes located further away. Table 1 shows some of the points that were used to plot the curves.

Table 1: Decline of Property Values as a Function of Distance and Time

Distance From Centerline	Month of Sale = 0	Month of Sale = 120
25 feet	-30%	-8%
50	-15%	-4%
100	-8%	-2%
200	-5%	-1.5%
300	-3%	-1%
400	-1%	0%

This study did not consider the situation that will be caused by Northern Pass, which will construct towers through existing rural, suburban, and urban areas. Colwell considered the opposite situation: developing new sub-divisions near an existing transmission line. He emphasized that this distinction is important, because developers can to some extent compensate for the effect of power lines on value through careful planning:

> *"As is generally the case when developers plat a subdivision after a transmission line is in place, lot size is correlated with proximity to the line. Developers appear to compensate those located along the line with larger lot sizes. The existence of this relationship is the reason for the inclusion of a lot size variable. To omit the lot size variable would tend to lower the estimate of the impact of the transmission line."*

In the case of the proposed project, the situation is reversed. The power line will be built along a corridor where a great deal of housing is already in place. Whatever siting and design decisions were made reflect the existence of a line of wooden poles that are often hidden below the tree-line of a forested countryside, not the new introduction of another line of much higher, more massive steel lattice structures reaching far above the tree tops. This study of property values in a suburban subdivision hardly bears comparison to the situation along most of the proposed Norther Pass route.

Stanley W. Hamilton and Gregory M. Schwann, *Do High Voltage Electric Transmission Lines Affect Property Values?* **Land Economics**. November 1995. 71 (4):436-44

This study considers the effect of high voltage transmission lines on the sales prices of nearby single family homes in metropolitan Vancouver, BC in the period 1985-91. The study included variables related to the visibility of the transmission lines as well as the usual variables related to real estate prices. They limited their study to properties within 200 meters (660feet) of the lines based upon their review of earlier literature. They performed separate regressions for properties adjacent to the line (average value of $116

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thousand) and for mid-range properties 100 to 200 meters away from the line (average value of $123 thousand). They considered possible losses of value related to the visibility of the towers and possible health hazards that would decline with distance from the towers. Their results were as follows:

1. Visibility of towers: *For properties adjacent to the lines, we estimate that removing the unsightliness of the towers increases property value by 5.7% ... for mid-range properties, we find no significant change in property value from removing the visual externality of the tower.*
2. Distance from center line: *For the adjacent properties, ... moving the houses to the 100m point increases property values by 5.8%. ... increasing average distance of a Mid-Range property by 30m increases its value by 2.8%.*
3. Joint effect of eliminating view of towers and increasing distance: *After removing both of the effects of the lines, property values increase by 6.3% ($7,339) for 100m. We find also that transmission lines affect Mid-Range properties, ... [which] increase in value by 1.1% or $1,338 after both of the effects of transmission line are removed.*

In the draft EIS's Chart 4-1 (see Figure 1 above), this study is summarized by a line connecting four points shown in Table 2. The percentages are the same 6.3%, 6.3%, 1.1%, and 0% figures reported by Hamilton and Schwann, but the percentages are improperly connected to distance. The paper indeed shows a 6.3% decline in property values for properties adjacent to the line as compared to the properties if they were located 100m (330 ft.) from the line. Likewise, the paper does show a 1.1% decline for Mid-Range properties if they were located 200m from the line, but these properties were actually located an average of 170m from the line. Thus, the 1.1% increase in value would reflect an average an increase in distance of only 30m. The paper does not report the average distance from the line for the Adjacent Properties, nor does it show an increase in value for increasing values if Adjacent Properties were moved from locations 100m away to locations 170m away (i.e. to the average distance for the Mid-Range Properties. In other words, the results reported by Hamilton and Schwann do not directly translate into a curve that would properly fit into Chart 4-1 in the draft EIS.

Table 2: Hamilton and Schwann's Results Used in Draft EIS

Distance from Centerline	Percentage Decline in Value in Chart 4-1
0 feet	-6.3%
165 feet (50m)	-6.3%
495 feet (150m)	-1.1%
660 feet (200m)	0%

Thus, it is necessary to make some additional assumptions to convert Hamilton and Schwann's results to a line appropriate for the draft EIS. The necessary analysis would require additional information concerning the average location of properties and the average changes in prices as distances from the transmission line increase. The logic is as follows:

a) The average distance from the center line for Adjacent Properties is D1.
b) Increasing the average distance from 0 to D1 increases values by P1%.
c) Increasing the distance from D1 to 100m increases values by 6.3%.
d) The average distance from the center line for Mid-Range Properties is 170m.
e) Increasing the distance from 100m to 170m increases values by P2% for Mid-Range Properties.

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f) Increasing the distance from 170m to 200m increase values by 1.1%.
g) Increasing the distance from 0 to 200m increases values by P1% + 6.3% + P2% + 1.1%.

To get the total increase in value, we need to estimate P1% and P2%, and to estimate these percentages, we need to estimate D1. In step a), D1 is certainly not 0, which would be directly under the lines, and D1 would likely be closer to 100m than to 0 assuming very few properties would be right under the lines. Thus assuming D1= 50m would be a conservative assumption. If so, then the average increase in value of 6.3% comes from an average increase in distance of 50m (from 50m to 100m). The increase in value per 100m in this distance range would be 12.6% (since 6.3%/(50/100) = 12.6%). In step e, the results from the paper show that the average increase in value per 100m is 3.7% (since 1.1%/(30/100) = 3.7%). The further away, the lower the effect of distance. We therefore expect the increase in value per 100m to be greater than 12.6% for P1 and between 12.6% and 3.7% for P2.

If we assume that D1 = 50m, P1 = 15%, and P2 = 3.7%, then we can get a better interpretation of Hamilton and Schwann's results (Table 3). The line for Hamilton and Schwann's results in Chart 4-1 would then be based upon the values shown in the right-hand column of Table 4, which show a much greater impact on prices than what was used in the draft EIS (i.e. the second column of Table 4). Hamilton and Schwann did not attempt to look at the effect of distance on value for distances beyond 600m, so their results cannot be used to confirm that there is no impact at longer distances.

Table 3: Estimating the Percentage Decline in Property Values per 100m based upon Hamilton and Schwann's Results

Distance from Centerline	Percent Decline in Property Value per 100m	Percentage increase in Value in Paper	Implied Percentage Increase in Value
0 to 50m (165 feet)	P1 ~ 15%	Not given	7.5%
50m to 100m (330)	12.6%	6.3%	6.3%
100m to 170m (560 feet)	P2 ~ 8%	Not given	5.6%
170m to 200m (660 feet)	3.7%	1.1% if Mid-Range properties all moved to 200m (an average increase of 30m)	1.1%
0 to 200m (660 feet)		Not given	20.5%

Table 4: Proper Interpretation of Hamilton and Schwann's Results

Distance from Centerline	Incorrect Percentage Decline in Value used in Chart 4-1 of the draft EIS	Correct Percentage Decline in Value Relative to Property 200m distant with no view of lines
0 feet	6.3%	20.5%
165 feet (50m)	6.3%	13.0%
330 feet (100m)		6.7%
495 feet (150m)	1.1%	
560 feet (170m)		1.1%
660 feet (200m)	0%	0%

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François Des Rosiers, *Power Lines, Visual Encumbrance and House Values: A Microspatial Approach to Impact Measurement.* **JRER** vol. 23, no. 3, 2002, 277-300.

This study was based upon the sale of 257 single-family houses within approximately 400 to 800 feet of a 315kv transmission line with towers between 165 and 175 feet high. The 2-mile-long study area, which is within the City of Brossard near Montreal, included 507 houses, of which 34 were directly adjacent to the line and 383 had a view of the lines. In addition to variables related to the characteristics of the houses and the neighborhoods, the study considered more than three dozen variables related to each house's distance from the line, distance from the easement, and nature of the view of the line or the towers. Thus, this study was extremely meticulous in seeking to identify the visual effects of transmission lines on housing values. The nature of the view was found to be critical, but being adjacent to the open space provided by the ROW also had some benefits:

> *"Findings suggest that although severe visual encumbrance due to a direct view of a pylon or conductors does exert a significantly negative impact on property prices with depreciations ranging from 5% to well over 20%, being adjacent to the easement will not necessarily cause a house to depreciate and may even increase its value in similar proportions where proximity advantages exceed drawbacks."* (p. 277)

The advantages of being next to the right-of-way were cited as "improved visual clearance and increased intimacy", two benefits that may be important in an urban context where land is fully developed with single-family houses located on small lots. In a rural setting, residents do not need access to a power line right-of-way to gain access to open space or views uncluttered by rows of neighboring houses.

This study included a section devoted to the "Impact of Distance to Line or Easement" (p. 294). The findings suggested that the loss in value was greatest (5-12%) for houses within 50 to 100m (165 to 330 feet) from the easement boundary (i.e. approximately 250 to 450 feet from the center line of the transmission lines). The impact disappeared beyond about 500 feet from the easement boundary.

Chart 4-1 in the draft EIS shows a line purporting to show the results of the Des Rosiers study. The five points in this graph bear little or no relationship to Des Rosiers's own conclusions (Table 5). Des Rosiers concludes that the average loss in value is 10% within 500 feet of the easement boundary, which would be about 600 feet of the centerline of the transmission towers. This average loss in value is three times greater than the 3.5% loss of value that the draft EIS uses based upon Chart 4-1.

Des Rosiers takes pains to state that impacts on value are much more complex than distance, because it is not only distance that counts, but also the nature of the view (e.g. front, rear or side view; view of lines only or view of towers; distance to towers and nature of view of towers). He also notes that the impacts on high end properties were greater than the impacts on lower end properties. The impacts on the most expensive properties were generally 15 to 20% and in one case as much as 23%.

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Table 5: The Draft EIS Does Not Properly Represent Des Rosiers's Conclusions

Distance from Centerline	Chart 4-1, Draft EIS	Des Rosiers's Conclusions
50 ft.	8%	*The price reduction … averages 14% in the study area where the setback between the power line and the lot boundary is only 50 feet.*
120 ft.	8%	
250-450 feet (50 to 100m from easement boundary)		*The net visual encumbrance reaches a maximum for houses located between 50m and 100m from the easement boundary, with values dropping by 5% - 12% of mean price.*
330 ft. (100m)	6%	
510 ft.	4%	
600 ft. (500 ft. from easement boundary)	0	*The net encumbrance … tends to disappear beyond 150m (500 ft.) from the easement boundary*
Overall		*Overall, the price reduction stands at roughly 10% of mean house value (global sample)*

Judith Callanan and R.V. Hargreaves, *The Effect of Transmission Lines on Property Values: A Statistical Analysis*, **New Zealand Valuer's Journal,** June 1995, pp. 35-38.

This study examined the impact of high voltage overhead transmission lines (HVOTLs) on property values in the suburb of Newlands in the city of Wellington in New Zealand. Over a five-year time period between 1987 and 1991, there were 330 sales of homes located within 300 meters (1000 feet) of transmission lines. Unlike the normal situation in the US and Canada, where transmission lines are located within an easement, these lines went directly next to or over houses. Since the region was very hilly, the nature of the views was not clearly related to distance, as a house on top of a hill might be hurt by the view of a distant tower, whereas a house at the base of a hill might have no view at all of a nearby tower.

The authors summarized their results in a table showing percentage decline in value as a function of distance. Their conclusion was that there is a reduction of around 20% of the average sale price for houses very close to the pylon and dropping off to 2% at 100 meters (330 ft.). Table 6 summarizes their results and also shows the results included in Chart 4-1 of the draft EIS. Chart 4-1 has the same percentages, but the distances are incorrect. The differences are not great, but the effect is to make the reduction in value a little less important.

Table 6: Effect of Transmission Lines in a City in New Zealand

Distance Reported in Paper	Reduction in Sale Price	Distance in Chart 4-1
10m (33 ft.)	27.3%	20 ft.
15m (50 ft.)	18.2%	40 ft.
20m (66 ft.)	13.6%	55 ft.
30m (100 ft.)	9.1%	85 ft.
50m (165 ft.)	5.4%	130 ft.
100m (330 ft.)	2.7%	250 ft.
N.A.	1.25%	550 ft,

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The authors added a very interesting note to their paper:

> *"A limitation determined since this research, is the presence of strong rumours amongst local residents and real estate agents that either one or both lines were to be removed in the near future. This may have influenced the purchaser's decision and purchase price."*

In plainer words, the reduction in sale prices shown in Table 6 might have been greater if people did not expect that the lines would shortly be removed. Upon reading this, I Googled the line in question and to my very great surprise found that the line not only had been removed, but that a doctoral dissertation completed in 2014 had documented a large increase in property values following the removal of the lines. And to my even greater surprise, the study was done by Judith Callanan, one of the authors of the 1995 study.

The doctoral dissertation compared trends in sales prices of homes that were affected by the line removal with sales prices of homes in a control area unaffected by the removal. Many of her conclusions (pp. 155-160) are very interesting and relevant to both the methodology and conclusions of the draft EIS:

- *Following the removal of the HVOTLs, prices in the study area of Newlands increased at a much faster rate than in the control area. From 1996 to 2010, sales prices in the study area increased by 60 per cent more than sales prices in the control area over the same period.*

- *The length of time to sell in the subject area dropped significantly over the two years following the removal of the HVOTLs. During that two year period, average sale price increased by 48 per cent, compared to the control area which increased by 35 per cent.*

- *Following the removal of the HVOTLs, the rate* [of owner occupancy] *increased to a higher level than the control area in both 2001 and 2006 census areas. This would indicate a more stable housing environment with fewer people renting.*

- *With the removal of the HVOTLs, land then became available for development, bringing an increase in population.*

- *When the HVOTLs were removed, the whole area improved in value, not only those properties adjacent to the towers.*

Callanan made several observations concerning limitation of her research and possibilities for further research. She noted that attitudes toward the presence of transmission lines could vary over time, because of changes in the perception of health risks or technology. She also noted that the study analyzed a low to medium-cost housing area where potential buyers may be willing to accept proximity to HVOTLs in order to save on housing costs. For the high-end market, she suggested something much different:

> *It may be that people seeking to purchase property at the lower end of the housing market are prepared to offset one detrimental factor against another, which someone paying $1,000,000 for a house may not be willing to do, as they have more options within the market. (p. 162)*

In general, it is surprising to find the draft EIS highlighting Callanan's 1995 study but failing to mention the caveat in that study concerning the rumors that the HVOTLs would be removed. It is also surprising that they did not use the much more detailed study of the same region by the same person, who concluded that removing the lines increased housing values for the entire neighborhood, not merely for the houses that had been closest to the lines. Might not there be a similar conclusion for the construction of a line? Might not a new line depress housing values in a region much broader than the area close to the line?

3. Summary of the Property Value Assessments in the Draft EIS

The Draft EIS Misinterprets the Literature

The property value analysis in the draft EIS is based upon the results of just four studies. My review of these studies found a number of serious problems with the draft EIS's interpretation of their results:

- Colwell (1990): this paper included two curves showing how proximity to a line reduces property values. Chart 4-1 in the draft EIS used the wrong curve; it showed the effects after ten years (when trees had grown to limit the visual impact of the lines), rather than the much greater effects as of the beginning of the project.
- Hamilton and Schwann (1995): the draft EIS misinterpreted the results of this study; the curve included in Chart 4-1 of the EIS underestimates the actual loss in values by a factor of three.
- Callanan and Hargreaves (1995): the curve shown in Chart 4-1 is shifted slightly from what is actually shown in the paper; the result is to slightly reduce the impact of transmission lines on property values. More important, the draft EIS does not mention the possibility that the price impacts were low because there were rumors that the overhead lines would soon be removed. In actual fact, one of the lines was removed, and Callanan completed a doctoral dissertation in 2014 that showed substantial benefits from removal, including a 10% increase in value compared to similar houses in a control region unaffected by views of transmission lines.
- Des Rosiers (2002): it is unclear how the draft EIS developed the curve used to represent Des Rosiers results. The paper's conclusion was that the global impact of the transmission lines was a 10% reduction in housing prices.

Studies Used in the Draft EIS Actually Suggest not a 3.5%, but a 10% Decline in Property Values

Taken together, these problems indicate that a) Chart 4-1 in the draft EIS does not properly reflect the results of the studies it purports to represent and b) the conclusions drawn from this chart are clearly erroneous. If the problems identified above were corrected, the overall conclusion would be similar to Des Rosiers: average property values within 500-600 feet of the transmission line decline not by 3.5% but by 10%. The studies also indicate that prices could decline more for high-end properties and that price effects could be felt for entire neighborhoods, not just for houses next to the transmission lines.

The Draft EIS Failed to Consider Visual Impacts in Rural Areas

The four studies used in the draft EIS all addressed property values in urban or suburban areas, whereas the proposed Northern Pass route goes primarily through rural areas where aesthetic concerns and visual impacts are much different and much more important. This is a serious defect in the methodology, since the effects of high voltage transmission lines on property values can be far greater in rural areas, as

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0003-6
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

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summarized in a recent review of research findings relevant to the effect of high voltage transmission lines on interior regions of the western US.[2] That review cited several studies that documented substantial impacts resulting from projects similar to the proposed Northern Pass project. For example, James Chalmers conducted an analysis of property values in Aspen Valley Ranches, a rural subdivision in Jefferson County Montana. He found an average 15% devaluation in value for properties located within 1000 feet of a 500kV line. This rural impact is more than eight times greater than the 3.5% devaluation within 500 feet of the proposed Northern Pass line that is assumed in the draft EIS.

The Draft EIS Failed to Examine Property Values in New Hampshire

DOE did not attempt any analysis of the effect of the proposed transmission lines on actual property values along the proposed route in New Hampshire. This is a serious defect in the draft EIS that should be corrected in the final EIS. The proposed route was announced five years ago, and property owners, real estate professionals, and developers have made many public comments about the deleterious effect of the proposal on property values near the line. Properties that currently have no view of the lines, because they are screened or because there are no existing lines, have been difficult or impossible to sell if views would be markedly hurt by the proposed project. Many individuals have documented their own experience in comments at public hearing and in comments filed with DOE.

4. Visual Impacts of the Proposed Northern Pass Project

Volume 2 of the draft EIS includes simulations of the impact of the proposed towers on views from 15 "key observation points (KOPs)". For each location, the draft EIS gives the following:

- An excellent map showing the location, direction and field of the view.
- The distance to the line and the number of structures visible.
- A photograph (approx. 10" x 16") showing current conditions.
- The same photograph simulating the view if the towers were constructed as proposed by NP.

Chapter 4 of the draft EIS includes a discussion of the visual impact of the proposed project for each of these 15 KOPs based upon the criteria shown in Table 3-1 (p. 3-5), which is duplicated below as Table 7.

Table 7 Visual Contrast-Dominance Rating (draft EIS, Table 3-1)

Contrast-Dominance Rating	Numeric Value Range	Description
Severe	36-45	The visual change is very large, and in sensitive settings is likely considered unreasonably adverse by a casual observer.
Strong	27-35	The visual change is large and is likely to be considered adverse by a casual observer, and depending on the sensitivity of the setting it may be considered unreasonable.
Moderate	18-26	The visual change is clearly noticeable to a casual observer, and is likely to be considered adverse.
Weak	9-17	The visual change is noticeable, but so small as to be considered unimportant.
Negligible	0-8	The visual change is likely to go unnoticed by a casual observer.

[22] Headwaters Economics, *Transmission Lines & Property Value Impacts: A Review of Published Research on Property Values from High Voltage Transmission Lines,"* http://headwaterseconomics.org.

Contrast-dominance ratings are shown in the draft EIS for both current conditions and existing conditions for the various key observation points. As shown in Table 8, the average visual impact under existing conditions is "moderate." The only severe impact is for a close-up view of an existing wooden structure. The only strong impacts are for the three views looking nearly straight down the ROW at a row of wooden structures. Distant views of a row of wooden structures are negligible or weak (e.g. FR-2 and LI-2), while views from less than 1000 feet may have only a weak impact so long as the towers are mostly shielded by trees (e.g. DU-1, CA-1).

Table 8 Visual Impact of Existing Situation

Location	View	Number of Structures Visible	Distance to Nearest Structure (feet)	Visual Impact
CL-1	View across fields toward forest and distant hills (no existing ROW)	0	-	0
Franconia (FR-2)	View from summit of Mt. Lafayette	6	34,443	7 Negligible
Dummer (DU-1)	View across Little Dummer Pond toward ROW on side of ridge	3	1,756	9 Weak
Lincoln (LI-2)	Driving north along Interstate 93 where it enters Franconia Notch State Park	5	10,491	10 Weak
Lancaster (LA-2)	View from ledge at Weeks State Park down toward lines crossing generally open area below	15	5,985	13 Weak
Campton (CA-1)	View to north at Exit 28, where existing ROW climbs Sunset Hill	4	758	16 Weak
Woodstock (WD-3)	Driving north along Interstate 93 just north of Exit 31 where towers climb across a ridge almost directly in front of viewer	6	2,665	21 Moderate
Concord (CO-1)	View of three rows of lines next to a shopping center	6	737	22 Moderate
Bethlehem (BT-1)	View across small pond where existing ROW crosses Route 302	2	579	24 Moderate
Concord (CO-4)	View from boat ramp across Turtletown Pond toward lines extending along shore	10	1,058	25 Moderate
Lincoln (LI-5)	View from Appalachian Trail near summit of S. Kinsman toward Bog Pond	25	9,320	25 Moderate
Deerfield (DE-1)	Lines crossing field and then over a small ridge from Nottingham Road	17	301	28 Strong
Woodstock (WD-4)	View along ROW where it crosses the Gordon Pond Trail	5	507	28 Strong
Easton (EA-3)	View from where ROW crosses Route 116 looking east toward Kinsman Ridge	7	129	32 Strong
Lincoln (LI-4)	Where the ROW crosses the Appalachian Trail at its intersection with the Reel Brook Trail, looking at the nearest tower	1	105	36 Severe
Average				18 Weak/ Moderate

When an additional row of taller towers is added (Table 9), the average visual impact increases from 18 (borderline between weak and moderate) to 32 (strong), and all but three of the selected vistas have a strong or severe visual impact. The visual impact is now severe in all seven instances where the nearest structure is less than 750 feet away, whether the view is toward a single nearby tower, a row of towers stretching left to right across the field of vision or a row of towers marching out into the distance. The visual impact can be strong even if only a few towers are visible from a distance of nearly 2,000 feet (DU-1) or if several dozen towers are visible from a distance of more than a mile (LI-5).

Table 9 Visual Impact of Proposed Situation (Alternative 2)

Location	View	Number of Structures Visible	Distance to Nearest Structure (feet)	Visual Impact
Franconia (FR-2)	View from summit of Mt. Lafayette	16	35,412	11 Weak
Lincoln (LI-2)	Driving north along Interstate 93 where it enters Franconia Notch State Park	8	10,155	17 Weak
Lancaster (LA-2)	View from ledge at Weeks State Park down toward lines crossing generally open area below	34	5,981	23 Moderate
Lincoln (LI-5)	View from Appalachian Trail near summit of S. Kinsman toward Bog Pond	38	9,411	27 Strong
Dummer (DU-1)	View across Little Dummer Pond toward ROW on side of ridge	6	1,756	29 Strong
CL-1	View of new transition station at transition between towers and burial, across fields toward forest and distant hills	5	1,450	29 Strong
Woodstock (WD-3)	Driving north along Interstate 93 just north of Exit 31 where towers climb across a ridge almost directly in front of viewer	11	1,391	32 Strong
Concord (CO-4)	View from boat ramp across Turtletown Pond toward lines extending along shore	13	1,058	33 Strong
Concord (CO-1)	View of three rows of lines next to a shopping center	7	749	36 Severe
Campton (CA-1)	View to north at Exit 28, where existing ROW climbs Sunset Hill	12	649	37 Severe
Bethlehem (BT-1)	View across small pond where existing ROW crosses Route 302	3	509	40 Severe
Deerfield (DE-1)	Lines crossing field and then over a small ridge from Nottingham Road	24	325	42 Severe
Woodstock (WD-4)	View along ROW where it crosses the Gordon Pond Trail	10	502	41 Severe
Easton (EA-3)	View from where ROW crosses Route 116 looking east toward Kinsman Ridge	25	126	43 Severe
Lincoln (LI-4)	Where the ROW crosses the Appalachian Trail at its intersection with the Reel Brook Trail, looking at the nearest tower	1	117	44 Severe
Average				32 Strong

The draft EIS only included simulations for 15 points, but these 15 points represent the entire range of possible conditions, from zero impact if nothing is visible (CL-1, existing conditions) to the severest impact for someone staring at a tall steel lattice tower from less than 40 yards away (LI-4). The contrast-dominance ratings for these 15 points could be applied to any similar situations at any point along the proposed route. Thus, DOE's visual assessment of KOPs supports several very important conclusions:

- Visual impacts are likely to be "severe" for all locations where towers would be visible up to at least 750 feet from the line. According to DOE's definitions (see Exhibit 1 above), these impacts would be deemed "unreasonably adverse by a casual observer".
- Visual impacts are likely to be "strong" for all locations where towers would be visible from up to at least 1800 feet of the line. Such an impact would be deemed "adverse by a casual observer, and depending upon the sensitivity of the setting it may be considered unreasonable".
- Visual impacts may be moderate or strong even for distances up to two miles from the nearest tower. Even moderate impacts are "likely to be considered adverse" by a casual observer.

Thus, if the proposed towers are visible from a distance of less than two miles, the visual impacts may be adverse; if the towers are visible from less than 1,800 feet, then the visual impacts are likely to be adverse and may be considered unreasonable; if the towers are visible from less than 750 feet, then the visible impacts are likely to be unreasonably adverse.

Is there an effect of views on property values? Of course there is. If there is an unreasonably adverse effect of a project on views, is there likely to be a strong impact on property values? Of course there is. Is there any reason to suppose that the effect of the proposed project would have only a 3.5% impact on values of property within 500 feet of the line? Of course there is not!

The KOP analysis indicates that visual impacts would have significant impact on any properties with views of the towers from at least 1800 feet, not for properties with views from less than 500 feet. The KOP analysis also indicates that much more distant views could be "adverse" for scenic vistas such as the views sought by second-home owners, families, fishermen, hikers, skiers and others visiting the fields and streams, lakes and forests, hillsides, ridges and mountains along the proposed Northern Pass route.

5. Effects of the Existing Power Lines on Property Values in Sugar Hill, New Hampshire

The preferred route for the Northern Pass Project (Alternative 2 in the draft EIS) would have followed an existing PSNH right-of-way for nearly 150 miles. Examination of property values along this corridor provides an opportunity to determine the extent to which overhead transmission lines have affected property values and real estate development over a period of more than 60 years.

This section uses Sugar Hill as a case study. Northern Pass's original proposed route would have followed approximately seven miles of the existing PSNH right-of-way that goes through Sugar Hill. When the existing lines were erected, circa 1950, nearly all of the land along the route was open farmland and fields. Thus, at that time, the lines would have been visible for hundreds of yards on either side of the right-of-way. It is therefore possible to ask whether the existence of the transmission lines affected property values or the orderly development of the town.

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Thank you for your comment. The simulation viewpoints and Key Observation Points (KOPs) are systematically identified so that they may be generalized. Considerations in the landscape assessment other than distance to nearest visible structure include visual magnitude (i.e., distance and number of visible structures); visual impact (i.e., visual quality of viewpoint and visual magnitude); and scenic impact (i.e., visual impact and scenic sensitivity of the viewpoint). The methods of the visual impact analysis are described in Section 2.4 of the Visual Impact Assessment Technical Report.

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Thank you for your comment. Section 4.1.2 of the EIS addresses the potential for impact to property values as a function of proximity of the Project to private property. Adjustments to the original analysis presented in the draft EIS have been updated in the final EIS to reflect comments on the methodology and assumptions.

0003-8

0003-9
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS. Impacts to property values in the Central Section, where Sugar Hill is located, are discussed in Section 4.3.2 of the EIS.

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The existing lines are strung on wooden poles that are generally 40 to 60 feet high, which is less than the height of the trees in forested areas of Sugar Hill. Therefore, along most of the route, the existing lines and poles are either invisible or difficult to discern from the nearby residences and roadways. The lines are clearly visible from the six locations where they cross town roads, where they pass through the town forest and other conservation areas, and from a few roadside locations where local roads parallel the right-of-way, most notably stretches along Streeter Pond Road, Crane Hill Road, and Jesseman Road.

Property Values are Lower Near the PSNH Right-of-Way

Analysis of property values and housing characteristics in Sugar Hill indicates that:

- Property values along the power lines right-of-way (ROW) are lower than average property values in the town.
- Development along the ROW may have been hindered or delayed by the visual impacts of the transmission lines.

This analysis makes use of several data sources:

- General information about Sugar Hill's property values from the town's 2014 annual report.
- Walling Historical Map Series (1860-61) and Hurd Historical Map Series (1892) (reproduced in the Draft Project Area Form for White Mountains Region as part of the Section 106 analysis for Northern Pass, June 2015). These maps show the location of individual residences, most of which are still in existence and some of which are occupied by the same families.
- Sugar Hill's tax assessment data base, which shows the assessed values for land and buildings, lot size, and owner's name and address.
- Sugar Hill's tax maps, which show the boundaries of each property and the PSNH ROW.
- Sugar Hill's emergency services maps, which show the location of every numbered residence and building, as well as the PSNH ROW.
- The USGS 1988 quadrant for Sugar Hill, which shows each building, color-coded to show buildings that existed in 1963 at the time of the previous survey and buildings added between 1963 and the USGS's 1983 aerial survey.

The analysis began by using the tax maps to identify properties that were on the right-of-way (ROW) or adjacent to properties that were on the right-of-way (AROW). Information for these properties was entered into a spreadsheet, so that it was possible to measure the acres, assessed land values, assessed building values, average lot sizes, and other measures for the ROW and AROW properties. Total acreage and assessed values for the town could be obtained from the 2014 annual report, and it was possible to combine this information so as to get acreage and assessed values for all properties other than ROW and AROW.

Table 10 shows that assessed property values on the right-of-way are less than half of the town average. Values for properties adjacent to the right-of-way are somewhat higher, but still less than two-thirds of average values. The analysis presented in Table 10 differs markedly from the property value studies used in the draft EIS. Those studies used regression analysis to develop models of property values as a function of the characteristics of the property, the house, and the location of and views toward the power lines. The goal was to show how the value of a typical house would change as the distance from the line or the visual impact of the line increases. In Table 10, the analysis is based upon property values 65 years after the line was built, a long enough time for new homes to be built, for farms and estates to be sub-divided, and for

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Continued

old houses to be expanded, improved, neglected or torn down. The intent is to show the impact of the power lines on the extent and nature of development over that long period.

Table 10 Property Values Decline Close to Transmission Lines

Location	Acres	Assessed Land Value (millions)	Assessed Building Value (Millions)	Total Assessed Value (millions)	Assessed Building Value per Acre	Total Assessed Value per Acre
On ROW	1,444	$3.54	$5.96	$9.50	$4,146	$6,607
Adjacent to ROW	1,431	5.03	$7.73	12.76	5,378	8,874
Other	7,732	48.10	76.92	125.02	9,936	16,150
Total	10,617	56.67	90.61	147.28	8,535	13,872

Distances from homes to the ROW is a major factor that is not addressed in Table 10. Some of the properties that are on the right-of-way are hundreds of acres, and houses on such large lots may actually be a long way from the power lines. Likewise, some of the properties adjacent to the power lines may be on small lots, so that the houses may actually be close to the lines. Another study was therefore done based upon the distance from the residences to the center of the right-of-way. The distances were measured on the town's emergency maps, which showed the exact location of each numbered building. Hence, it was possible to use the same data on assessed values to examine how values declined as a function of distance from the power lines (Table 11).

Table 11 Value of Residential Properties as a Function of Distance from Center of Right-of-Way

	125 to 500 feet	500 to 1000 feet	1000 to 1500 feet	1500 to 2000 feet
Houses in or adjacent to Row				
Number	20	23	12	12
Average value of house ($000s)	$154	$156	$196	$291
Total value, house plus land ($000s)	$231	$239	$289	$391
Average acres	8.1	9.8	23.2	35.3
Average assessed value per acre	$28,519	$24,388	$12,457	$11,076
Other houses with potential view				
Number		1	5	14
Average value of house ($000s)		$252	$207	$222
Total value, house plus land ($000s)		$333	$307	$317
Average acres		5.8	5.4	9
Average assessed value per acre		$57,379	$56,785	$35,232
Total				
Number	20	24	17	26
Average value of house ($000s)	$154	$160	$199	$254
Average assessed value of land ($000s)	$77	$83	$95	$97
Total value, house plus land ($000s)	$231	$243	$294	$351
Average acres	8.1	9.6	18.0	21.1
Average assessed value per acre	$28,519	$25,215	$16,376	$16,614

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In Table 11, the key variable is distance from the house to the center of the right-of-way, and no distinction is made between properties that own a piece of the ROW and ones that are adjacent to such properties. In addition, the table includes other properties that are within 2000 feet of the ROW, but that are neither on nor adjacent to the right-of-way. The key results are as follows:

- There are no houses within 125 feet of the center line of the ROW.
- There are a similar number of houses (between 17 and 26) in each 500-foot band.
- Lot size increases from 8.1 acres for residential properties closest to the line to 21.1 acres for properties 1,500 to 2,000 feet from the line.
- Average property values increase from $231 thousand for those closest to the line to $351 thousand for those furthest from the line.
- The average assessed value per acre for residential properties is highest close to the line, but only because land in larger parcels is assessed at a lower rate.[3]

Construction of the Existing PSNH Power Lines has Affected the Orderly Development of Sugar Hill

It is possible to use maps from the 19th, 20th, and 21st centuries to document the development of the area within a mile of the existing PSNH right-of-way:

- The oldest buildings were on the Walling Series or the Hurd Series maps from the 19th century.
- The 1988 USGS map for Sugar Hill shows buildings that were located in a 1963 survey of the town along with buildings that were built between 1967 and 1983.
- The most recent town map shows all buildings that were assessed in 2014.

By comparing the maps, it was possible to show the pace of residential development in the areas next to the PSNH right-of-way. Table 12 shows that 21 homes were built between 1967 and 1983 within the potential viewshed of the power lines, while another 62 were built between 1984 and 2014. Without having a map showing the location of homes circa 1950, it is impossible to know whether construction was depressed between the time of construction and 1963. However, by driving along the local roads of Sugar Hill, one can see that homes constructed since 1963 have all been located so as to have at most a minimal view of the lines, as shown in Table 13. Locations that have a clear view of the lines have had at most only a few new homes built, including much of Streeter Pond Road, southern portions of Crane Hill Road, much of Center District Road, western portions of Blake Road and northern portions of Jesseman Road.

[3] If a residential property has more than ten acres, then a portion of the land will be assessed at a rate reflecting the value of a residential lot and the rest may be assessed as "current use" (i.e. valued at less than $100/acre as open space or agricultural land rather at $10,000 to $15,000/acre as residential land). If the land is sold or sub-divided, then the town captures a portion of the sales price in compensation for the prior years of low taxation under "current use".

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Table 12 Age of Houses Close to Existing Power Lines in Sugar Hill

Road	19th Century	Between 1892 and 1967	Between 1967 and 1983	Between 1983 and 2014	Total as of 2014
Streeter Pond Road (Rt. 18 to Ski Hearth Farm)	4	1	1	0	6
Crane Hill Road	3	2	1	4	10
Jesseman Road	2	1	0	4	7
Blake Road (within ½ mile of line)	3	1	0	3	7
Center District Road, Locke Lane and Northy Road	8	0	0	6	14
Rt. 117 (from Pearl Lake Road to Lisbon)	0	1	1	3	5
Creamery Pond Road	0	0	2	1	3
Pearl Lake Road (Rt. 117 to Georgeville Road)	2	2	1	4	9
Post Road	2	4	3	2	11
Hadley Road plus Nason Road	2	1	4	13	20
Dyke Road plus Presby, Jericho, and Trumpet Round Roads	3	3	7	8	21
Easton Road (from Dyke Road to Easton)	1	1	1	3	6
Easton Road (Rt. 117 to Toad Hill Road, including Beaver Pond Road)	3	4	3	11	21
Total	33	21	24	62	140
Percent	24%	15%	17%	44%	100%
Total per decade	N.A.	3	16	20	

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Table 13 View of Power Lines from Houses Constructed Since 1967

Road	New Houses 1967-2014	View of Existing Lines from New Houses
Streeter Pond Road (Rt. 18 to Ski Hearth Farm)	1	None
Crane Hill Road	5	Mostly or entirely blocked by trees
Jesseman Road	4	Mostly or entirely blocked by trees
Blake Road (within ½ mile of line)	3	View is over power lines, which are mostly blocked by trees
Center District Road, Locke Lane and Northy Road	6	Views are either above power lines or mostly blocked by trees
Rt. 117 (from Pearl Lake Road to Lisbon)	4	Mostly or entirely blocked by trees
Creamery Pond Road	3	Mostly or entirely blocked by trees
Pearl Lake Road (Rt. 117 to Georgeville Road)	5	Mostly or entirely blocked by trees
Post Road	5	Mostly or entirely blocked by trees
Hadley Road plus Nason Road	14	Seven are mostly or entirely blocked by trees, even though close to right-of-way; seven have views over lines, which are mostly blocked by trees.
Dyke Road plus Presby, Jericho, and Trumpet Round Roads	15	Mostly or entirely blocked by trees
Easton Road (from Dyke Road to Easton)	4	Mostly or entirely blocked by trees
Easton Road (Rt. 117 to Toad Hill Road, including Beaver Pond Road)	14	Mostly or entirely blocked by trees
Total	83	All or nearly all have either no view or a very limited view of the existing lines, because the lines are blocked by trees.

Over the past 50 years, the existence of the PSNH power lines has not prevented development along the nearby areas of Sugar Hill, but only because the poles are shorter than the height of the trees. Since most of the views along the right-of-way are buffered by trees, it is possible to locate houses so as to avoid or minimize any adverse visual impact.

Decades after a transmission line has been constructed, when a forest has grown up in what were once farmlands and fields, it is easy to choose housing sites where visual impacts of the line are minimal. The impact on housing values seems to be that the houses that are built near the power lines were smaller, with smaller lots, and therefore with lower assessed value than other residential properties in Sugar Hill.

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Open Space Next to the Transmission Lines in Sugar Hill

There are 1,356 acres of parcels of undeveloped land that include portions of the existing ROW or are adjacent to such parcels. More than half of this land is taken up by nine large parcels, most of which are owned by the town or under conservation easement. Table 14 describes these properties and also shows the number of towers that would be visible if Northern Pass's original plan were implemented.

Table 14 Large Parcels of Undeveloped Land Near the Existing ROW

Name	Description	Towers Visible	Acres
Coffin Pond Park	Conservation land around Coffin Pond south of Streeter Pond Road, approximately 2/3 mile south of ROW	21-40	116
Sugar Hill Town Forest	Forested land bi-sected by one half-mile of ROW	>40	101
Ammonoosuc Conservation Trust	Forested land on the west side of Bronson Hill, extending down to Salmon Hole Brook and Hadley Road; largely forested with some views to existing ROW approximately ½ mile to east	6-10	96
Pinney Family	Hillside to west of Center District Road that is bisected by the existing ROW.	>41	94
Young Family	Largely forested land west of Crane Hill Road approximately ¼ above ROW	6-10	88
King Family	Three large parcels; largely open fields; above Jesseman Road looking over valley with existing ROW clearly visible approximately ¼ mile to southeast	>40	87
Johnston Trust	Largely forested land above Jesseman Road, approximately 1/3 mile above ROW; a few locations with views of lines	?	59
Martland Family	Two parcels on either side of Pearl Lake Road that are bordered by Hadley Road and Salmon Hole Brook. The hillsides, valley, fields and wetlands are bisected by approximately ½ mile of ROW.	>41	47
Sullivan Trust	Largely forested land along Crane Hill Road	Mostly <5	46
Total			734 acres

Other open space includes 54 other parcels that average 19 acres apiece:

- 37 lots of less than 10 acres
- 17 lots of 10 to 45 acres

Overall, there are 1,356 acres of open space in lots that are on or adjacent to the existing ROW. The average assessed value per acre is low (approximately $1,700 for land on the ROW and $1,500 for land off of the ROW) because much of the land is assessed as "current use". When land is developed, or when land is subdivided into lots for development, the average assessed value is much higher. For example, there are 16 properties of 4-7 acres on Nason Road and Hadley Road that are within a quarter mile of the

0003-9 cont'd

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power lines. Half of these are vacant, and half have a house. The average value per lot is about $75,000 for these properties; values are slightly lower for lots on Nason Road than on Hadley Road, because the lots on Nason Road are somewhat closer to the power lines and also generally somewhat lower on the hillsides.

The value of the open space, whether for public recreation or for home development, is highly dependent upon the scenery. Dozens of new homes have been constructed since the existing line was built circa 1950, but it was possible to locate these homes so as to minimize or completely block views of the lines. It is also clear that development of the areas next to the lines was much greater after 1967, by which time the forest had had a chance to grow high enough to block views of the towers. I have traveled all of the roads in Sugar Hill that pass close to the ROW, I have noted the location of most if not all of the houses constructed over the past 50 years, and I have not found a single instance where a new house was constructed to have a clear view of the existing lines. New developments on private roads near the lines have left a buffer of trees to block full views of the lines; houses built along town roads have either been located in forested areas or in locations where there are views across valleys where at most the tips of the existing poles are visible above the tree line.

The existing powers lines are clearly visible from hillsides across open fields in only one portion of Sugar Hill that includes the southern end of Crane Hill Road, the northern end of Jesseman Road, and the western end of Blake Road. Figure 1 shows the location of these roads in relation to the power lines. The underlying map shows the visual impact of the steel towers originally proposed by Northern Pass along this right-of-way. The number of structures that would be visible from each location are color-coded in the map, which was prepared by consultants to US DOE as part of the Section 106 Historical Review Process for the Northern Pass Project. Areas of deep red, such as those along the three roads highlighted on the map, would have more than 40 towers visible. Areas that lack color, such as the northern portion of Crane Hill Road, the eastern portion of Blake Road, and the southern portion of Jesseman Road, are forested and therefore would have no views of either the existing wooden poles or the proposed towers. The numbered yellow markers locate old houses and barns identified by the DOE consultants as having potential historic importance. Examination of town records and USGS maps of this area indicate that:

- No new houses have been built anywhere along these three roads where there would be views of the proposed towers.
- Yet, in the last 30 years, 14 new houses have been constructed in forested areas along these same three roads.

Despite the desirability of valley views across open fields, the construction of the existing lines appears to have hindered the orderly development of this portion of Sugar Hill for more than 60 years. New residential development has occurred, not where the vistas are most open, but where views of existing power lines are largely or entirely blocked by trees.

Sixty-five years ago, when Sugar Hill was almost entirely farms and fields, the new PSNH power lines would have been highly visible from points all along the ROW. Over time, however, farms and fields along the ROW were allowed to revert to old fields filled with clumps of alders, willows, and birches, and these old fields eventually gave way to forests topped by pines, firs, maple, cherry, or poplar. These new forests blocked views of the power lines and, after several decades, opened up new regions for development along all of the old town roads paralleling or crossing the ROW and in new sub-divisions

0003-9 cont'd

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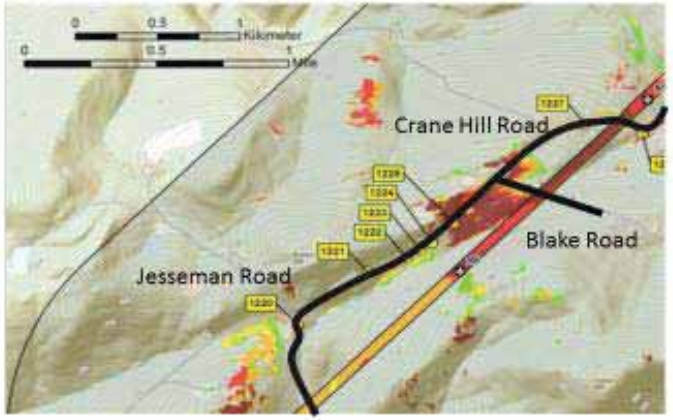
located on new town or private roads close to the PSNH ROW.[4] Essentially all of these new houses and residential lots would have views adversely affected by the steel towers originally proposed by Northern Pass.

Figure 1 The power lines are clearly visible where Crane Hill, Blake and Jesseman Roads meet at a point on a hillside overlooking fields with a view toward Garnet Hill. (Source of map: White Mountains Region, draft Project Area Form, Section 106 Research for the Northern Pass Project, June 2015)



According to Sugar Hill tax assessment records, there were 176 lots of less than 20 acres that could potentially be developed for residential properties in of Sugar Hill. Lots that were on, adjacent to, or nearby with a view of the ROW accounted for nearly 40% of the total available lots and nearly half of the lots of four or more acres (Table 15). Given the very high percentage of lots that would be affected by views of tall steel towers, the project as originally proposed would have had a very large impact on the orderly development of residential property in Sugar Hill.

Table 15 Residential Lots Potentially Available for Development in Sugar Hill, as of early 2015 (Source: non-farm properties listed in Sugar Hill tax assessment records)

	0.5 to 3.9 acres	4 to 7.9 acres	8 to 11.9 acres	12 to 20 acres	Total
Total in Sugar Hill	58	62	21	35	176
On or adjacent to ROW	7	24	6	14	51
Within ¼ mile with view of ROW	3	6	3	3	15
Total potentially affected by originally proposed Northern Pass	10	30	9	17	66
% of total	17%	48%	43%	49%	38%

[4] Sub-divisions include parcels along Nason Road, Presby Road, Trumpet Hill Road, Jericho Road, Cannon View Drive, and Beaver Pond Road, all of which are accessed from Hadley Road, Dyke Road, or Easton Road.

5. Summary, Conclusions, and Recommendations

The draft EIS's analysis of the impact on property values should be completely redone

The analysis of the impact of the proposed Northern Pass transmission lines on property values is so flawed that it should be completely redone.

The analysis depends on results from four studies that are improperly summarized in Chart 4-1 of the draft EIS. The magnitude of the impact is not the minor 3.5% decline for properties within 500 feet of the centerline of the right-of-way. Instead, it is more likely to be 10 to 15% over a much more extensive residential area.

The analysis does not consider any studies of visual impacts on property values in rural areas, where adverse impacts on views can dramatically reduce land values.

The draft EIS makes no attempt to consider how the visual impact of the existing PSNH lines has delayed and disrupted residential development for decades all along the route.

The analysis does not consider the impact of the proposed transmission lines on the orderly development of rural areas. In many locations along the existing ROW, land has already been sub-divided for future residential development in locations where the existing poles and transmission lines are largely or entirely shielded by trees. Widening the ROW and constructing taller, more massive towers would greatly reduce the value of these lots.

The KOP analysis should be incorporated within the analysis of the impact on rural property values

The analysis of visual impacts from Key Observation Points (KOPs) clearly documents the adverse visual impacts of the transmission lines in rural locations. The distance within which property values will be affected is not 500 feet, as in an urban area, but well over 1000 feet and perhaps out to hillsides more than a mile distant.

If the results from the KOP analysis were incorporated into the assessment of rural property values, the draft EIS would have found a much larger loss in property values.

The draft EIS greatly underestimates the loss in property values

Because the draft EIS misinterprets the results or prior studies, ignores the results of the KOP analysis, and fails to consider impacts on land values and orderly development, it underestimates the effect of the lines on property values by more than a factor of ten. The potential loss in property value for the preferred route (Alternative 2) is not less than $10 million as shown in the draft EIS, but more than $100 million.

0003-10

Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

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0003-11

Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on property values using the most relevant available research. Adjustments to the original analysis presented in the draft EIS have been updated in the final EIS to reflect comments on the methodology and assumptions. This analysis considers visibility of the Project, as analyzed throughout the EIS (see Sections 4.1.1, 4.2.1, 4.3.1, 4.4.1, and 4.5.1) and the Visual Impact Assessment Technical Report.

0003-11

0003-12

Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

0003-12

SPNHF Comments for Joint SEC/DOE Hearing in Colebrook, March 7, 2016

My name is Will Abbott, and I am here today representing the Society for the Protection of NH Forests, where I serve as Vice President for Policy & Reservation Stewardship.

I have comments for the DOE on the Draft EIS. I also have comments for the SEC on the proposed Northern Pass application, comments to supplement those made by our President/Forester Jane Difley last week in Meredith. I will offer comments on the DEIS now, and respectfully request the opportunity to present an additional three minutes of comments on the SEC issues once all others have had a chance to speak.

DEIS COMMENTS

Concerning the Draft EIS, the Forest Society sees one major flaw that must be corrected in the final EIS. We believe that the DEIS fails to satisfy the legal requirements of the National Environmental Policy Act (NEPA) because it fails to study more than one international border crossing.

NEPA regulations require federal agencies to (and I am quoting directly from the regulations here) "to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment." An environmental impact statement (EIS) is the tool provided by NEPA to study a range of alternatives. The EIS is designed to inform the federal permitting agency as to what is the least damaging environmental alternative is for the project. NEPA does not require that the agency choose the least damaging alternative, only that it study a range of alternatives to inform the agency's decision.

The DEIS before us today does not study a range of alternatives for the international border crossing. It only studies one crossing alternative, the one presented by the applicant. And the applicant's proposal is the one requested by its customer, Hydro-Quebec.

We strongly urge the DOE to prepare a final EIS that studies at least one additional alternative to the applicant's preferred border crossing point. This would correct the flaw and would better inform DOE's Presidential Permit decision.

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Thank you for your comment. Northern Pass has applied to the Department of Energy for a Presidential permit for an international border crossing associated with an HVDC transmission line that would run from Quebec, Canada to Deerfield, NH. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE, however, does not have siting authority for the Project. In this case, the New Hampshire Site Evaluation Committee has siting authority for the Project in the state of New Hampshire. Additionally, the USFS has siting authority for portions of the Project located in the White Mountain National Forest. (For further discussion, see Sections 1.1-1.3 of the final EIS.) While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a "connected action" under NEPA. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from detailed analysis. Section 2.4 of the final EIS has been updated with additional information on alternatives considered but eliminated from detailed analysis. Among these alternatives, DOE considered two alternate border crossings. One was an alternative that would utilize the existing National Grid Phase I/II route, including its border crossing in Vermont. Based on its review of the National Grid alternative DOE determined that this alternative is not reasonable. Section

2.4.3 of the final EIS has been updated with additional information related to the National Grid alternative. Separately, in response to comments received on the draft EIS, DOE considered a second alternative border crossing in Vermont, specifically identified as a border crossing at Derby Line, VT that would utilize I-91. DOE determined that this alternative is not reasonable. Section 2.4.17 of the final EIS has been added to reflect consideration of this alternative and DOE's determination.

Given that NP changed the size of the facility and the cable technology proposed for the project last summer, after the original EIS work was completed, this is another compelling reason to revisit the issue of options for crossing the international border.

As just one example, if the final EIS studies an alternative border crossing at Derby Line, VT, it could then consider a completely buried facility from Derby Line to either Hartford or Boston or even Deerfield, NH. This would get the electricity to the southern New England markets Bill Quinlan explained earlier is a primary objective of Northern Pass.

Consider that a buried route along I-91 and I-93 would avoid Coos County completely, and all of the adverse impacts the current proposal has on Coos County.

Consider that a buried transmission line down I-91 and I-93 between Derby Line and Exit 40 off I-93 in Bethlehem NH is 10 miles shorter than the current serpentine route through Coos County.

Consider that a completely buried line from Derby Line to Deerfield would avoid nearly all of the adverse impacts of the 132 miles of overhead lines currently proposed.

Consider that an alternative border crossing at Derby Line would provide an alternative to a Coos County route that may be rendered moot by a property rights lawsuit that we have raised in Coos County Superior Court concerning our land in Clarksville, which I will discuss in more detail later.

The point here is that the DRAFT EIS does not consider any border crossing except the applicant's proposed crossing at Hall's Stream. In doing so the DEIS fails to meet a primary statutory objective of NEPA and fails to fully inform DOE on the decision ahead of it concerning the President Permit. This is precisely why NEPA requires a range of alternatives to be studied in the first place. The final EIS should study more than one border crossing.

SEC COMMENTS

Concerning the SEC application, I would like to share concerns with the subcommittee regarding two properties we own in Coos County that are directly impacted by NP as currently proposed.

Our 2000 acre Washburn Family Forest in Clarksville has six miles of frontage on the Connecticut River. The River itself is the town line between Pittsburg and Clarksville. The Washburn Forest includes land you visited today just south of the bridge where Route 3 crosses the River.

0004-1 cont'd

0004-1 Continued

0004-2

Thank you for your comment. The Washburn Family Forest is included as a scenic resource in the landscape assessment. Visual impacts in the Northern Section are analyzed in the EIS (Section 4.2.1) and Visual Impact Assessment Technical Report (Section 4.1). Thank you. These comments have been provided to the SEC for use in its proceedings.

0004-2

As you observed earlier today, this land provides an exceptional scenic gateway into the Town of Pittsburg. If NP is built as proposed, this natural landscape will be forever scarred by the overhead lines coming from Hall's Stream to the point near Route 3 where the transition station from above ground to underground is proposed to be built. This permanent scar would harm more than just the Washburn Family Forest.

Furthermore, Northern Pass proposes to build its line 50 to 70 feet below the surface of Route 3 as the road crosses our land. The State holds a transportation easement over this land by virtue of a road layout approved jointly by the selectmen of Pittsburg, Stewartstown and Clarksville in 1931.

We believe Northern Pass does not have the legal right to build the project through our land as they propose. Without our permission, this would constitute an unconstitutional taking. We are, therefore, defending our property rights in the only legal setting where the NH Constitution provides for such relief, in Coos County Superior Court. If the Court rules in our favor, NP cannot dig in our dirt. And if NP cannot dig in our dirt the entire corridor now proposed through Coos County will likely be abandoned. When we suggested that under SEC rules this legal issue rendered the NP application incomplete, you chose to decide otherwise. But the legal dispute is real. No case with such a set of facts has ever been decided before by a New Hampshire court. The Forest Society continues to believe that it is inappropriate and a waste of resources for all of us to be investing so much time and money into this matter while the court is considering our case.

Finally, I would like to bring to your attention the concerns we as a landowner have with the proposed use of the PSNH ROW through more than a mile of our Kauffmann Forest in Stark. In this 150 foot wide right of way held by PSNH and the Portland Natural Gas Pipeline Company there is presently a 115kv overhead transmission line on wooden poles below tree line and a 24 inch natural gas pipeline buried four feet below ground. Northern Pass proposes to remove the existing above ground transmission facility and replace it with an entirely new set of steel structures well above tree line to host a new enhanced AC transmission line. This AC line is the so-called "Coos Loop." NP also proposes to erect a second set of structures within the 150 ROW to host the new HVDC line, also well above tree line. Many of the individual towers for both facilities will be above 100 feet in height.

There is a very practical question as to how many transmission facilities can be safely crammed into this 150 foot ROW. There is a question about whether the consequence of what NP proposes represents an unreasonable adverse impact on aesthetics. And there is the question about just how safe it is to co-locate all three of these facilities in the existing ROW.

0004-2 cont'd

0004-2 Continued

0004-3

0004-4

0004-3

Thank you for your comment. Sections 4.1.6 and 4.2.6 of the EIS analyze land use impacts to conservation lands in Coos County and the Northern Section of the alternatives. As noted in Section 1.7.3.1 of the final EIS, the State of New Hampshire Site Evaluation Committee (SEC) is an eleven member committee representing state agencies and the public that review and act upon applications to construct energy facilities. This is a non-federal process in which DOE has no role. Therefore, SEC approval is beyond the scope of this analysis. Additionally, the legal rights along the alternatives fall under the purview of the court system and are also beyond the scope of this analysis. The Applicant will be responsible for securing all necessary rights and land use approvals to utilize any route permitted by the SEC.

0004-4

Sections 3.1.6.3 and 3.1.6.4 of the final EIS discuss rights-of-way and the law, regulation and policy surrounding the use of public rights-of-way for a potential transmission route. Greater detail regarding the pertinent laws, regulations and policies is provided in Section 1.5 of the Land Use Technical Report.

0004-4

Thank you for your comment. As discussed in Section 4.1.4.2 of the EIS, to ensure the safety of any existing pipelines or utilities during operation of the project, the Applicant would conduct studies during project design to determine if the presence of the buried cable could adversely affect existing utilities. If so, appropriate mitigation would be provided.

0004-4 cont'd

If NP is built through Stark as proposed, the natural landscapes of the Town of Stark will change dramatically. If NP as proposed in Stark were built, will private property be harmed if any of these new towers fall outside the ROW? Or if they fall on each other? Or if they fall in a way that disrupts the gas pipeline?

We think that what Northern Pass proposes for our land in Stark is not only an unreasonable adverse impact on aesthetics but also an unreasonable adverse impact on public safety.

As the SEC subcommittee contemplates the NP application, we ask that you consider these questions about property rights, aesthetics, public safety, and natural resources much more comprehensively than the DOE's Draft EIS does. New Hampshire only has one chance to get the decision on this application right. To make a well informed decision on the NP application, the SEC should set a very high bar for the substance of its review.

Thank You.

0004-4
Continued

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9204

Date Entered: Apr 4, 2016

Source: Website

Topics: Purpose and Need, Alternatives, Viewshed/Scenery, Recreation, Cumulative Effects, Forest Service Lands, NEPA Process, Design Criteria / Mitigation Measures

Name: Hawk Metheny

Organization: Appalachian Trail Conservnacy

Title: New England Regional Director

Email: hmetheny@appalachiantrail.org

Mailing Address: 158 Sweetwater Drive

City: White River Junction

State: VT

Zip: 05001

Country: US

Comment: Comments from the Appalachian Trail Conservancy for the DEIS supplementing our comments submitted in December 16, 2010, June 13, 2011, and November 5, 2013. Please see attached.

APPALACHIAN TRAIL CONSERVANCY®

April 4, 2016

Brian Mills
Senior Planning Advisor
Office of Electricity Delivery and Energy Reliability (OE-20)
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
Brian.Mills@hq.doe.gov

RE: Appalachian Trail Conservancy comments on the Draft Environmental Impact Statement for the Northern Pass Transmission Line in New Hampshire

Dear Mr. Mills:

I am writing on behalf of the Appalachian Trail Conservancy (ATC) regarding the above-referenced Draft Environmental Impact Statement (DEIS) and Supplemental Draft Environmental Impact Statement (SDEIS) for the proposed 1200 MW HVDC Northern Pass Transmission Line and the associated potential impacts to the Appalachian National Scenic Trail (ANST or A.T.). These comments will supplement the written comments submitted by ATC on December 16, 2010, June 13, 2011 and on November 5, 2013, and the oral comments submitted at the DOE public scoping meetings on March 16, 2011 in Lincoln, NH; on March 20, 2011 in Haverhill, NH; and on September 25, 2013 in Whitefield, NH.

Organizational background—ATC is a private, nonprofit, educational organization founded in 1925 (as the Appalachian Trail Conference) to coordinate private-citizen as well as public-agency efforts to design, construct, and maintain the Appalachian Trail and to conserve and manage adjacent lands and resources. ATC has a membership of 45,000 individuals and also is a federation of 31 affiliated hiking and outing clubs throughout the eastern United States, each of which maintains an assigned segment of the Appalachian Trail. From its earliest beginnings, the Appalachian Trail and its associated facilities have been maintained largely by a corps of dedicated volunteers that today numbers more than 6,000 individuals and who last year contributed about 240,000 hours to Trail maintenance, protection, and education.

Mission—The Appalachian Trail Conservancy's mission is to preserve and manage the Appalachian Trail—ensuring that its vast natural beauty and priceless cultural heritage can be shared and enjoyed today, tomorrow, and for centuries to come.

Appalachian Trail overview—The Appalachian Trail is a 2,189-mile footpath extending from Maine to Georgia through 14 states, generally along the ridgelines and major valleys of the Appalachian Mountain range. The A.T., as it is generally known, connects six National Parks, eight National Forests, including the White Mountain National Forest, and more than 60 state parks, forests, and game-management units. The Trail received Federal recognition in 1968 under the National Trails System Act as the nation's first National Scenic Trail. Congress mandated through that act that the Appalachian National Scenic Trail would be administered by the Secretary of Interior in consultation with the Secretary of Agriculture. As an outgrowth of amendments to the act in 1978, and notwithstanding its mosaic pattern of land ownership and administration, the Trail is now identified as a unit of the National Park System and is administered by the A.T. Park Office and the Appalachian Trail Conservancy in separate offices in Harpers Ferry, West Virginia. ATC has formal agreements with the National Park Service, the U.S. Forest Service, and

numerous state agencies in the management of the A.T. Over two million annual visitors hike or backpack on the A.T.

Comments on Northern Pass DEIS and SDEIS--- In July 2015 DOE issued the draft Environmental Impact Statement for the proposed Northern Pass Transmission line and in November 2015 a supplemental draft Environmental Impact Statement. The focus of these comments will be on the impacts the proposed project would have on the Appalachian National Scenic Trail, both at the direct crossing and from key viewpoints along the ANST. As noted in the DEIS, the long-term impacts to the ANST would be reduced by an underground installation along roadway corridors through the WMNF as opposed to an overhead installation as originally proposed and analyzed as Alternative 2.

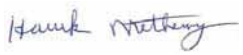
ATC agrees that there could be short and long term-term scenic and recreational experience impacts to the ANST at the Rt. 112 crossing during construction from an underground installation as described in Chapter 4 of the DIES and SDEIS. Since it will be essential that the Appalachian Trail remain open for safe travel during the construction process, ATC requests that a detailed description appear in the final EIS on how both the impacts from construction and the long-term impacts will be minimized or mitigated at the Rt. 112 crossing.

ATC also requests that a photo simulation be created from Mount Lafayette (viewpoint FR-2a in the DEIS appendix) with the camera angle to the northwest so that the simulation can depict the underground installation ROW for Alternatives 4B, 4C, 5B, 5C, 6B and 7 through Bethlehem, Sugar Hill and Franconia. A second photo simulation should also be created from the summit of Mt. Garfield. The views from both of these locations are highly important scenic attributes of the ANST. These simulations should be created for Alternatives 4B, 4C, 5B, 5C, 6B and 7 so that ATC and the public can determine which of these alternatives would have the least impact on these scenic qualities of the ANST.

Current Status—The ATC's New England Regional Office has been actively engaged in the public process for this project and has been working closely with the White Mountain National Forest and EIS Group on the analysis of the impacts the proposed project would have on the Appalachian National Scenic Trail. We will continue to do so and will be monitoring developments related to this project, and we appreciate being kept informed of any new changes in the EIS process. Also, please contact our office if any questions or clarifications arise that are related to the Appalachian National Scenic Trail and the EIS process.

Thank you for this opportunity to comment.

Sincerely,



Hawk Metheny
New England Regional Director
Appalachian Trail Conservancy
158 Sweetwater Drive
White River Junction, VT 05001
802-281-5890
hmetheny@appalachiantrail.org

0005-1

0005-1
Thank you for your comment. Potential short- and long-term impacts to the recreation experience on the ANST from Alternative 7 - Proposed Action are analyzed in Section 4.5.3.12 of the final EIS. All impacts would occur at the existing road crossing, where the recreational experience is currently impacted by the presence of traffic and road infrastructure. Appendix H of the final EIS has been updated to include additional measures intended to minimize impacts at the ANST crossing.

0005-2

0005-2
Thank you for your comment. Additional simulations have been prepared and incorporated into the final EIS to ensure that representative views are presented for all alternatives, including Alternative 7 - Proposed Action. The high peaks in the White Mountain National Forest (WMNF) are well represented among the photo-simulations and Key Observation Points (KOPs). No additional simulations have been prepared for views in the WMNF in response to this comment. Visual impacts to the Appalachian National Scenic Trail (ANST) are analyzed in Section 4.5.1 of the EIS.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 25, 2015

ID: 8216

Date Entered: Jul 25, 2015

Source: Website

Topics: Vegetation

Organization: none; concerned citizen

Comment: Once the land is destroyed, it's gone. Find an alternate transmission method.

0006-1

0006-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 25, 2015

ID: 8217

Date Entered: Jul 25, 2015

Source: Website

Topics: Purpose and Need, Viewshed/Scenery, Historic/Cultural, Economic, Tourism, Quality of Life, Cumulative Effects, Environmental Justice

Organization:

Comment: The Northern Pass project represents only a negative to NH, impacting property values, tourism, quality of life, economics, and possibly health. There is no benefit to NH. The line should be buried in its entirety.

0007-1

0007-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 25, 2015

ID: 8220

Date Entered: Jul 25, 2015

Source: Website

Topics: Recreation

Organization:

Comment: I go North to relax, regenerate. I do not feel that this assault for energy is really going to change our energy consumption issues.
What I am sure of is this: the wilderness areas are too important to life, ours and the life that goes on, unseen, to risk the damage that the Northern Pass will do to this area.
Hopefully, the powers that be will set aside their greed and stop this nonsense before a beautiful area is ruined.
Listen to what the people are saying and honor the intent that created these wild spaces.

0008-1

0008-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 25, 2015

ID: 8221

Date Entered: Jul 25, 2015

Source: Website

Topics: Alternatives

Organization:

Comment: As a New Hamshire resident, I completely oppose the Northern Pass Project in its current form. It offers little to no benefit to our state, while offering only destruction of our scenic forests and mountains. If this is truly a necessary project, than it should be buried. The residents of our state should not be paying the price just to insure higher profits for a foreign company. I am amazed that anyone is actually still considering using towers for this project.

No Northern Pass!

Thank you

0009-1

0009-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 26, 2015

ID: 8223

Date Entered: Jul 26, 2015

Source: Website

Topics: Purpose and Need

Organization:

Comment: NO to Northern Pass.

0010-1

0010-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 26, 2015

ID: 8224

Date Entered: Jul 26, 2015

Source: Website

Topics: Health and Safety, Water / Wetlands, Private Property/Land Use, Taxes

Name: Edward Giunta

Organization:

Email: montealto@roadrunner.com

Mailing Address: 35 weston woods cir

City: campton

State: NH

Zip: 03223

Country: US

Comment: I am opposed to the building of this project as it now stands. My house and those of my neighbors are within a few hundred feet of the right of way where these towers are to be built. The whole world remembers what happened on September 11 2001 but everyone seems to have forgotten about the ice storm of 1998 where around 1000 of these towers came tumbling down in southern Quebec causing billions of dollars of damage.the fact of the matter is that this project has nothing to do with power, it has more to do with PSNH now Eversource leasing their so called right of ways to Hydro Quebec for millions of dollars a year. If this project is allowed to happen it should be buried where it belongs and put on the State of New Hampshire right of ways so the State can earn that much needed money.One more thing, I have 2 children and 5 grand children living in Germany where all lines have been put under ground since the 1970's, in all those years they don't know what a power outage is.

0011-1

0011-1
Thank you for your comment.

Statement to Joint Hearing by US DOE and NH SEC on Proposed Northern Pass Project
Carl D. Martland, Chair, North Country Scenic Byways Council
Home address: 16 Post Road, Sugar Hill, NH 03586
Martland@mit.edu

My name is Carl D. Martland, and I live in Sugar Hill, NH. I have more than 40 years' experience in research and analysis related to infrastructure projects, and I am the author of "Toward More Sustainable Infrastructure: Project Evaluation for Planners and Engineers," a textbook that is based upon a course that I developed and taught at MIT for more than ten years.

I am the Chair of the North Country Scenic Byways Council (NC SBC), which is responsible for developing and maintaining management plans for the scenic and cultural byways in northern New Hampshire. Members of the council represent communities served by the byways, state departments concerned with transportation and tourism, regional planning groups, and non-profit organizations that promote the use of the byways to reach the many attractions of the North Country of New Hampshire. In October 2015, NC SBC submitted comments concerning the impact of the proposed Northern Pass project on North Country's scenic byways, which are the basis for my comments today.

Three of the region's major scenic byways would be adversely affected by the proposed Northern Pass Project. These byways cover all of the major state roads and non-interstate US highways serving the North Country:

1. The Presidential Range Trail includes NH Route 302 from Littleton to Twin Mountain, US Route 3 from Twin Mountain to Lancaster, and NH Route 116 from Whitefield to Jefferson along with routes further south that go through Crawford Notch on NH Route 302 and then head north on NH Route 16 through Pinkham Notch.
2. The Woodland Heritage Trail includes US Route 2 from Gorham to Lancaster, US Route 3 from Lancaster to Groveton, NH Routes 110/110A from Groveton to Milan, and NH Route 16 from Milan to Gorham.
3. The Moose Path Trail extends from Gorham to Colebrook to Pittsburg to the Canadian border along NH Routes 16, 26, 145 and US Route 3.

The local roads that are accessed from the scenic byways are in many cases even more rural, more scenic, and less touched by 20th century industrialization than the designated scenic byways themselves. Prime examples would include Prospect Mountain Road in Weeks State Park, Lost Nation Road between Groveton and Lancaster, the access roads to Forest Lake State Park in Whitefield and Dalton, and the access roads to Coleman State Park in Stewartstown. The state-designated scenic byways are not only designed to highlight routes for a pleasant afternoon drive; they also provide visitors safe access to historical, cultural and recreational resources throughout the North Country. The byways lead visitors through the historic centers of old mill towns such as Whitefield, Lancaster, and Groveton, to beautiful rural villages such as Stark, and to the remaining 19th century resort hotels in Bretton Woods, Whitefield, and Dixville Notch.

If the project is constructed as proposed, then visitors to the North Country would suffer adverse visual impacts as they drive along the scenic byways and as they visit the attractions and wild areas that can be found along the byways. Visitors would have repeated views of massive industrial structures in what they expected to be a rural or wild region little touched by 20th century industrial development. The visual analysis presented in the draft EIS documents the dramatic negative effect that the proposed project will have on the region.

The draft EIS includes photo simulations of what the proposed towers would look like from 15 "key observation points" (KOPs) along roads, trails, and recreational sites. Experts in evaluating visual impacts quantified the visual impact of the existing and proposed towers by documenting what they termed the "contrast-dominance rating" for each photo. This rating varies from 0 to 45, depending upon the apparent size of the structures and the extent to which the structures contrasted with the surrounding environment. The rating is higher for taller, more massive, closer structures that are located in a less developed, more pristine location. Based upon this rating, they describe the visual impacts on a casual observer as negligible, weak, moderate, strong, or severe, or severe. A moderate impact is "clearly noticeable to a casual observer, and is likely to be considered adverse." A strong impact is "likely to be considered adverse … and may be considered unreasonable." A strong impact is "likely to be considered unreasonably adverse."

The photo simulations cover three situations of special interest to users of the scenic byways:

0012-1

0012-2

0012-1
Thank you for your comment. Impacts to national, state, and local scenic byways, including the Presidential Range Tour, Woodland Heritage Trail, and Moose Path Trail are analyzed in the EIS and Visual Impact Assessment Technical Report (see Sections 4.2.1, 4.3.1, and 5.1.1). Impacts to other roadways are included in the Roads-Based Analysis in the EIS and Visual Impact Assessment Technical Report.

0012-2
Thank you for your comment. As analyzed in the Visual Impact Assessment Technical Report, six Key Observation Points (KOPs) are located at scenic route crossings: CL-1 in Clarksville, NH on the Connecticut River National Scenic Byway and Moose Path Trail, BT-1 in Bethlehem, NH on the Presidential Range Tour, CA-1 in Campton, NH on the River Heritage Tour, EA-3 in Easton, NH on the River Heritage Tour, and LI-2 in Lincoln, NH on the White Mountain Trail National Scenic Byway. Visual impacts of the Project from roadways are analyzed throughout the EIS (Sections 4.1.1, 4.2.1, 4.3.1, 4.4.1, and 4.5.1). The impact of cumulative or repetitive exposure is not evaluated, but is considered infrequent at most locations. The impact analysis is presented by geographic section in order to facilitate review, and a summary of project-wide impacts is presented in Sections 2.5.1 and 4.1.1 of the EIS. The results of the KOP analysis are also summarized project-wide in Chapter 5 and the end of Appendix A of the Visual Impact Assessment Technical Report. As described in the Visual Impact Assessment Technical Report (Section 2.4.6), the selection of viewpoints is representative of various landscape conditions, including distances from the Project. However, the impact of the Project at each viewpoint depends on other unique characteristics such as intrinsic visual quality, visual magnitude, immediate and distant landscape character, scenic concern and viewer exposure which makes it difficult to extrapolate to other similar locations.

Views of towers at road-crossings: the visual impact will be severe, i.e. "unreasonably adverse", at eight locations where the proposed transmission lines would cross scenic byways and at nearly forty other locations in Coos County where the lines would cross access roads from the byways to state parks, recreational trails, and other scenic & cultural resources (see KOP BT-1 for a simulation of towers at a crossing of a scenic byway).

Views of a row of towers from a byway: in some locations, such as driving along Route 3 from Whitefield toward Pittsburg, visitors will have repeated views of a row of towers running along a nearby hillside. According to the KOP analysis (see KOP WD-3), the visual impact of a row of towers roughly 1,400 feet from the highway can be strong, i.e. "adverse and possibly unreasonable". The cumulative effect of coming across several such vistas when driving along a scenic byway would be even more unreasonable.

Views of towers from a scenic vantage point: the proposed lines and towers of the Northern Pass Project would be seen again and again as visitors traveled along local roads to visit nearby attractions, including historic town centers, hiking trails, farm stands, lakes, rivers and streams. Even from a distance of more than a mile, the visual impact will increase from weak to moderate when a row of steel towers is added (KOP LA-2). At closer distances, the visual impact will increase from negligible to strong or severe in locations where there no lines are currently visible (KOPs CL-1, DU-1, DE-2).

The draft EIS only included simulations for 15 points, but these 15 points represent the entire range of possible conditions, from zero impact if nothing is visible (CL-1, existing conditions) to the severest impact for someone staring at a tall steel lattice tower from less than 40 yards away (LI-4). Complete results of the KOP analysis can be found in Tables 1 and 2. I have color-coded the results of the KOP analysis so that it is easy to compare the existing situation (Table 1) and the proposed situation (Table 2). Today, the visual impact is strong or severe from only four of the 15 KOPs. If the towers are built, then the impact would be strong or severe for all but three of the KOPs. A closer look at Table 2 shows conclusions of interest to travelers along the byways and visitors taking advantage of the scenic, cultural, and recreational resources of the North Country:

- Visual impacts were severe and deemed unreasonably adverse for all locations where towers would be visible within 750 feet.
- Visual impacts were strong and deemed adverse and possibly unreasonable for all locations where towers would be visible from 750 to 1800 feet of the line.
- Visual impacts may be moderate or strong even for distances up to two miles from the nearest tower. Even moderate impacts are "likely to be considered adverse" by a casual observer.

In short, the KOP shows that the visual impact of the proposed towers would be "adverse" or "unreasonably adverse" at many locations for people using the scenic byways to explore the North Country of New Hampshire. The strength of the KOP analysis is that it is based upon photographs taken from actual viewpoints that' would be of interest to travelers on scenic byways, to hikers or fishermen, or to people considering renting or purchasing property for weekends, vacations, or retirement. The weakness of the KOP analysis is that its results are spread across multiple sections of the draft EIS, and no attempt is made to show how the KOP analysis could apply to different locations.

Unfortunately the KOP analysis is basically ignored and contradicted by the conclusion of the draft EIS that the visual impact of the project would be minor. This conclusion is based upon a different visual analysis, which considers the average impact over the entire viewshed of the project. The conclusion is based upon a result showing that there would only be a 10% increase in the average scenic impact, ignoring the fact there would be an increase of 165% in the size of the viewshed in the North Country. This is like saying that the flood waters have only risen 10% when more than twice as much land is flooded.

In conclusion, the North Country Scenic Byways Council believes that the analysis included within the draft EIS documents the adverse and unreasonably adverse impacts of the proposed project on the scenic, cultural, and recreational resources found along the scenic byways of the North Country. In our earlier, more detailed comments, we have recommended ways to improve the presentation of the visual analyses within the Final EIS. Today we are happy to also have the opportunity to document the adverse aesthetic impacts of the proposed Northern Pass route on the scenic byways and the magnificent scenic, cultural and recreational resources that can only be accessed by traveling along the scenic byways of the North Country. The Site Evaluation Committee must conclude that these adverse impacts can only be averted by requiring the line to be buried throughout the North Country.

0012-2 cont'd

0012-2
Continued

0012-3
Thank you for your comment. All GIS-based models were re-run to address the commenter's concern. A new calculation, the "aggregate scenic impact," was added to the final EIS and additional aggregate indices were added to the Visual Impact Assessment Technical Report to account for an increase in the size of the affected area. However, the area and average indices used in the Visual Impact Assessment Technical Report are useful to make relative comparisons among alternatives (see Section 5 of the Visual Impact Assessment Technical Report).

0012-3

Consolidation of the Results of the Draft EIS's Analysis of the Visual Impact of Transmission Lines from Key Observation Points[1]

Table A1 Visual Impact of Existing Situation

Location	View	Number of Structures Visible	Distance to Nearest Structure (feet)	Visual Impact	
CL-1	View across fields toward forest and distant hills (no existing ROW)	0	-	0	
Franconia (FR-2)	View from summit of Mt. Lafayette	6	34,443	7 Negligible	
Dummer (DU-1)	View across Little Dummer Pond toward ROW on side of ridge	3	1,756	9 Weak	
Lincoln (LI-2)	Driving north along Interstate 93 where it enters Franconia Notch State Park	5	10,491	10 Weak	
Lancaster (LA-2)	View from ledge at Weeks State Park down toward lines crossing generally open area below	15	5,985	13 Weak	
Campton (CA-1)	View to north at Exit 28, where existing ROW climbs Sunset Hill	4	758	16 Weak	
Woodstock (WD-3)	Driving north along Interstate 93 just north of Exit 31 where towers climb across a ridge almost directly in front of viewer	6	2,665	21 Moderate	
Concord (CO-1)	View of three rows of lines next to a shopping center	6	737	22 Moderate	
Bethlehem (BT-1)	View across small pond where existing ROW crosses Route 302	2	579	24 Moderate	
Concord (CO-4)	View from boat ramp across Turtletown Pond toward lines extending along shore	10	1,058	25 Moderate	
Lincoln (LI-5)	View from Appalachian Trail near summit of S. Kinsman toward Bog Pond	25	9,320	25 Moderate	
Deerfield (DE-1)	Lines crossing field and then over a small ridge from Nottingham Road	17	301	28 Strong	
Woodstock (WD-4)	View along ROW where it crosses the Gordon Pond Trail	5	507	28 Strong	
Easton (EA-3)	View from where ROW crosses Route 116 looking east toward Kinsman Ridge	7	129	32 Strong	
Lincoln (LI-4)	Where the ROW crosses the Appalachian Trail at its intersection with the Reel Brook Trail, looking at the nearest tower	1	105	36 Severe	

[1] Source of data: details of KOP from Volume 2 of the draft EIS; contrast dominance ratings and qualitative interpretations from Sections 4.2.1, 4.3.1 and 4.4.1 of the draft IES.

Table A2 Visual Impact of Proposed Situation

Location	View	Number of Structures Visible	Distance to Nearest Structure (feet)	Visual Impact	
Franconia (FR-2)	View from summit of Mt. Lafayette	16	35,412	11 Weak	
Lincoln (LI-2)	Driving north along Interstate 93 where it enters Franconia Notch State Park	8	10,155	17 Weak	
Lancaster (LA-2)	View from ledge at Weeks State Park down toward lines crossing generally open area below	34	5,981	23 Moderate	
Lincoln (LI-5)	View from Appalachian Trail near summit of S. Kinsman toward Bog Pond	38	9,411	27 Strong	
Dummer (DU-1)	View across Little Dummer Pond toward ROW on side of ridge	6	1,756	29 Strong	
CL-1	View of new transition station at transition between towers and burial, across fields toward forest and distant hills	5	1,450	29 Strong	
Woodstock (WD-3)	Driving north along Interstate 93 just north of Exit 31 where towers climb across a ridge almost directly in front of viewer	11	1,391	32 Strong	
Concord (CO-4)	View from boat ramp across Turtletown Pond toward lines extending along shore	13	1,058	33 Strong	
Concord (CO-1)	View of three rows of lines next to a shopping center	7	749	36 Severe	
Campton (CA-1)	View to north at Exit 28, where existing ROW climbs Sunset Hill	12	649	37 Severe	
Bethlehem (BT-1)	View across small pond where existing ROW crosses Route 302	3	509	40 Severe	
Deerfield (DE-1)	Lines crossing field and then over a small ridge from Nottingham Road	24	325	42 Severe	
Woodstock (WD-4)	View along ROW where it crosses the Gordon Pond Trail	10	502	41 Severe	
Easton (EA-3)	View from where ROW crosses Route 116 looking east toward Kinsman Ridge	25	126	43 Severe	
Lincoln (LI-4)	Where the ROW crosses the Appalachian Trail at its intersection with the Reel Brook Trail, looking at the nearest tower	1	117	44 Severe	

My name is Carl Martland. I have previously submitted detailed comments to DOE concerning the Draft EIS, and in particular the visual impact analysis. I just wanted to hit the highlights of those just so other people might hear them. One, the literature review is one of three parts of the visual analysis. The visual literature review and the Draft EIS is in my opinion of limited use at best and misleading and erroneous at worse. I documented this the same as I would review an article for a professional journal. Second, the summary that is often cited by Northern Pass is very misleading. They say that the average visual impact increased from, I think it's 1.61 to 1.79. An increase of 10 percent. That's like someone saying that a river was flooding, the flood level was up only 10 percent, but the area flooded had increased by one and a half or two times which is the case with the visual impact. Third, the photo simulations and key observation point analysis is outstanding, and everybody should look at that, but the problem is that the results interpretation are dispersed throughout the document. There are 15 points, and I will get into that a little later. So my comments, main comments, today are addressed to the Site Evaluation Committee concerning the unreasonably adverse impacts of the proposed towers on the scenic byways, and I know we traveled today on the byways. You'll see more tomorrow. I hope you'll stop in Stark. Walk the byway a little bit and go up toward Christine Lake and Georgia farm lands, and you'll see many more of what my wife calls the cultural landscapes of the North Country. So I'm here as the Chair of the North Country Scenic Byways Council. We have submitted comments previously, and the main point of these comments is that the towers will obstruct the views for people using the byways, going off the byways on local roads to see the kinds of sites that we saw today and you will see tomorrow. Coleman State Park is a wonderful spot. You go another two miles down the road, you would have seen it. On the way down and on the way back, you would have noticed that view where we stopped, and then you would have gone under the lines and then you would have gone out on the lake and gone fishing and seen the towers over the hills. The photo simulations in the EIS differ from the ones you saw today because they also had visual experts interpret the views. They call it contrast/dominance rating. I'm not sure what is, but it goes from zero which is no towers to 45 if there's one right here. Every place the towers cross the road there's a tower within a hundred feet or so of the road. The visual impact is severe, which the experts call, not me, the experts call unreasonably adverse. Every tower that is within 750 feet according to the EIS would have an unreasonably adverse impact. Every tower that is within 750 to 1800 feet we would have an adverse impact, and depending on the situation, it would be unreasonably adverse. We're in the North Country. You've heard about the scenic landscape. You've seen it. That is the location where it would be unreasonably adverse. There are locations up to two miles. We saw some today where it was a mile away. The impact there might be strong or it might be moderate. We've heard in previous sessions, we saw a picture. We couldn't see those pictures because the lights prevented you, but it was like those we saw today. A mile away. That impact, according to the EIS methodology, could be moderate. What does moderate mean? Well, it might be considered adverse by a casual observer. So moderate is probably not what you were thinking. MR. HONIGBERG: Mr. Martland, how much more do you have? MR. MARTLAND: I've got a picture and one paragraph. Basically saying the North Country Byways Council knows that these impacts would be eliminated if the lines were buried. The picture is this. Even in the back of the room you can probably see the red, these are the 15 key observation points. Red means it was severe. This color means it was moderate. Every point in the group has in that picture and I have a longer statement that I will leave with you. Thank you very much.

0013-1

0013-2

0013-3

0013-1
Thank you for your comment. All GIS-based models were re-run to address the commenter's concern. A new calculation, the "aggregate scenic impact," was added to the final EIS and additional aggregate indices were added to the Visual Impact Assessment Technical Report to account for an increase in the size of the affected area. The rating scales used in the landscape assessment characterize a single cell or point, and it is a misinterpretation to apply the same descriptions to the average value. However, the area and average indices used in the Visual Impact Assessment Technical Report are useful to make relative comparisons among alternatives (see Section 5 of the Visual Impact Assessment Technical Report).

0013-2
Thank you for your comment. Impacts to national, state, and local scenic byways are analyzed in the EIS and in the Visual Impact Assessment Technical Report (see Sections 4.1.1, 4.2.1, 4.3.1, 4.4.1, and 4.5.1 of the EIS, Section 2.4.2.4 and Chapter 4 of the Visual Impact Assessment Technical Report).

0013-3
Thank you for your comment. The EIS and Visual Impact Assessment Technical Report analyze potential impacts to visual resources resulting from the Project. Visual impacts are summarized in Section 2.5.1 of the EIS, and are further evaluated under each geographic section and alternative (see Sections 4.1.1, 4.2.1, 4.3.1, 4.4.1, and 4.5.1 of the EIS). The method for the contrast-dominance ratings of simulations is described in Section 2.4.6 and Appendix E of the Visual Impact Assessment Technical Report.

COMMENTS ON THE *DRAFT ENVIRONMENTAL IMPACT STATEMENT*
PREPARED BY THE US DEPT. OF ENERGY REGARDING THE *PROPOSED* NORTHERN PASS TRANSMISSION LLC

To: Brian Mills, PhD, Office of Electricity Delivery and Energy Reliability (OE-20)
U.S. Department of Energy, 1000 Independence Avenue SW, Washington, DC 20585
From: Rebecca Weeks Sherrill More, Ph.D., Weeks Lancaster Trust, Lancaster NH
Date: April 2, 2016

Members of the family of the Hon. John Wingate Weeks, sponsor of the Weeks Act of 1911, are deeply concerned about the *Adverse Effect* of the proposed Northern Pass Transmission LLC project (NPT) on the environment, historical and cultural landscape, and economy of the state of New Hampshire. As a result, our family, represented by the Weeks Lancaster Trust, filed a Motion to Intervene against the request of the Northern Pass for a Presidential Permit in 2013. As Interveners, the following comments are submitted for your consideration and intended to improve the Dept. of Energy's *Draft* Environmental Impact Statement (EIS) & Supplemental Report (July & December 2015). This document does not include Section 106 Review Consulting Party comments that will be submitted separately. These Comments on the Draft EIS are intended to **improve** the *Final* edition of the EIS.

1. **The narrow (1 mile) Area of Potential Impact (APE) is inappropriate for New Hampshire**. While such a narrow APE may be suitable for project Review in some geographic areas, it is not suitable for a state with varied terrain, including the highest aggregation of mountains in New England settled in 1623. Forests, wetlands, historic and cultural landscapes and major recreation/tourist areas are distributed up and down the path of this proposed project. It is possible to see, hear and relate to the construction of a major 192 mile corridor of TWO (2) parallel lines of c. 100' + Towers (or buried cable) from far longer distances than might be the case in flat lands. James L. Garvin, PhD, retired State Historian has already written eloquently to Mr. Mills on this issue (July 23, 2015). Scenic views in NH are not static - a bend in the road or on a hiking trail will reveals a new vista. Four seasons in this state also change the aspects of a vista and, therefore its impact. An example of the false conclusions based on the 1-mile APE is the selection of a narrow restricted Key Observation Point (KOP #LA-2a) from Weeks State Park in Lancaster NH. Another example would be the low impact assigned to the many hiking trails in the state, including the ANSC (Supplement 4.3: Table S-5). Views obtained from Rte. 3 at Colby Rd., Rte 116 at Kimball Hill Whitefield and Rte 2 at North Rd Jefferson show a different view of the proposed Towers than from the Mountain View Grand hotel (selected for analysis). Rtes 3, 2 and 116 are the routes most Tourists will use. ***Recommendation***: **The APE should be Amended to a minimum five (5) mile APE or an ideal, ten (10) mile APE, consistent with the already accepted (DOE & NH SEC) ten (10) mile Zone of Visual Effect (ZVI).**

2. **The Draft EIS materials are based on false data provided by NPT.** Much of the Draft EIS analysis is based on documentation submitted by the NPT. However, based on careful study and cross-referencing of those related to Weeks State Park in Lancaster NH and the surrounding historical and cultural landscape, many are flawed, inconsistent with each other or misleading. Therefore, the Draft EIS materials are based on false premises. An example would be the "overlook" data provided for Weeks State Park in Lancaster NH (KOP LA#2). ***Recommendations*: See specific critiques of data below #s7, 8 and 9.**

3. **The Draft EIS does not address the impact of a 192 mile corridor of TWO (2) parallel lines of c. 100' + Towers** (or buried cable). The emphasis is on the 1,198 *new* HVDV Line of Towers carrying three - five transmission lines with an average height of some 90 - 120" in height, each carrying 3 - 5 wires. However, the "relocation" of the *existing* lines, creates a parallel line with Towers just as high or higher. The result is **more** visible that a single line. Furthermore, the NPT documents submitted are misleading in that they do not clearly disclose the DOUBLE line and DOUBLE number of Towers proposed. Not least, Wires will be visible at different times of day in different light conditions. None of the submitted materials analyze these factors. ***Recommendation***: **DOE will need to review the data and reconsider the Impact of TWO (2) Transmission lines.**

4. The Draft EIS does not discuss how **DEEP** *blasting* and *digging* with the ROW or underground State Routes will be for the 100'+ Tower footings. Monopoles on the Clean Energy website

0014-1

Thank you for your comment. EIS Section 3.1.8.2 describes the study area for the EIS analysis. For historic and cultural resources, the study area is informed by the area of potential effects ("APE") [36 CFR Section 800.16(d)] determined by DOE, through consultation, for DOE's review of the proposed Northern Pass project in accordance with Section 106 of the National Historic Preservation Act of 1966 ("NHPA"). The EIS describes the methodology and consultation informing DOE's definition of the APE. The Section 106 programmatic agreement documents the development and definition of the APE. The APE is the area within which the proposed project may directly or indirectly cause changes in the character or use of historic properties, should any be present. The Direct APE is the area that potentially would be directly and physically impacted by the project. The Indirect APE is usually larger than the Direct APE and may extend beyond it to encompass additional properties that could be affected indirectly by the project. The indirect APE is typically used to account for potential adverse visual impacts/effects to identified historic properties (those that are NRHP-listed or NRHP-eligible historic resources) within the indirect APE for the proposed Northern Pass project. With respect to the recommendation to change the APE, the definition of the APE has been determined through Section 106 consultation and informs the study area for this document. The referenced 10-mile zone of visual interest (ZVI) accepted by DOE is not an accurate statement. The ZVI is the area from which the components of the proposed are theoretically visible. DOE's ZVI varies along the project route as a result of different factors such as the project design, the topography of the terrain, and the pre-existing built and natural environment. No changes have been made to the final EIS in response to this comment.

0014-1

0014-2

0014-2

Thank you for your comment. The analysis presented in this EIS was conducted by independent contractors under the direction of DOE. A review of data submitted to the New Hampshire Site Evaluation Committee is beyond the scope of this EIS. The analysis was performed according to the project design specifications provided by Northern Pass to DOE in their application for a Presidential permit.

0014-3

0014-4

0014-3

Thank you for your comment. The EIS and the Visual Impact Assessment Technical Report do consider the visual impact of both proposed structures and transmission lines, and the

relocation of existing lines. Proposed new structures/lines and relocated structures/lines are represented in all simulations, as applicable.

0014-4
Thank you for your comment. Several sections in the EIS discuss the requirements for and evaluate the impacts of installation of transmission towers and burial of the transmission line (e.g., Sections 2.3.2.5, 2.3.12.5, and 4.1.14; see specific alternatives in each geographic area). Evaluation of specific depths and the resulting impacts and mitigation at specific locations would be addressed during subsequent federal and state permitting processes, as applicable. The Geology and Soils Technical Report has been updated to include additional description of tower footer construction details, including typical depths. Appendix H discusses mitigation measures intended to avoid, minimize, or mitigate impacts to geology, soils, vegetation, and wildlife.

(http://www.cleanlineenergy.com/technology/transmission-line-structures) indicate a below-ground minimum of 25'. In NH's granite and clay soil, not to mention wetland areas such as the Pondicherry section of the Silvio O. Conte National Wildlife Refuge (Whitefield NH), this could result in blasting and digging at a depth which could take a very long time for wildlife and plant material to heal or adapt. ***Recommendation***: **A more specific analysis of the depth required for the proposed monopoles and the resulting impact is required.**

5. The Draft EIS Supplement (Nov. 2015: section 4.5, #7) does not address the specific impact of burial in Alternative Route 7 along State Routes in **highly populated areas**, such Plymouth NH (students) or Franconia (tourists). See #4 above - what will be the impact of blasting and digging and for how long in those areas. ***Recommendation*: Review the data provided within the context of highly populated areas**.

6. **The NPT Data misstates the number of Towers visible**. For example, Weeks State Park commands 360o panoramic views. On a clear day these views extend from Mt. Monadnock in Northern Vermont at the Canadian Border to Mt. Moosilauke on the southeast side of the White Mountain National Forest. To the East, the northern section of the White Mountain National Forest, including Mt. Weeks, is in full view, as well as the entire Presidential Range. To the West, the Connecticut River valley and Camel's Hump Mountain near Burlington VT are easily visible The existing transmission lines are barely visible from Weeks State Park's summit, rather it is the open ROW pathway which is mainly visible. The NPT's published materials state that eight (8) Towers will be visible - because NPT only counted the new 320-kV HVDC Towers, and did not include the relocated *new* 115-kVtowers carrying the existing line. First, using the KOP, the number eight (8) is incorrect (12-15 is more accurate depending on leaf-on/leaf off). However, if the more appropriate Summit of Weeks State Park were used, the NPT Route Maps indicate that two Hundred and nineteen (219) Towers, each hung with 4 or 5 tiers of wires, in two (**2**) parallel lines between Cape Horn State Forest in Groveton and the Mountain View Hotel, would be clearly visible to the Park's Visitors (http://www.northernpass.us/towns.htm: Route Maps #52 - 65). From Whitefield on to Bethlehem, more Towers and Lines would be visible. From Mt. Washington itself, the NPT's wall of lines and Towers, as well as the clear-cut pathway, would be visible to the thousands of visitors there. ***Recommendation*: In order to ensure the validity of the Draft EIS, specify what is meant by "upgrade" of existing AC lines by NPT (Sect 3) and revise the EIS conclusions to accurately reflect the EXACT number of new transmission lines, regardless of whether HVDC or relocated AC.**

7. **The Key Observation Points provide flawed data for the Draft EIS:** For example: the Key Observation Point (KOP #LA-2a) from Mt. Prospect, Weeks State Park Lancaster NH is based on several erroneous assumptions. In the *Visual Impact Assessment*, T. J. Boyle Assoc., the contractor hired by NPT, states the "existing view from this KOP is of high quality. The Weeks State Park is a significant state resource that is visited throughout the year." (July 10, 2015: http://media.northernpasseis.us/media/Visual_Impact_Assessment.pdf, p. 271). KOP #LA-2 is based on one (1) Lookout on the eastern side of the auto road up Mt. Prospect that has a narrow view, restricted by surrounding trees and shrubbery to a specific E/SE direction. The Lookout was selected by Boyle Assoc. for the KOP because "it offers a more direct and closer view of the existing corridor" - an example of the errors perpetrated by the 1-mile APE. However, the *Summit* of Mt. Prospect is crowned by an historic 1913 Stone Observatory Tower that commands **360o panoramic views** of the entire region. Boyle Associates states that it did not choose to use the *Summit* for its assessment for the following reason, "The fire observatory is locked when inactive, and the views from immediately below the fire observatory do not offer a wide view of the existing transmission corridor due to the enclosed nature of the stone fire tower itself, which obstructs the view." However, this is false information: a) the Lodge and Fire Tower/Observatory are open at the same time as the Auto Road, therefore any of the several thousands of annual Visitors coming by that route would be afforded the opportunity of the full Panoramic View, not just the one from the restricted Lookout; 2) The Fire Tower is not "enclosed" as stated by Boyle Assoc., therefore the view is not "obstructed." *Clearly Boyle Assoc. did not actually climb the Fire Tower nor enter the Lodge to make a full assessment of Visual Impact from the Summit.* The assessment concludes that "The proposed HVDC structures and some new right-of-way clearing would be visible from this location (the KOP)", but UNDERESTIMATES the Impact by an extraordinary amount. ***Recommendation*: In order to ensure the validity of the Draft EIS, revise the KOP from the Lookout to the Summit of Weeks State**

0014-4 cont'd

0014-4 Continued

0014-5

Thank you for your comment. The final EIS has been updated to include a complete analysis of Alternative 7 - Proposed Action in all geographic sections across all resources. Impacts resulting from underground cable in roadways are discussed in the EIS; impacts in Plymouth are discussed throughout Section 4.3 of the EIS for all resources and alternatives (see Section 4.3.5 for a discussion of impacts to traffic and transportation in this area), and impacts in Franklin are discussed throughout Section 4.4 of the EIS for all resources and alternatives (see Section 4.4.5 for a discussion of impacts to traffic and transportation in this area). Short-term impacts to traffic would occur during construction if lane closures are required, which could be more disruptive in highly populated areas (see Section 4.1.5 of the EIS).

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0014-6

Thank you for your comment. The visual analysis, including photo-simulations, presented in this EIS was conducted by an independent contractor under the direction of DOE. A review of data submitted to the New Hampshire Site Evaluation Committee is beyond the scope of this EIS. The analysis was performed according to the project design specifications provided by Northern Pass to DOE in their application for a Presidential permit. The analysis considers both new structures (HVDC and HVAC) and the relocation of structures related to upgrading the existing AC lines required by the Project.

0014-7

0014-7

Thank you for your comment. The top floor of the stone fire tower was locked the day field work was conducted at Weeks State Park. Photography was taken from the next floor down, but views were restricted through openings in the stone wall. In response to this comment, arrangements were made to access the top floor of the tower. However, the top floor is enclosed with glass windows with small panes in wooden mullions. Photographs under these conditions distract from the distant view and would therefore be inappropriate to use for a simulation. As a result, no changes to the viewpoint selected for the EIS and the Visual Impact Assessment Technical Report have been made in response to this comment.

Park and conduct an Independent Review of the all the data provided for other KOPs to determine if they are accurate or similarly flawed.

8. **The Technical information provided by the NPT is inaccurate**. For example, in the case of Weeks State Park a comparison of the data provided in the Northern Pass Public Outreach Maps—Preliminary Design Supporting Information with the "Photo Simulations" by T. De Wan Assoc. reveals that do not support each other. For example, the cross-section diagrams provided in each section are NOT TO SCALE. The trees (45' high relative to the existing 45' high poles) are drawn to appear to be almost the same height as the NEW Towers. Careful comparison of the Structure Heights given in the accompanying Table with the cross-section reveal that most of the *new* Towers should be depicted as more than DOUBLE the height of the trees (90+ to 120'). Had these cross-sections be done to scale, then the Data provided to the DOE would be accurate and the EIS would realize accurate conclusions. Furthermore, several types of "weathering monopoles" are depicted - are these what is proposed? As a result of the inaccurate cross-section diagrams, the depicted "monopoles, as well as the inadequate KOP, the "Photo-simulations" from Weeks State Park do not accurately reflect what the proposed Towers would actually look like and, therefore, underestimate the Visual Impact. Note also that the dates of the photos provided vary widely, are missing in the case of large photos, and are inconsistent from one site to the next. ***Recommendation*: In order to ensure the validity of the Draft EIS, conduct a complete, meticulous Analytical Review of all NPT data submitted to the DOE.**

9. **The Draft EIS does not address International Security Issues**: The Draft EIS does not take into consideration the following issues which should be of concern to the safety and security of a Power Line crossing an International Boundary. Above-ground high voltage power lines are highly vulnerable to: a) *tampering* by terrorists and/or vandals; b) *solar storms*: see Henry Fountain," Solar Storm Risks Bring Disaster Plans", *The New York Times*, November 16, 2010; c) *ice storms*: ice Storms in Quebec have shown that towers are vulnerable to damage and outages. In Rhode Island, where the electric lines are buried in historic areas, power has only been out once in the past 46 years. In NH by contrast, where Eversource provides service, the power goes out with frequently and for protracted periods of time. Many in rural New Hampshire have had to invest in propane generators to protect themselves from Eversource's inability to deliver its product securely and safely; d) *high winds*: Storm damage from high winds is increasing throughout the region as a result of climate change. There is statistical evidence for this phenomenon.

10. **Methane Gas Assessment**: The Draft EIS does not address the impact of Hydro-Quebec flooding-based hydropower on the production of Methane Gas near the Arctic Ice Shield. The EIS discusses Carbon impact (S-5), but not Methane, which the EPA is currently studying. ***Recommendation*: The Draft EIS should also include consideration of Methane production and its impact, via NPT, on climate change goals.**

11. **Impact on Tourism:** The Draft EIS includes conclusions in its sections on Tourism (S-20) and Historical and Cultural Resources *in advance of* final reports on the Section 106 Review. Many visitors come to New Hampshire specifically for these resources, not just for recreation. Furthermore, scenic views obtained Tourist Routes throughout the affected proposed NPT route vary dramatically from place to place - well beyond the limited KOPs selected. For example, Towers visible from Rte. 3 at Colby Rd. and Rte 116 at Kimball Hill Whitefield and Bray Hill Jefferson show a different, often more visible, view of the Towers than from the Mountain View Grand hotel (the selected site for photo-simulations). However, Rtes 3 and 116 are the route most Tourists will use to reach the hotel. ***Recommendation*: Tourism and Historical and Cultural Resources are inextricably connected in regions such as New England. The Draft EIS should subject Tourism Impact analysis to cross-referencing with the Section 106 Review data.**

0014-7 cont'd

0014-7 Continued

0014-8

0014-8 Thank you for your comment. The photo simulations produced by NPT mentioned in the comment were submitted to the New Hampshire Site Evaluation Committee. DOE did not rely on these photo simulations for its visual analysis. The visual analysis, including photo-simulations, presented in the draft EIS was conducted by an independent contractor under the direction of DOE. DOE relied upon the project design specifications provided by Northern Pass to DOE in their application for a Presidential Permit.

0014-9

Thank you for your comment. Section 4.1.4.2 in the EIS and Section 3.1.9 of the Public Health and Safety Technical Report discuss impacts related to intentional destructive acts. Impacts to health and safety from intentional destructive acts would be unlikely to be greater than the potential impacts from events involving extreme weather. If such an act were to occur and to succeed in destroying aboveground infrastructure or other components of the project, the main consequence for the public would be the temporary loss of electrical service from the Project (i.e., the loss of the 1,090 or 1,200 MW supplied by the Project) in the ISO-NE region.

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0014-11

Thank you for your comment. Section 4.1.4.2 in the EIS discusses the design of the transmission line in relation to extreme weather. Additional discussion is provided in Sections 2.1.2 and 3.1.6 in the Public Health and Safety Technical Report. The overhead transmission line would be constructed to satisfy National Electrical Safety Code (NESC) requirements related to extreme wind and temperature conditions. Implementation of these measures should reduce the potential for downed wires and tower collapse due to wind and ice loading, reducing the potential for power outages. Safety measures, including shield wires, are incorporated into transmission line design to prevent flashovers or power surges due to lightning strikes.

0014-12

0014-11

Thank you for your comment. Potential impacts in Canada from the construction and operation of electricity infrastructure, including hydropower generation and transmission in Canada, are beyond the scope of this NEPA analysis. NEPA does not require an analysis of potential environmental impacts that occur

within another sovereign nation that result from actions approved by that sovereign nation. Additionally, the construction and operation of Hydro-Quebec power generation projects and electricity transmission line projects in the bulk Hydro-Quebec system will occur regardless of and independent to whether DOE issues a Presidential permit for the proposed Northern Pass Project international border crossing. For these reasons, potential environmental impacts in Canada are not addressed in this EIS. Section 1.5.4.1 of the Final EIS has been updated in response to this comment.

0014-12
Thank you for your comment. The EIS analyzes the importance of tourism to New Hampshire, businesses, and the local and regional economy. The EIS concludes that "while it is reasonable to conclude that the Project may have some level of impact to tourism within New Hampshire, and to individual locations proximate to the Project route, these are not quantifiable." Historic and cultural tourism are discussed in Section 3.1.2.4, in the Socioeconomic analysis in the EIS.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 27, 2015

ID: 8228

Date Entered: Jul 27, 2015

Source: Website

Topics: Purpose and Need, Alternatives, Health and Safety, Vegetation, Viewshed/Scenery, Water / Wetlands, Soils, Recreation, Tourism, Quality of Life

Name: Brian Martin

Organization:

Email: Brian.Martin@RoundTableRealty.com

Mailing Address: 7824 Mount Ranier Drive

City: Jacksonville

State: FL

Country: US

Comment: Northern Pass:

Much to my amazement, we are only able to get to New England a couple of times a year. When we heard of this project and how it would change the landscape of New Hampshire and bordering states, we were devastated. This type of short range thinking would devastate the beauty of the region and would negatively impact the financial successes that the states have realized. All this, so that a big company can get bigger? REALLY?

0015-1

0015-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 27, 2015

ID: 8229

Date Entered: Jul 27, 2015

Source: Website

Topics: Private Property/Land Use

Organization: Mrs.

Comment: The Right of Way that Northern Pass intends to use was never meant for a private, for-profit venture. The easements were bought or given for the use of a public utility to provide electricity to the rural areas of New Hampshire. Northern Pass intends to usurp this public ROW for its own profit. This should not be allowed. If this project is approved at all, it should be buried along transportation ROW and the state should be paid for that right.

0016-1

0016-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 27, 2015

ID: 8230

Date Entered: Jul 27, 2015

Source: Website

Topics: Cumulative Effects

Organization:

Comment: The Northern Pass project is a merchant funded profit motivated proposal. It is not a needed or requested project, nor is the power for NH, since we produce far more electricity than we use and export the surplus energy. The sole purpose of this project is profit for Eversource stockholders. But, if they are allowed to build a huge overhead power line down our state, through tourist and second home areas it will do lasting damage to our economy and property values. Speculative corporate projects should never take precedence over the welfare of the citizens, their property values, environment and aesthetics.

0017-1

0017-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9214

Date Entered: Apr 4, 2016

Source: Website

Topics: Viewshed/Scenery, Design Criteria / Mitigation Measures

Organization: Northern Pass Transmission LLC

Email: maryanne.sullivan@hoganlovells.com

Mailing Address: 781 N. Commercial Street

City: Manchester

State: NH

Zip: 03101

Country: US

Comment:

COMMENTS OF NORTHERN PASS TRANSMISSION LLC
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT
VISUAL IMPACT ASSESSMENT

The U.S. Department of Energy ("DOE") included in its Draft Environmental Impact Statement ("DEIS") a visual impact analysis of the proposed transmission project of Northern Pass Transmission LLC ("Northern Pass" or the "Project"). On August 15, 2015, Northern Pass amended its application for a Presidential Permit to indicate its support for a revised Project design that includes an additional 52 miles of underground construction in addition to the eight miles of underground identified in the discussion of Alternative 2 in the DEIS. The amended design, which Northern Pass supports in lieu of Alternative 2, places the majority of the Central Section as identified in the DEIS of the Project underground, effectively eliminating any potential visual impact on the scenic and recreational resources of WMNF and the surrounding landscape by placing the line underground within existing public road rights-of-way from Bethlehem to Bridgewater. (This amendment supports a Project design that is nearly identical in visual impacts to Alternative 4c.) In November 2015, DOE issued a Supplement to the EIS to summarize the impacts of this change in the proposed design, designating it Alternative 7. In this comment, Northern Pass addresses issues related to the visual impact analysis in the DEIS as they apply to Alternative 7 and also responds to the comment of the North Country Scenic Byways Council.

Comments on DEIS

Northern Pass agrees with the fundamental conclusion of the visual impact assessment included in the DEIS, namely that the visual impact of the Project will be low to very low. (See Table 2 Visual Resources Summary Impact Table on p. S-5 in the DEIS Supplement, dated November 2015.) However, in several respects the DEIS overstates the visual impact of the Project, particularly as it has been redesigned to substantially increase the portion of the Project that will be underground.

1. **Limits of Visibility.** The GIS-based visibility analysis determined if a 'target' (i.e., the very top of a transmission structure) within 10 miles of a viewpoint would be visible. This approach overstates actual visibility for two reasons: a) while only the top inch of a transmission structure may be theoretically visible in the background viewing distance, it is highly unlikely that there would be enough contrast in color or form for the human eye to distinguish it, especially if it were to be seen against a wooded backdrop; and b) beginning at certain distances – generally between 1.5 and 3 miles – it is difficult to reliably distinguish individual structures unless they are seen in high contrast situations. (See the discussion on

0019-1

0019-1
Thank you for your comment. The landscape assessment uses an estimate of visual magnitude based on accepted professional practices. As distance increases, the number of potentially visible structures must increase to maintain a given level of visual magnitude. This is described in Section 2.4.2.2 of the Visual Impact Assessment Technical Report.

visibility and visual acuity as they relate to distance zones in the Visual Impact Assessment Technical Report, p. 29.)[1]

2. **Viewshed Mapping.** While the DEIS maps are based upon a different methodology than the Northern Pass visual impact assessment,[2] the patterns and intensity of results are quite similar in most areas, indicating that the NPT project will have a relatively minor overall visual impact in those locations where it is visible. However, in heavily developed downtown areas, e.g., Concord and Franklin, the DEIS mapping indicates extensive areas of project visibility that greatly overstate the potential visual effect. This is clearly not the case, based upon the field assessment Northern Pass undertook in these two communities.[3]

3. **Visual Quality of Existing Landscape.** In the DEIS landscape assessment, the numerical rating of existing visual quality is derived from the synthesis of landform (relative relief) and land cover (predominant landscape use), based upon these physical characteristics. The methodology used in the DEIS combines the ratings for landform and land cover into a matrix that assigns a value from 1 to 5 to individual components of the analysis area. While this approach provides a seeming numerical certainty to the analysis, it produces results that in some cases do not make much sense as applied to the New Hampshire landscape. For example, landscapes with less relief, such as farming and open land, can be and often are very attractive. Yet the DEIS Technical Report rates such landscapes as a 2 (low on the 5-point scale). By contrast, large-lot subdivisions (developed open spaces) are assigned a value of 4 in mountains, and suburban residential development is assigned a value of 3 in mountains and hills. This approach likely overstates the visual quality of some of the landscapes that may be affected by the NPT project.

4. **Scenic Impact**. The DEIS landscape assessment combines the rating for visual impact with the rating for scenic sensitivity. The average scenic impact of the existing PSNH transmission line on the existing landscape was rated at 1.62 on a 5-point scale. The average scenic impact of Alternative 2, the previously proposed action, was 1.79. The average scenic impact of Alternative 7 (the current proposal) was 1.76. All three of these impact ratings are considered "low to very low." Yet Alternative 7 places an additional 52 miles of overhead transmission line underground and avoids virtually all visual impacts on White Mountain National Forest. Burying over a quarter of the line in some of the most scenic parts of the state will greatly reduce the number of scenic resources, roadways and land areas that will be affected by the transmission corridor. It is difficult to understand how the improvement in

[1] *See also* Visual Impact Assessment, Northern Pass Transmission Project, Pittsburgh to Deerfield, New Hampshire at M-1 – M-16 (October 14, 2015) ("VIA") http://www.northernpass.us/assets/filings/Volume%20XV/Appendix%2017%20Visual%20Impact%20Assessment.pdf; http://www.Northernpass.us/assets/additional-sec-filing-documents/Attachment%207%20Visual%20Impact20 Assessment.pdf.

[2] VIA, id.

[3] Id. at 4-3 – 4-5, 4-38 4-40, 4-44 (Franklin); 5-3, 5-12 – 5-15 (Concord).

0019-1 cont'd

0019-1 Continued

0019-2

0019-2
Thank you for your comment. The commenter is correct that potential visual impacts in urban areas were overstated in the draft EIS. Because the Concord area is urban, there is no estimation of screening from land cover which leads to an overstatement of visibility in the developed areas of Concord. The analysis has been updated for the final EIS to include more accurate data reflecting the height of land cover in Concord which better represents the visibility of the Project.

0019-3

0019-3
Thank you for your comment. It is acknowledged that the model for rating visual quality is simple, and specific views and conditions will vary from the modeled value. However, observations during field visits generally corroborate the intrinsic visual quality modeled through the landscape assessment, illustrating the usefulness of the model as a general analysis tool for the large study area.

0019-4
Thank you for your comment. The analysis of visual impacts has been updated in the final EIS, see Sections 4.1.1, 4.2.1, 4.3.1, 4.4.1, and 4.5.1. The impact of Alternative 7 is less than Alternative 2 in the WMNF Section (see Section 4.5.1). These revisions reflect a reduction in visual impact for Alternative 7 relative to Alternative 2.

0019-4

scenic impact of placing 52 additional miles of the Project underground could be deemed only 0.03.

5. **Visual Exposure from Roads.** The DEIS visual impact assessment estimates the number of hours that vehicles will travel through areas on state or nationally designated scenic roads within view of transmission structures. It considers the visibility from roads within 1.5 miles on either side of the Project and up to 10 miles in either direction from within this 3-mile wide corridor. This approach overstates visibility of the line by using viewshed data 10 miles away from the corridor. While the computer analysis determined that transmission structures may be visible, in all likelihood at distances greater than 3 miles, the average observer would not notice them, especially from a moving vehicle. The analysis is also based upon a measurement of Average Annual Daily Traffic, but it does not seem to discount those times when the transmission lines would not be visible at all, such as during evening and nighttime hours. This approach also does not take into consideration directionality of views, e.g., in many instances the visual exposure will only be felt by northbound motorists and not by southbound traffic and only while the view is in front of them, nor does it account for the screening effect of roadside vegetation that may not show up on the LiDAR vegetation cover data. The roads analysis seems to be based solely on the computer model of visibility and does not seem to reflect actual ground conditions. For example, the Technical Report indicates that the project would be visible from a total of 2.26 miles of the Connecticut River Scenic Byway (National). Based upon field observation and evaluation of roadside vegetation patterns, this number seems highly inflated. At best, this approach informs the need for field evaluation and does not provide any way to assess the relative visual effect of individual transmission structures.

6. **Key Observation Points.** A common approach used in preparing visual impact assessments is to select key observation points ("KOPs") that represent the range of viewpoints where the project may be visible and to illustrate the potential visual effects that a project may have on the landscape. The KOPs are usually considered more sensitive locations from a scenic or recreational use perspective, and they typically illustrate a worst-case visual impact scenario. The analysis of each of the KOPs identified in the DEIS was derived from both the GIS-based landscape assessment and the field-visit based viewpoint assessment. The analysis in the DEIS overstates the Project's visibility at the KOPs in several respects.

   - **Limits of Visibility.** The KOP analyses include an estimate of the number of structures that would be visible from each viewpoint, based upon the GIS landscape assessment. As noted above, the GIS assessment counts a structure as "visible" even if only the very top of the structure might be seen for up to a distance of ten miles. This approach includes structures that are partially visible, barely visible due to vegetative screening or topography, or not visible at all due to the effect of distance on visual acuity. The result is an exaggerated estimate of the number of structures that would be visible from certain of the DEIS KOPs (e.g., LA-1, Weeks State Park East Overlook in Lancaster).

0019-4 cont'd

0019-4 Continued

0019-5

0019-5
Thank you for your comment. The shortcomings of using average annual daily traffic (AADT) are acknowledged in Section 2.4.3.3 of the Visual Impact Assessment Technical Report. However, the biases are applied to all alternatives equally, so the indices are still useful for relative comparisons.

0019-6
Thank you for your comment. As described in the Visual Impact Assessment Technical Report (Section 2.4.6), the selection of viewpoints is representative of various landscape conditions, including distances from the Project. The Key Observation Points (KOPs) selected for this analysis were not limited to designated scenic resources, although such resources may be given increased importance and consideration.

0019-6

0019-7
Thank you for your comment. The Key Observation Point (KOP) analysis calculated the number of structures that are visible based on the three-dimensional computer-aided design (CAD) data used to create the photo-simulations. These counts were checked and verified for the Visual Impact Assessment Technical Report and the final EIS (see Section 4.1.1). Geographic information data (GIS) data are not used for this purpose.

0019-7

- **Inaccurate portrayal of project components.** For several of the KOPs, the analyses are based on outdated technical specifications of the Project. These include the use of an incorrect structure type in the photo-simulation (e.g., LA-1, Weeks State Park), and basing the narrative on the wrong structure type (CO-4, Turtletown Pond in Concord). A change in structure type or material often makes a significant difference in the rating, and thus the determination of visual impact.

- **Lack of contextual photographs.** The illustration of the visual impact is based upon a single photograph that has been selected to represent the landscape seen from the KOP. While the selected photographs show the potential visual effect from the Project, they do not provide the reviewer with any visual context, an important consideration in judging the overall visual impact on the resource as a whole (e.g., CO-4, Turtletown Pond).

- **Lack of vegetation growth in five-year representation.** The photo-simulations are intended to illustrate how the Project might appear after approximately five growing seasons. However, in several photo-simulations there does not appear to be any change in vegetation when compared to the existing conditions photograph. In some KOPs (e.g., CL-1, NH Route 145 in Clarksville, and DU-1, Little Dummer Pond in Dummer), normal vegetation growth between the viewpoint and the corridor in the years after Project completion will significantly reduce visibility of the project elements, and thus reduce the overall visual impact.

- **Evaluation of non-scenic resources.** KOPs are commonly employed to evaluate the visual effect of a project on scenic resources. However, several of the KOPs evaluated in the DEIS were located at sites that would not be considered scenic resources (e.g., CO-1 Loudon Road commercial area in Concord and DE-1, Nottingham Road, a wooded rural area in Deerfield).

- **Viewing Times**. Three of the KOPs are views from local roads or larger highways that are primarily seen from a moving vehicle and therefore afford brief glimpses of the NPT project (i.e., CL-1, NH Route 145; CO-1, Loudon Road commercial district in Concord; and DE-1, Nottingham Road in Deerfield). While the images shown are characteristic of portions of the driving experience, the actual time that the average motorist will see the project should be noted to put into the proper perspective the nature of the contact with the Project.

Comments on North Country Scenic Byways Council Comment

Northern Pass also comments briefly on the comment on the DEIS submission made by the Chair of the North Country Scenic Byways Council.

0019-8

0019-8
Thank you for your comment. The cover sheet for each simulation notes that each simulation is based on the best information available in March 2014, and Alternative 2 has not changed since that time. Additional visual simulations have been prepared to reflect the design of Alternative 7. The structures in KOP LA-2, Weeks State Park Lookout, reflect the Alternative 2 information. The text for the description of KOP CO-4, Turtletown Pond, has been corrected in the Visual Impact Assessment Technical Report.

0019-9

0019-9
Thank you for your comment. It is acknowledged that surrounding context and other information can be important in determining visual impact. However, this analysis uses a method of simulation rating that is adapted from other procedures and professionally accepted (see Section 2.4.6 of the Visual Impact Assessment Technical Report for a description of the method). In the case of Turtletown Pond, most of the six evaluators have visited the location and thus understand the context of the site.

0019-10

0019-10
Thank you for your comment. Correct, no vegetation growth or dieback is represented in the simulations. If vegetation were allowed to grow back in the corridor, the visibility of the Project could be reduced. It is expected that periodic vegetation management within the corridor could occur, and this condition is represented in the simulations because it represents the greatest potential impact.

0019-11

0019-12

0019-11
Thank you for your comment. As described in the Visual Impact Assessment Technical Report (Section 2.4.6), the selection of viewpoints is representative of various landscape conditions, including distances from the Project. The Key Observation Points (KOPs) selected for this analysis were not limited to designated scenic resources, although such resources may be given increased importance and consideration.

0019-12
Thank you for your comment. The visual analysis includes a Roads-Based Analysis, the method for this analysis is described in Section 2.4.3 of the Visual Impact Assessment Technical Report. The greatest visual impact is expected where the road intersects the transmission line, even though the exposure for an individual vehicle would be brief. The structures at road crossings are expected to capture a typical viewers' attention, even of

0019-13

drivers focused on the road, because of their high contrast and visual magnitude. Exposure to more distant views may or may not be longer, but the impact would normally be less.

0019-13
Thank you for your comment. This is a response to another comment submitted on the draft EIS. No changes have been made to the EIS in response to this comment.

1. **Scenic Byways.** In the Visual Impact Assessment Northern Pass submitted to the New Hampshire Site Evaluation Committee, Northern Pass included a detailed analysis of the potential for and degree of impacts the Project may have on New Hampshire scenic byways. Northern Pass provided photo-simulations, updated descriptions of tower designs in the areas near scenic byways, descriptions of other existing human activity in those areas, including commercial development, other transmission lines and substations, and the current status of those byways.[4] By contrast, other than noting the presence of the scenic byways in and near the Project area, the Comment fails to describe any particular adverse consequences the Project will have on those byways. The Comment also fails to acknowledge that portions of one of the byways discussed have been proposed for de-designation from the scenic byways program.[5]

2. **Key Observation Points.** The North Country Scenic Byway Council's Comment devotes considerable attention to the KOP's identified in the DEIS, comparing the impact ranking of existing transmission structures to the impact ranking of what the Comment describes as the Proposed Situation. Nowhere does the Comment acknowledge that, of the 15 KOPs identified in the DEIS, only six will have any visibility of the Project under the new Project design. Of the remaining six KOPs, three do not reflect mitigation measures that will reduce the visual impact of the transmission line. Specifically, Northern Pass has replaced the structure types for KOPs LA-2, CL-1 and CO-1. Likewise, because the DEIS simulations fail to reflect the anticipated growth of vegetation in the vicinity of the Project for KOPs DU-1 and CL-1, as noted above, the Comment likewise fails to account for the effect that this growth would have on reducing project visibility. In total, out of the seven KOPs that the Comment claims would suffer a "severe" visual impact, five will have no impact at all because of the Northern Pass decision to put an additional 52 miles of the Project underground, and one (CO-1), which is at a shopping center, will have a lesser impact because of the change in structure design at that location.

The North Country Scenic Byway Council's Comment was submitted on March 22, 2016, many months after the Project design change was announced and many months after Northern Pass filed its SEC application and made all of the supporting data available to the public. The Comment suggests that the 15 KOPs analyzed in the DEIS "represent the entire range of possible conditions." That simply is not true. In adopting its new Project design, Northern Pass took pains to reduce or totally eliminate the potential visual impact of the Project on many of the most visually sensitive and scenic resources that the prior design would have affected.

Mitigation Measures

In its Visual Impact Assessment submitted in the SEC proceeding, Northern Pass

[4] *See, e.g.,* id. at 1-1 – 1-119, 2-1 – 2-79.
[5] Id. at 2-41.

0019-13 cont'd

0019-13 Continued

0019-14
Thank you for your comment. Potential visual impacts from the current Proposed Action, Alternative 7, were presented in the supplement to the draft EIS published in November 2015. The visual impact analysis, including photo-simulations and Key Observation Point analysis, has been updated in the final EIS to reflect Alternative 7 - Proposed Action.

0019-15
Thank you for your comment. Appendix H of the EIS includes a list of Applicant-Proposed Impact Avoidance and Minimization Measures considered in the EIS process. The analysis of potential impacts in this EIS assumes that these measures would be applied during implementation of the Project, if approved. DOE's and USFS's decisions would be conditioned on the implementation of these APMs, as well as any other requirements identified by other permitting processes (including the New Hampshire Site Evaluation Committee review, consultation with the U.S. Fish and Wildlife Service, etc.). DOE has considered the cited measures and no change to the EIS was made.

0019-14

0019-15

0019-15 cont'd

0019-15
Continued

identified ten different visual impact mitigation measures the Project will incorporate.[6] Those measures include:

- Placing 60 miles of the Project underground;
- Co-locating the majority of the Project in existing transmission corridors;
- Where possible, placing new transmission structures in proximity to existing structures to maintain the same spacing and avoid irregular linear patterns;
- Matching materials for relocated and new transmission structures to minimize contrasts in color and texture;
- Designing transmission structures with a relatively narrow profile to minimize clearing in the existing corridor;
- Relocating existing transmission and distribution structures within the existing corridor to minimize the amount of clearing needed for the new structures;
- Using weathering steel monopole structures in certain locations, to match the brown tones commonly found in New Hampshire landscapes and to simplify structure appearance;
- Maintaining or restoring vegetation at road crossings (with landowner permission) to screen views down the transmission corridor and concentrate attention in the foreground;
- Maintaining or restoring vegetation at river and stream crossings; and
- Planting native trees and shrubs to restore areas disturbed by underground installation (with landowner permission).

Individually at particular locations and collectively for the Project as a whole, these mitigation measures will further reduce the already low visual impacts of the Project. To the extent they are not accounted for in the DEIS, the Final EIS should take account of them in evaluating the visual impacts of the Project.

[6] Id. at M-16.

From: Benjamin Jones <benjamin.jones@mvrsd.org>
Sent: Monday, August 31, 2015 5:45 AM
To: draftEIScomments@northernpasseis.us
Subject: Draft EIS

The draft EIS is deficient in its failure to focus on environmental concerns concerning New Hampshire and Vermont waterways and systems as well as its impact on the Cohos Trail.

For instance, there is no serious discussion of the impact the Northern Pass project will have on the viewshed from the Connecticut River and its tributary, Halls Stream in Pittsburg, NH. This is the entry point of the project from Canada into NH just a few hundred yards north of the Vermont border. Approximately 20 lattice transmission towers averaging 90 feet high with some over 100 feet high are planned to be erected across the Halls Stream wetlands and then into an upland area that stands high above the Connecticut River. In many cases these towers will be visible from the Connecticut River and various points in the towns of Canaan, Vermont (including Beecher Falls), Stewartstown, New Hampshire, Clarksville, New Hampshire and Pittsburg, New Hampshire. This section of the Connecticut River is known to fishermen as the "trophy stretch" and is well known to canoe and kayak enthusiasts as the Connecticut River Paddlers Trail. There is absolutely no discussion of the environmental impact that this will have on the cultural and scenic landscapes on the Vemont side of the Connecticut River; and the discussion of the visual impacts on the New Hampshire side is superficial and unenlightening. Certainly, visual simulations of this impact should have been included, but were not. It is therefore requested that the final EIS include visual simulations from several locations focusing on the impact that these first 20 planned transmission towers and cables would have on this very important scenic river and related scenic and cultural byways in Vermont and New Hampshire as the proposed transmission line runs from the Canadian border to the Connecticut River.

In addition, Northern Pass's latest plans show that it plans to build a transition station in Pittsburg on the northwest side of the Connecticut River in what appears to be a large wetland area that drains into the river. This transition station was originally located in a non-wetlands area. The DOE environmental consultants should, at a minimum, investigate and report on the impact of this change and the many others now proposed by Northern Pass in its new campaign "Forward NH" that was announced after the completion of the draft EIS.

The Cohos Trail is a relatively new and important hiking trail in New Hampshire that runs south to north to the Canadian border in Pittsburg. There are no visual simulations of the multiple above ground transmission line crossings of this trail proposed by Northern Pass. The visual impact and visual simulations of these crossings in Stewartstown and Stark need to be provided in the final EIS in a far more robust documentation of the environmental impact that the project will have on this important hiking trail.

Finally, the amazing and popular 740 mile Northern Forest Canoe Trail runs through Stark, NH on the Upper Ammonoosuc River. Northern Pass proposes to erect HVDC transmission towers on both banks of Upper Ammonoosuc in Stark and to string 1000MW DC cables over the Northern Foest Canoe Trail. In addition, it proposes removing an existing small AC transmission line strung on 50 foot high wooden poles and replacing that AC transmission line with steel tower poles up to 100 feet high. In other words, the adverse visual impact of the project on the Northern Forest Canoe Trail in Stark will be dramatic. Two wooden structures will be replaced with four steel structures that are twice as high carrying multiple transmission cables over the river. This adverse impact needs to be discussed in detail and the visual impact must be documented with visual

0020-1

0020-1
Thank you for your comment. The Visual Impact Assessment Technical Report and final EIS have been updated to include an analysis of impacts in the area around Canaan, Vermont (see Section 4.2.1 of the EIS). Comparable data to that used in the landscape assessment in New Hampshire is not available in Vermont, but impacts are analyzed through visibility and visual magnitude. Additionally, photographs were captured in this area of Vermont. Potential visibility from the Connecticut River is considered in the landscape assessment. No additional simulations have been prepared near the U.S./Canada border crossing in response to this comment. The final EIS, Visual Impact Assessment Technical Report, and Recreation Technical Report have been updated to include analysis of the Cohos Trail. A visual simulation has been prepared at the location where the Project would cross the Cohos Trail in Stark, and the location has been analyzed as a Key Observation Point (KOP ST-4). See Section 4.2.1 and Appendix E of the final EIS. See Section 4.2.3 of the final EIS for a brief discussion of recreation impacts to this resource, additional information has been added to the Recreation Technical Report.

0020-2

0020-2
Thank you for your comment. Analysis of potential impacts to water resources and wetlands resulting from the transition station in Pittsburg have been verified. Impact estimates are described in Section 4.2.13 of the final EIS.

0020-3

0020-3
Thank you for your comment. The final EIS and Visual Impact Assessment Technical Report have been updated to include analysis of the Cohos Trail. Under Alternatives 2, 5a, 5b, 5c, and 7 the Project would cross the Cohos Trail three times as an overhead line. A visual simulation has been prepared at the location where the Project would cross the Cohos Trail in Stark, NH, and the location has been analyzed as a Key Observation Point (KOP ST-4). See Section 4.2.1 and Appendix E of the final EIS.

0020-4

0020-4
Thank you for your comment. While the Northern Forest Canoe Trail is not a designated scenic resource, these sections of the trail are included in the landscape analysis. The visual impact of proposed new and relocated towers are analyzed in the EIS and Visual Impact Assessment Technical Report. Impacts to the recreation experience on the Ammonoosuc River are analyzed in

the Recreation Technical Report and the Northern and Central sections of the EIS (see Sections 4.2.3 and 4.3.3 of the EIS). Both short- and long-term impacts were analyzed. Long-term visual impacts could impact the recreational experience of boating along stretches of the River, including parts of the Northern Forest Canoe Trail. This trail, while not explicitly mentioned, will be impacted in ways similar to the Ammonoosuc River.

simulations of the impact showing the crossing from various vantage points on the river as it would be seen by travelers on the Northern Forest Canoe Trail.

0020-4
Continued 0020-4 cont'd

William Schomburg

378 Meriden Hill

Columbia, NH, 03590

email address opaschom@icloud.com

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 11, 2015

ID: 8277

Date Entered: Aug 11, 2015

Source: Website

Topics: Alternatives, Viewshed/Scenery, Recreation, Economic, Tourism, Quality of Life, Cumulative Effects, Forest Service Lands

Name: David Lorman

Organization:

Email: lorindavebuy@myfairpoint.net

Mailing Address: 86 Oak Ridge Rd

City: Plymouth

State: NH

Zip: 03264

Country: US

Comment: In most conversation regarding the Northern Pass power transmission project, the discussion inevitably centers around the "north country" (typically described as the area of the state north of the notches). With good reason. But in addition to the North country, this province of Quebec project will have lasting, considerable negative effects on the entire Pemigewassett River Valley south of the White Mountains.

As presently proposed the overhead transmission cables and steel truss towers exit the White Mts, enter the Pemigewassett River valley and cross the world class view of Franconia Notch state park. The towers and cables then follow the ridge, over and immediately parallel to interstate I-93. These are not distant views of a large scale power transmission line. At exits 28, 30, and 31 towers and cables will be directly in your face on the ridge and as you exit the highway. This project seriously impacts the view shed into Franconia Notch. This area is a critical entryway into the White Mt National forest (and beyond). Northern Pass continues south paralleling and repeatedly intersecting I-93 to Concord.

Presently the Pemigewasett River valley meets criteria and is eligible for inclusion in the federal Wild and Scenic river program (see NH DES web site). The destruction of this pristine river valley with

0021-1

0021-1
Thank you for your comment. The current Proposed Action (Alternative 7) would be underground between Bethlehem and Bridgewater, NH, including the portion of the line mentioned in the comment. The alternative referenced by the commenter is the previous proposal, analyzed in the EIS as Alternative 2. A visual analysis of Franconia Notch and the surrounding area is included in section 4.3.1 of the EIS. Franconia Notch State Park is also specifically referenced and analyzed in Sections 4.3.3 and 4.3.6 of the EIS. The Pemigewasset River is identified and analyzed as a state-protected and eligible Wild and Scenic river in Sections 3.3.6, 3.4.6, 3.5.6, 4.3.6, 4.4.6 an 4.5.6 of the EIS. A new visual simulation has been added to represent the Project crossing the Pemigewasset River in New Hampton, KOP NH-3, see Appendix E of the final EIS.

Northern Pass seems absurd. For all of New England.

Some speak of the need for "grid reliability" and the need for varied multiple sources of electricity. Presently Hydro-Quebec supplies the National Grid 1500MW line in western NH, [what else?] and recently received approval for large scale electrical transmission projects in Vt and NY (both underground). What percent of the electrical grid will Hydro Quebec supply? Is it prudent to rely on one provider (in another country) for so much of our electrical supply?

Some speak of the jobs this project will bring. The recently released federal Environmental Impact Statement shows the number of potential jobs that might be created. An underground line will create a two-fold increase in jobs. During and after construction.

The state Site Evaluating Committee has final authority to approve/ deny this project. As presently proposed it seems impossible that the SEC would approve this project? Right? 180 miles of Hydro-Quebec overhead transmission lines down the heart of New Hampshire?

At minimum, if this project is allowed to proceed, we should take the time to establish a proper right of way and underground the powerlines. A right of way that will benefit the state of New Hampshire, NOT permanently deface some of its most precious resources.

As proposed (overhead power transmission lines), anyone traveling north of Concord on interstate I-93 will have lasting memories of a huge transmission line. Will this Hydro-Quebec power transmission project come to define NH as "that place with that powerline"? Welcome to NH? What will be the effect on the White Mt National forest? How will the economic engine of NH tourism be effected?

It seems impossible to me that anyone who has driven north on I-93, who has appreciated the unspoiled views of this area and who notes the positioning of this large scale power transmission project, could support it. I do agree with a recent statement by Bill Quinlan of Eversource, "Northern Pass is an investment... one that is really going to change lives in this state." For certain. Northern Pass as proposed is certain to have long lasting negative effects on all of New Hampshire. For generations to come.

0021-2

0021-2
Thank you for your comment. This EIS process is intended to respond to a specific application from the proponent to evaluate the Project. Region-wide, or system-wide evaluation of supply, demand and/or reliability is the responsibility of ISO-NE and is beyond the scope of this EIS analysis.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9207

Date Entered: Apr 4, 2016

Source: Website

Topics: Vegetation, Viewshed/Scenery, Water / Wetlands, Recreation, Private Property/Land Use, Tourism, Quality of Life, NEPA Process

Name: Charlotte Crane

Organization:

Email: ccrane@law.northwestern.edu

Mailing Address: 1868 River Road

Mailing Address: Bridgewater

City: Plymouth

State: NH

Zip: 03264

Country: US

Comment: We are property owners along the Pemigewasset River in Bridgewater, New Hampshire. We are concerned that the Department of Energy's studies of the impact of the Northern Pass project have underestimated the impact of the project on the recreational and scenic value of the portion of the Pemigewasset that includes our land. More specifically, we are concerned about the impact of the Project on the Pemigewasset River and on those who use it, in the portion of the river between Ashland and Bristol.
Our property includes more than 200 acres, which stretch from the water, across a flat plain west of the river and extend up several hundred feet of elevation into the hills west of the river. The river banks are often very steep, perhaps as much as 30 or 40 feet in some locations. The grade is also often very steep from the river itself to the road that runs roughly parallel to it in our area.
It has been impossible given the information and resources available to us to determine exactly how much the project will impact our views from all three levels, that is, the water, the road above it, and the hills. But the mass and height of the towers suggest that there will be a strongly negative impact from all three vantage points. Under the most likely route, the project will include a tower of more than 100 feet to be built within 100 feet of the river, almost immediately across the river from our land. Two more sets of towers will be located up and down river from our land, where the transmission lines will

actually cross the river. These towers will, in the admission of Northern Pass, usually be higher than the tree growth (sometimes as high as 120 feet when treeline is generally 60 feet), and therefore will be far more visible than the existing electric transmission facilities. They will also involve significant construction at the edge of steep river banks as the larger towers are erected, and far greater swaths of permanently deforested river bank. We fear that the overall result will be a loss of an almost primitive river scene and the introduction of an industrialized landscape.

The Pemigewasset is a substantial river by the time it reaches this area. In some places it can be more than 50 yards wide; in others it is deep enough to accommodate power boats. For several miles between Ashland and New Hampton there is currently very little development visible from the River itself. From several vantage points on our property there is no significant evidence of development as one looks both upstream and downstream across the river. The facts that the Town of Bridgewater maintains a small park just north of our property and the State of New Hampshire maintains a Scenic Easement at the river a few miles south of our property, and two seasonal campgrounds with minimal permanent infrastructure are located along this portion of the river are evidence of the scenic and recreational value of this stretch of the river. We, our neighbors, fellow residents of Bridgewater and guests at the campgrounds, enjoy all varieties of water recreation here.

We are concerned that, to the best of our knowledge, the Draft Environmental Impact Statement discounts or totally ignores all of the effects of the Project on the Pemigewasset River south of Ashland. In particular, there seems to have been no analysis of the impact of the Project on the resources enjoyed by those actually using the river. Indeed, very little in the DEIS even acknowledges that there is value associated with the use of this river other than as part of a much larger viewshed that includes the river.

The best evidence of this lack of analysis is Section 4.1.1.2, in which the DEIS summarizes the overall effects of Alternative Three. Alternative Three involves burying the transmission lines under the existing right of way through most portions of the Central section of the Project. At page 4.4, the report acknowledges that no analysis was done that would include an assessment of most of the impacts of Alternative Three because “underground portions of the Project would not involve substantial aboveground structures or vegetation clearing.” But nowhere in the DEIS is there a description of how the Project would actually cross the Pemigewasset River, despite the fact that if the existing right of way is used, the Project would cross the river near our property at least twice (under Alternative 7) or three times (under Alternative 3), except the cursory mention in other portions of the DEIS of “underground transmission cables.” The DEIS does provide, at pages 2-9 through 2-11, a brief summary of what the burial process might include. But nothing on those pages, or in any other portion of the statement we have been able to locate, addresses any different challenges associated with this approach at our location compared to locations much further north where the river is substantially smaller.

The omission of these impacts on this portion of the Pemigewasset River is systematic throughout the DEIS. Consistently throughout the document, discussions of Alternative Three simply conclude that the project would be “located underground.” For instance, section 4.3.1.3, page 4-167 of Volume 1, Impact Analysis, Visual Resources makes this assertion and simply refers back to section 4.1.1.2 “for a discussion of the long-term operational impacts of the Project where it would be buried in the existing PSNH transmission route.” In neither place is there a discussion of what it means to be “located underground” as the Project crosses the river. Similarly, at section 4.3.2.3, the analysis of the effect of Alternative 3 on Property Values and Tourism asserts that there will be “no impacts to property values” “because the Project would be buried.”

We do not understand what assumptions are being used in the conclusion that the project would be “buried” or “located underground,” since we can find no specific discussion of what would be involved in installing and using “underground transmission cables” to cross the Pemigewasset within the existing right of way. Perhaps it is possible to use such cables at the points at which the existing right-

0022-1

0022-2

0022-3

0022-1
Thank you for your comment. The Pemigewasset River is analyzed as a recreation resource in the Recreation Technical Report (see Section 3.2 of the Recreation Technical Report). Impacts to recreation resources in the Central Section are analyzed in Section 4.3.3 of the EIS. Additionally, the Pemigewasset River is analyzed as a state-protected river (see Section 4.3.6 of the EIS). An additional Key Observation Point (KOP) simulation at the Pemigewasset River in New Hampton has been incorporated into the final EIS and Visual Impact Assessment Technical Report (KOP NH-3, see Appendix E of the EIS).

0022-2
Thank you for your comment. The final EIS notes that the Pemigewasset River is protected under the state Rivers Management and Protection Program and that it is eligible for federal designation as a wild and scenic river (e.g., Section 3.3.6.3). The river's protected status requires that the local advisory committee be notified of proposed projects on protected rivers and that related permits be sent to the committee. The EIS also indicates that potential wild-and-scenic designation would likely not be jeopardized by the project (e.g., Section 4.3.6.4). The EIS also discusses potential impacts from installation of the underground transmission line in sections devoted to water resources, vegetation, and geology and soils. Section 3.3.13 and Section 4.1.13.1 of the final EIS has been revised to include more details about impacts of underground cable river crossings.

0022-3
Thank you for your comment. Section 2.3.3.5 of the EIS describes the methods of construction for Alternative 3. Section 4.1.13.1 states that stream crossings for underground transmission cable could include installation methods for minimizing short-term construction impacts to water quality including trenching or HDD, and/or attaching to existing infrastructure such as bridges. The particular project design and associated impacts at the Pemigewasset River crossing will be considered during the New Hampshire Site Evaluation Committee review. The implementation of Applicant-proposed impact avoidance and minimization measures (see Appendix H of the EIS) would also ensure that the Project would be consistent with all applicable federal, state, and local laws, and that impacts to water resources would be minimized.

of-way crosses the Pemigewasset, and that no additional barriers between the users and the transmission lines themselves will be required. Perhaps it is also true that running transmission lines under the river (or along the riverbed) will not affect the use of the river by those who current use it for recreation. But we do not understand why the DEIS does not include more information about how this burial would in fact be accomplished and therefore confirm that there would be no permanent impact on the shore.

Note that we do not believe that these impacts should have been addressed only in discussions of Alternative Three; we focus in this discussion on Alternative Three because the failure to take fully into account the effects on this portion of the Pemigewasset River are easiest to see in the discussion of this Alternative. Indeed, we are also concerned that (1) none of the Key Observation Points include a view that would be experienced by anyone using the river, and (2) none of the Photo Locations included in the Viewpoint Assessment (available online at www.northernpasseis.us/library/draft-eis/visual-impact-assessment) include shots from locations that include the vantage point of those using the river, or even of the shoreline that faces the project from the west bank of the river.

Some arguably more specific treatment of the impact of the Project on the Pemigewasset near our location is provided for several Alternatives in other portions of the EIS. For instance, in the discussion of the impact of the Project under Alternative 2 on Recreation in the Central Section in section 4.3.3, there is mention made of the fact that there will be additional visual impact on "recreational resources currently visually affected by the PSNH transmission line" (page 4-184). Similarly the Pemigewasset is mentioned in Section 4.3.6 dealing effects on land use within the Central Section. These discussions are, however, cursory at best. For instance, at page 4-202 it is acknowledged that the Project under Alternative 2 (only towers in the relevant sections) will cross rivers that are currently state-protected rivers, but any possible impact is simply dismissed because "no structures or activities are proposed within [the] river. At page 4-204, any possible effect of the Project under Alternative 3 (buried everywhere in the relevant sections, including "an underground transmission cable" where the Project crosses the Pemigewasset) is dismissed as not worthy of analysis because the Northern Pass would be required to comply with the "specific protection measures established by the New Hampshire Rivers Management and Protection Program." We have found nothing in the DEIS that addresses exactly what an "underground transmission cable" would involve along this stretch of the Pemigewasset.

It is also true that in some filings with the State of New Hampshire, the Northern Pass has included a simulated photograph of the view of a relatively short tower on a high bank from roughly the water level. But this one photograph provides no context, since it shows very little of the adjoining undeveloped shoreline. We are unaware, furthermore, of any attempt in the analysis to show whether the towers will appear above treeline when one is standing on the higher banks of the river.

We fear that as the result of a failure to provide complete analyses as indicated above, the conclusions in the Draft Environmental Impact Statement may also understate the adverse impact of the Project on both the recreational use of the river along this stretch and on water quality as they may be affected by erosion due to the additional clearing that will be required in this area. Because the banks of the river are steep at the sites at which the towers are to be located, we are concerned that the construction and continued clearing of vegetation will lead to increased erosion, both at the sites and in other places as the course of the river may be shifted at the sites. Although a buried line might result in less erosion after its installation and if great care is taken to restore the banks, as indicated above, the DEIS simply does not include any analysis of these situations.

Members of our family have enjoyed this location for more than 200 years. We and our neighbors have consciously decided to leave the land in a relatively primitive state. For the majority of our woodlands, we work closer with a forester to carefully manage them to minimize longterm impact on landscape. We should not be required to give up what we cherish about the land in order to facilitate a project that is unlikely to provide much benefit to us.

0022-3 Continued

0022-3 cont'd

0022-4

Thank you for your comment. An additional Key Observation Point (KOP) simulation at the Pemigewasset River in New Hampton has been incorporated into the final EIS and Visual Impact Assessment Technical Report (KOP NH-3, see Appendix E of the EIS).

0022-5

Thank you for your comment. Section 4.1.13 in the EIS describes, in general, potential impacts to water resources from the proposed project, including soil erosion related to stream and river banks, with more detail provided under each alternative in each geographic section. Best management practices (BMPs), including silt fence installation, intended to avoid and minimize impacts to these resources are included in those and related geographic sections, as well as in Appendix H of the EIS. Impacts to vegetation (Section 4.1.12 of the EIS) and geology and soils (Section 4.1.14.1 of the EIS) also discuss issues related to water resource protection. Section 1.7.2 of the EIS discusses a variety of federal and state permits required for the Project, including the New Hampshire Rivers Management and Protection Program. See Section 1.5.2 in the Water Resources Technical Report for additional discussion of state permitting related to water resources. These permits have additional measures to protect, monitor, and mitigate impacts. If the Campton Conservation Commission takes issue with specific measures such as silt fencing, they should consult with relevant state agencies responsible for water quality regulation. Potential Project impacts at the Pemigewasset River crossings are not expected to impact the potential future designation of the river because there is already an existing road crossing and cables would likely be installed underneath existing bridges.

In sum, we are concerned that there is nothing in the Draft Environmental Impact Statement (DEIS) that addresses any of the impacts (scenic, recreational, water resources, or property) of the Project on our stretch of the river, especially from the point of view of users of the river. We urge the Department to either reject alternatives that involve proximity to and crossing of the Pemigewasset River, or to address these impacts before it issues its final statement.

Charlotte Crane and Ellen Webster Faran

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 1, 2015

ID: 8239

Date Entered: Aug 1, 2015

Source: Website

Topics: Purpose and Need, Recreation, Private Property/Land Use, Taxes, Tourism, Quality of Life, Forest Service Lands

Organization:

Comment: Northern Pass is not needed.

However, if there is a perceived for NP then then anything less than complete burial would decrease everything that we in Northern NH rely on. There would be a decrease in tourism, beauty, home property values and a general erosion of a quality of life.In vermont the lines are buried. In Ontario - not. Perhaps we should put overhead line in the Grand Cannon ?
Please bury the project or the lines .

0023-1

0023-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 1, 2015

ID: 8240

Date Entered: Aug 1, 2015

Source: Website

Topics: Health and Safety

Organization:

Comment: My first attempt was incomplete.
I am adamantly opposed to any Presidential permit which allows this Northern Pass to enter the US through New Hampshire, My reasons are too many to list.

0024-1

0024-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 3, 2015

ID: 8241

Date Entered: Aug 3, 2015

Source: Website

Topics: Purpose and Need, Alternatives, Health and Safety, Wildlife, Viewshed/Scenery, Water / Wetlands

Organization:

Comment: I do not want the Northern Pass. If anything I would accept the Northern Pass if it was buried underground. I live in New Hampton and the power lines would go directly through my town and would have a major impact on the river and the flood plan area. It would have major implications for property values and for wildlife in the area. I also spend a lot of time camping and hiking in the White Mountains and have severe concerns about the impact on the views and the wildlife. I do not think that jobs for a couple of years and energy for Massachusetts and Connecticut residents is worth the l long term impact to the state of New Hampshire.

0025-1

0025-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 4, 2015

ID: 8242

Date Entered: Aug 4, 2015

Source: Website

Topics: Environmental Justice

Name: John Ebanks

Organization: Self

Email: Jonathan.Ebanks@yahoo.com

Mailing Address: 1100 NE 181 st

City: North Miami Beach

State: FL

Zip: 33162

Country: US

Comment: I disagree with the above ground transmission on the grounds that it will interfere with the quite enjoyment of property users and the natural enviroment generally with wildlife (birds and small rodents) potentially being killed on a ongoing basis. Moreover, it will interfere with the quite enjoyment of property owners in an area know for its peaceful nature. The errection of this system is not keeping with charaterstics of the community which are being impacted.

I believe that a compromise will be better had if the utility lines were burried,

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0026-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 3, 2016

ID: 9174

Date Entered: Apr 3, 2016

Source: Website

Topics: Purpose and Need, Alternatives, Health and Safety, Wildlife, Viewshed/Scenery, Recreation, Private Property/Land Use, Historic/Cultural, Economic, Tourism, Quality of Life, Environmental Justice

Organization:

Comment: I am writing as a long-time resident of Deerfield, New Hampshire, which is the site of the “terminus” substation that is part of the Northern Pass Transmission project being proposed by Eversource and Northern Pass, its subsidiary.

Purpose and Need
The Northern Pass Transmission (NPT) project does address current or future needs for power in New Hampshire (NH). NH currently produces more power than it uses and is working toward more diversification of power sources, not consolidating sources of power with one out-of-country supplier, HydroQuebec, which would then control an even greater segment of New England’s electricity market. The significant impact in other areas, to be elucidated below, far outweighs any potential market benefit that this project represents. Many of my neighbors and I are gravely concerned that this project is not an isolated project to bring power from Quebec to southern New England, at NH’s (and Deerfield’s) expense- certainly the impact of this project alone is worrisome enough. Rather we have reason to believe that it represents one phase of many to vastly increase the network of electric distribution and transmission and that a substantial hub of that plan for expanded energy distribution is in my town of Deerfield. Deerfield is rural community of 4500 and is known for its picturesque and historic character- most of which will be destroyed by the Northern Pass project and any future expansions planned by Eversource.

Alternatives
Despite my personal objections to this project in total, I believe that most residents of NH and I would be much more accepting of the project if were entirely buried, thereby reducing the impact on viewsheds, scenery, property values, recreational opportunities, and tourism. Eversource has been unwilling to date to consider complete burial because it impacts their bottom line and profits. The permanent destruction of world-renowned natural beauty that serves as the basis for much of NH’s economy should not be sold out because of corporate greed.

Economic Impact
The boundary lines of my property are less than 1 mile of the new transmission lines that are proposed to run from Deerfield Center to the substation on Cate Road in Deerfield. My house has a

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0028-1
Thank you for your comment. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE's purpose and need reflects this limited authority. As discussed in Section 1.4 of the EIS, Northern Pass set forth a range of project objectives and benefits in its permit application. DOE and the cooperating agencies reviewed this documentation and determined that the project objectives include addressing three primary needs concerning New England’s electricity supply: diverse, low-carbon, non-intermittent electricity. While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from further detailed analysis.

0028-2
Thank you for your comment. The EIS analyzes several full-burial alternatives in detail (Alternatives 3, 4a, 4b, and 4c). The potential environmental impacts of all twelve alternatives, as well as technical constraints and costs, are discussed throughout the EIS.

southerly orientation, facing the path of the current power lines with very beautiful views of woods and fields also facing south. It was this view that amazed me when I first looked at the property and influenced my decision to move here. It has brought me enormous pleasure every day of my seven years here. This view is very likely to be completely marred by the replacement of the current 74.5 foot transmission structures with the proposed 105 foot structures, bringing the height of the transmission structures above the treeline. What is now a very bucolic rural landscape will become quite unsightly.

I believe this change will significantly impact the value of my property, which as it exists now is a beautiful rural New Hampshire property. The potential sale of this property plays a substantial role in my financial strategy for covering future health care and living expenses for my family and myself in the future, when I am too old to work and manage the care of the property. This was part of my retirement plan when I bought this piece of land seven years ago. If the value of the property declines significantly, I will suffer significant hardship through no action of my own. I am quite certain that this is the exact same situation facing many, many New Hampshire families who have worked very hard, as I have, to secure what should have been a sound investment for the future.

In addition, this project will have severely detrimental impact to wetlands and a myriad of wildlife therein that exist on land abutting my property. This wetland is currently of high quality and provides extensive habitat for endangered species, such as the Blanding's Turtle and the American Marten. This land adjacent to my property has provided many hours of enjoyment hiking, snowshoeing, and cross-country skiing, knowing these natural resources are able to co-exist and thrive. I believe having these natural resources so close by contributes to the value of my property and if they are damaged, so will that property value be damaged.

Aesthetic Impact

The rural and culturally valuable historic nature of the town of Deerfield is what drew me to settle in this community when I was looking for a home for my family and myself seven years ago. Many of the nine roads in Deerfield that are acknowledged in the SEC application as scenic byways are those I travel every day, deriving much pleasure in the relatively undisturbed natural beauty that currently exists for long stretches on many of these roads. The Upper Lamprey River Scenic Byway will be particularly impacted by the NPT project, affecting views around the very beautiful Saddleback Mountain area. The scenic nature of these roads will be ruined and the aesthetic pleasure of traveling around Deerfield will be substantially reduced, if not eliminated.

Additionally, I feel that Eversource/NPT has been disingenuous in its portrayal of the visibility of the new transmission structures if one is located in the historic Deerfield Town Center. As one proceeds down Center Road into this historic district, these structures will most certainly be visible and the aesthetic beauty and charm of the cultural and civic center of our town will have been ruined. It seems that NPT has chosen one very particular spot on Center Road to demonstrate how visible the structures will be, which favors their interests. If one were to move a short distance one direction or another along that same street the impact is likely to be very different, given the additional 30 feet in height these towers will possess.

This year Deerfield celebrates its 250th anniversary and many of the celebratory events planned for the town take place in Deerfield Town Center. Every year, in fact, Deerfield hosts many town events that bring the people of Deerfield together in the same area. The reason for this is the historic grounding this gives the residents, the pleasure derived by all in sharing the atmosphere created by the beautiful and historically significant buildings in this part of town, and the fostering of community

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Thank you for your comment. Section 4.1.2 of the EIS addresses the potential for impact to property values as a function of proximity of the Project to private property. Adjustments to the original analysis presented in the draft EIS have been updated in the final EIS to reflect comments on the methodology and assumptions.

0028-4
Thank you for your comment. Chapter 4 of the EIS and Section 3 of the Wildlife Technical Report summarizes impacts to wildlife, including American marten and Blanding's turtle, from construction of the Project under a variety of alternatives that have varying lengths of aboveground and burial sections.

0028-5
Thank you for your comment. The final EIS and Visual Impact Assessment Technical Report have been revised to include the Upper Lamprey River Scenic Byway as a scenic resource in the landscape assessment (see Section 4.3 of the Visual Impact Assessment and Section 4.4.1 of the EIS).

0028-6
Thank you for your comment. A new Key Observation Point (KOP) photo-simulation for Deerfield Town Center has been prepared and evaluated in the final EIS and revised Visual Impact Assessment Technical Report (viewpoint DE-2, see Section 4.4.1 and Appendix E of the final EIS and Appendices A and B of the Visual Impact Assessment Technical Report).

connection in this context. The NPT project threatens the historic ambience of our Deerfield Town Center and, given the scale of this project, this will be a permanent devastation.

The road I live on, which runs adjacent to the path of current power lines which are proposed to be increased in height from 75 feet to as much as 120 feet, is home to more than thirty antique homes. The historic nature of the neighborhood will be severely damaged by the imposing presence of the proposed towers.

Health and Safety Concerns

0028-7

The boundary of my property is less than 1 mile from current 115kV and proposed 345kV transmission lines that run from Deerfield Center to the substation on Cate Road in Deerfield. As a nurse and a public health professional, I have significant concerns about the still largely unknown effects of chronic, daily exposure to the electromagnetic fields that will be created with the more than 100% increase in the amount of electrical current carried by this project and the lines in close proximity to my property, myself, my partner, as well as my children and grandchildren.

While more recent studies have had mixed findings. a study conducted in 1979 and reported in the American Journal of Epidemiology pointed to a possible association between living near electric power lines and childhood leukemia. As a former pediatric oncology nurse and mother/grandmother, the lack of conclusive evidence with regard to risks of chronic exposure to elevated levels of electromagnetic radiation is very concerning. The lack of consistent findings of an increasing risk of leukemia, brain tumors, or female breast cancer with increasing exposure to magnetic fields at work does not afford much comfort- a lack of information does not mean that the association does not exist. Virtually all scientific research into this issue states that additional study is required to be able to draw conclusions one way or the other.

The situation regarding the scientific evidence as described above is exactly why the concept of the precautionary principle is appropriate in this situation. The precautionary principle encourages policies that protect human health and the environment in the face of uncertain risks. I believe this concept pertains very relevantly to the lack of knowledge regarding prolonged human exposure to elevated electromagnetic (EM) radiation such as what will occur with the construction of the Northern Pass transmission lines.

Environmental scientists worldwide have proposed that this precautionary principle concept be adopted as the standard guideline in environmental decision-making with regard to policymaking and scientific inquiry. The concept has four central components:
1. Taking preventive action in the face of uncertainty;
2. Shifting the burden of proof to the proponents of an activity;
3. Exploring a wide range of alternatives to possibly harmful actions; and
4. Increasing public participation in decision-making.

Taking preventive action in the face of uncertainty should lead to a decision to reject this project given the serious consequences to the large numbers of New Hampshire residents in the many communities (including Deerfield) all along the path of this project who would be exposed to potentially lethal EM radiation. I do not feel that Eversource/NPT has met the threshold for achieving the burden of proof that there is no danger to those living adjacent to the power lines proposed in this project. There is no plan in the proposal for addressing public safety needs in the event of tower falling- NH does experience occasional earthquakes, tornados, and hurricanes and the frequency of

0028-7
Thank you for your comment. The commenter's concern regarding potential impacts from electro-magnetic fields is noted. Section 4.1.4.2 in the EIS addresses the potential for magnetic fields to cause cancer. Additional discussion is provided in Appendix B of the Electric and Magnetic Fields Technical Report (included as Appendix B of the Public Health and Safety Technical Report). Section 4.1.4.2 of the EIS also addresses the potential adverse impacts caused by downed transmission lines and natural disasters.

such events has increased in recent years.

Recreation, Tourism, Viewshed, and Scenery
It is challenging to put into words the incredible natural beauty that exists all along the path of the Northern Pass project. To say that it is unbelievably gorgeous and unlike anywhere else in the world is such an understatement. People travel from everywhere to experience the beauty of our mountains, rivers, lakes and expansive views of untouched forests and natural landscapes. I believe that their ability to experience and enjoy such magnificence has a substantial impact on their lives, their peace of mind and even perhaps their spirituality. This cannot be quantified. NH is unique in the quality and degree of aesthetically pleasing places- many of which will be impacted negatively and irreparably by this project. This damage too is unquantifiable.

I can say for certain is that my life is immeasurably improved by experiencing the natural beauty that exists across NH and in my town of Deerfield. Deerfield is home in part to Pawtuckaway State Park, where I hike, swim, canoe, snowshoe and bike frequently. The views from within the park and on the roads around Deerfield approaching the park, which includes views of three beautiful mountains, will be significantly damaged by the presence of the new and very large electric transmission towers and lines. Adjacent to Deerfield, in Epsom, is Bear Brook State Park, another place in which we enjoy walking, biking, and swimming. The very thought of 150 foot towers being erected along the boundary of this park seems unconscionable. It will be devastating and people will no longer want to come their because it will feel completely unnatural and threatening.

My partner and I frequently hike, ski, snowshoe and camp up in the White Mountains as well. We will likely choose to enjoy these activities elsewhere if Northern Pass is allowed to move forward and destroy the beauty and our ability to enjoy that beauty.

Seeing New Hampshire’s character and beauty damaged to such a degree will certainly impact the quality of life of many people who have chosen to make the lives and those of their families here. We will lose the natural beauty we value experiencing, the economic benefit of stable and improved property values, the historic context in which we live, and the knowledge that we co-exist with nature to the greatest degree possible.

Northern Pass brings with it such devastation and irreparable harm to NH and the communities along its path. Please do not discount the substantial impact that this project will have, please do not allow them to sell NH out for corporate profit.

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Continued

0028-7 cont'd

0028-8

0028-8
Thank you for your comment. The EIS analyzes the importance of tourism to New Hampshire, businesses, and the local and regional economy. The EIS concludes that "while it is reasonable to conclude that the Project may have some level of impact on tourism within New Hampshire and on individual locations near the Project route, these are not quantifiable." Potential impacts to Pawtuckaway State Park are discussed in the recreation analysis (see Sections 3.4.3 and 4.4.3 of the EIS).

0028-9

0028-9
Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS.

Town of New Hampton

Office of The Selectmen

6 Pinnacle Hill Road
New Hampton, New Hampshire 03256

(603) 744-3559
FAX (603) 744-5106
www.new-hampton.nh.us

Brian Mills
Senior Planning Advisor
Office of Electricity Delivery and Energy Reliability (OE-20)
U.S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585

Dear Mr. Mills,

To paraphrase Daniel Patrick Moynihan, former US Ambassador to the UN & India and US Senator for New York; we are entitled to our own opinions, but we are not entitled to our own facts. We respectfully submit that the evaluation of the Northern Pass project focus on the facts, and offer the following facts in opposition to the Northern Pass as it is currently proposed.

Fact: The Northern Pass is a private "participant funded merchant project". It is at its core a project between an energy producer and an energy distributor to get product to market, nothing more. Any talk about tax revenues, jobs or energy cost reductions are there to muddy the waters and attempt to put lipstick on a pig. There is no public need for the project, therefore, it is the position of the Town of New Hampton that any disruption, inconvenience or financial impact be borne in its entirety by the applicant.

However, if local benefit is to be part of the discussion then we must consider the following facts; quoting from the DOE Draft EIS Summary, Page S-15 "alternatives that would be constructed underground along existing roadways would impose the fewest environmental impacts [...]." It goes on to say, "Because of the higher construction cost, the underground alternatives would [...] provide additional tax revenue to local taxing jurisdictions." It also states, "The overhead alternatives would be expected to create between 5,000 and 6,000 short-term jobs [...] and approximately 900 permanent jobs, while the underground alternatives would be expected to create between 9,000 and 10,000 short-term jobs [...] and between 1,300 and 1,500 permanent jobs. Additionally, on page S-19, Table S-3 we see that the impact of the burial option on property values and associated property tax payments is zero.

Fact: New Hampton, like a great many other Towns, is currently involved in litigation initiated by the utility companies, including Eversource, regarding tax assessments of assets within our

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0030-1
Thank you for your comment. The EIS addresses potential impacts on property taxes and employment anticipated as a result of the Project (see Section 4.1.2 of the EIS). Future tax abatement, or related proceedings, are beyond the scope of this analysis.

Town. To date New Hampton has had to pay in excess of $27,000 in legal expenses for the privilege of prevailing in the courts. Northern Pass tells us that the Towns will receive a much needed influx of tax revenue. However, if "What is Past is Prologue" every Town forced to host this project will receive their annual tax abatement filing and be tied up in litigation for years offsetting any perceived benefit.

Fact: In 1987 the town of New Hampton created and adopted the Pemigewasset Overlay District, a zoning district, providing protection for the environmentally sensitive corridor along the Pemigewasset River. After the US Congress passed the Pemigewasset River Study Act in 1990, the Pemigewasset qualified for designation as a Wild and Scenic River in 1993. A designation the voters of New Hampton supported at Town vote in March of the same year. While the move to have the river designated as such was unsuccessful, it does not change the fact that the Pemigewasset should be recognized for possessing outstandingly remarkable scenic, recreational, fish and wildlife, historic and cultural values. As stewards of the States resources, it is incumbent upon us to defend against actions that would adversely impact the value, in all of its meanings, of the river.

Fact: Northern Pass, despite its recent attempt at rebranding and rhetoric about listening to the people of New Hampshire has elected to place a tower within the Designated Scenic Easement for the Pemigewasset River in New Hampton and ignore the historical and cultural significance of identified Native Indian sites on the banks of the Pemigewasset, most notably the "Long Carry" site, identified in the NH Division of Historic Resources inventory as 27-BK-0010, and recorded in the expeditionary journals of Capt. Baker 1712 and Capt. Peter Powers 1754. Additionally, Dr. Ellen Cowie, Principal Investigator and Director of the Archaeology Research Center, University of Maine observed in her 2008 Phase 1B report that, "...lines of evidence [...] indicate probable Late Paleo-Indian occupation circa 8000-7000 BC." The insistence of Northern Pass on the above ground option for 69% of the route is not a "forward nhplan," it is a willful disregard for the history of New Hampshire and a willful rejection of the voice of the people of New Hampshire.

Fact: New Hampton is a gateway community for the Lakes Region and the White Mountains. For many visitors to New Hampshire their first glimpse of the majesty of the North Country as they travel North on I-93 comes around mile marker 73 where the Eversource RoW crosses I-93 into New Hampton. Currently the RoW is occupied with wooden pole structures, typically 55' in height. Northern Pass proposes to frame that vista with 3 steel lattice towers approximately 100' tall. Similarly, at mile marker 71 where the line again crosses the highway, Northern Pass proposes to replace the existing 55' wooden pole structures with a series of steel monopoles up to 115' in height, collocated with 3 steel lattice structures each in excess of 100' tall, the tallest measuring 125'. Visitors travelling West to Newfound Lake on Route 104 will be exposed to a similar treatment of the existing RoW as it crosses both Route 104 and the Pemigewasset River into New Hampton, with 120' monopoles replacing the existing wooden structures and steel lattice towers of 100' & 125' on either side of the Pemigewasset River. The industrialization of the rural character of our Town and State is

0030-1 Continued 0030-1 cont'd

0030-2

Thank you for your comment. The commenter's concerns regarding potential impacts from the proposed Northern Pass project in the vicinity of the Pemigewasset River, such as the designated scenic easement along that River, as well as potential effects to American Indian archaeological sites such as the Long Carry site are noted. The Pemigewasset River was considered during preparation of the DEIS and is discussed in Sections 3.3 and 4.3 of the final EIS. The Long Carry site was not included in this EIS because it is outside the study area for archaeological resources, which is the direct area of potential effects ("APE") [36 CFR Section 800.16(d)]. NH DHR concurred with DOE's finding that the Long Carry Site is not in the direct APE. DOE is addressing potential adverse effects to historic properties,

0030-2 including historic properties of religious and cultural significance to federally-recognized Indian tribes and cultural landscapes listed in the National Register of Historic Places (NRHP) or eligible for listing in the NRHP, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations. DOE is coordinating its compliance with Section 106, in a manner consistent with 36 C.F.R. Section 800.8, with the pertinent standards of the National Environmental Policy Act of 1969 ("NEPA") pursuant to 40 C.F.R. Sections 1500-1508. The Section 106 process is described in Sections 1.6 and 1.7.3.2 of the EIS. No updates have been made to the final EIS regarding this resource.

0030-3

0030-3

Thank you for your comment. Visual impacts in New Hampton are analyzed in Section 4.3.1 of the EIS. Two new Key Observation Points (KOPs) in New Hampton have been added to the final EIS, one along I-93 northbound (KOP NH-2) and one at the Pemigewasset river crossing (NH-3).

again a willful dismissal of the voice of the people of New Hampton and the State of New Hampshire.

0030-3 Continued 0030-3 cont'd

Fact: Northern Pass Transmission LLC does not answer to the people of New Hampshire. It answers to the stakeholders of the project and to the shareholders of the parent companies. Voluntarily, it will seek to do the absolute minimum to mitigate the impacts and costs of the project, while maximizing its earnings. If the Northern Pass Transmission Line is to be located within New Hampshire then it is incumbent upon us as custodians of our communities and of the State to impose upon Northern Pass the measures which will bring about the maximum protections, of our environment and economies, while securing for our communities the best possible outcomes in jobs and tax revenues.

Therefore Alternative 4A which calls for the burial of the transmission line in its entirety, while being "disadvantageous to the Applicant" results in maximum benefit to the affected communities and is consistent with the position taken by the Town of New Hampton that any inconvenience or financial impact be borne in its entirety by the applicant.

Respectfully submitted

Neil G. Irvine

Nathaniel H. Sawyer

Kenneth A. Mertz

September 10, 2015

Selectboard, Town of New Hampton

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Dec 4, 2015

ID: 8567

Date Entered: Dec 4, 2015

Source: Website

Topics: Other

Organization:

Comment: I support the Northern Pass project and if you are tired of paying outrageous energy bills, you should too. It's time to bring more diverse sources of energy to New Hampshire and reduce the financial burden of high electric rates on our families and businesses. I've seen signs supporting and opposing Northern Pass, I've listened to the radio and television ads being aired by both sides, and I've read the news stories covering the project. At the end of the day it comes down to the fact that we pay too much to heat and power our homes and something needs to be done. And relying on a fossil fuel like natural gas for more than 50% of our power is just bad economics. Introducing more clean hydro power will lessen our reliance on all fossil fuels to make power.
Northern Pass will help reduce our dependence on oil, coal and natural gas, and increase the amount of clean hydro power being distributed in our state. Hydro is also clean and reliable alternative to wind and solar power. Hydro is what's called a baseload power source that you can count on when the wind doesn't blow and the sun doesn't shine. Now that Northern Pass is burying more line to protect viewsheds, and dedicating a large amount of power from the line to New Hampshire, I am hoping regulators will approve this project quickly.

0031-1

0031-1
Thank you for your comment. Section 1.4 of the EIS discusses the project's objectives of providing diverse, low-carbon, non-intermittent electricity supply to New England.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 9, 2015

ID: 8251

Date Entered: Aug 9, 2015

Source: Website

Topics: Other

Name: Peter Martin

Organization: Mr.

Email: martinp003@gmail.com

Mailing Address: 280 Old Hebron Rd.

City: Plymouth

State: NH

Zip: 03264

Country: US

Comment: Citizens rights before corporate profits, always. It does not matter if it cost more for a merchant funded, bottom line, profit motivated project to use modern, environmentally friendly and community friendly technology. Modern technology for power transmission allows for cost competitive, rapid line burial along state approved public ROW prepared surfaces. Long term it cost less to "do it right" than to deface public and private property with overhead Power lines for there is less maintenance and no storm damage. Northern Pass must be buried - all of it.

0032-1

0032-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 9, 2015

ID: 8252

Date Entered: Aug 9, 2015

Source: Website

Topics: Purpose and Need

Name: Timothy Duggan

Organization:

City: Concord

State: MA

Country: US

Comment: The Northern Pass project is NOT NEEDED. Its only purpose is to generate profit for both Hydro Quebec and Eversource. The fact that Southern New England will receive an additional electricity source is merely a side effect. If these 2 corporations were genuinely interested in providing electricity to Southern New England and if that electricity was so sorely needed, then they would embrace 100% burial as the fastest means to accomplish that goal.

Instead, they chose the cheapest construction option: Overhead Transmission. Why? Because the primary purpose of the project is to generate profit for both Hydro Quebec and Eversource. Lower construction costs mean higher profits. This choice has exposed the project to ongoing delays in the project schedule with completion dates regularly pushed out further and further. In the meantime, Southern New England has fared just fine in terms of electricity supplies. Which proves that the Northern Pass project is not needed - we can all live without this project... and we do so every day.

There is no energy crisis. The only crisis here is the one brewing for Eversource shareholders when the market finally realizes that they've been lied to at every step of the way - much like the citizens of Northern and Central New Hampshire have been lied to every step of the way.

0033-1

0033-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 9, 2015

ID: 8253

Date Entered: Aug 9, 2015

Source: Website

Topics: Alternatives

Name: pamela martin

Organization:

Email: martinp003@gmail.com

Mailing Address: 280 Old Hebron Road

City: Plymouth

State: NH

Zip: 03264

Country: US

Comment: If Northern Pass is needed by southern New England, then they can pay to bury it. New Hampshire doesn't need the energy and would suffer the consequences of the overhead lines. Burying the entire project would be a win-win for all.

0034-1

0034-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9224

Date Entered: Apr 4, 2016

Source: Website

Topics: Alternatives

Name: Walter Palmer

Organization:

Email: waltpalmer1@gmail.com

Mailing Address: 1900 Easton Rd.

Mailing Address: Apt. 5

City: Franconia

State: NH

Zip: 03580

Country: US

Comment:

Comments of Walter A. Palmer

on the

DRAFT NORTHERN PASS TRANSMISSION LINE PROJECT
ENVIRONMENTAL IMPACT STATEMENT

Thank you for the opportunity to comment on the subject Draft Environmental Impact Statement (DEIS). My comment pertains to the alternatives considered in the DEIS, and in the final Environmental Impact Statement (FEIS). Specifically, I request that the U.S. Department of Energy (DOE) retain Alternative 4a in the FEIS. Further, I strongly suggest that DOE drop from the FEIS as nonviable all alternatives that involve burial of the Northern Pass electric transmission line under or along NH routes 18, 116, or 112, 3, and all other secondary state roads. This includes Alternatives 4b, 4c, 5b, 5c, 6b, and 7, hereinafter referred to collectively as the "state road alternatives".

The basis for these requests is that alternative 4a is in fact a fully viable alternative from an engineering and legal standpoint, and, as determined in the DEIS, poses the least environmental and socioeconomic impacts of all of the alternatives considered. In these respects, Alternative 4a has already been found to be the optimal alternative. The state road alternatives, on the other hand, face legal barriers that as of this writing (4/4/2016) have not been resolved. Moreover, the state road alternatives involve extensive, serious negative environmental and social impacts that are almost entirely avoidable through the adoption of Alternative 4a. These unresolved legal issues and severe, avoidable, negative impacts render the state road alternatives nonviable.

1. Alternative 4a is Fully Viable and Should Be Retained in the FEIS

On 1/11/2016 Northern Pass Transmission LLC (NP), submitted to DOE its Comment of Northern Pass Transmission LLC on Draft Environmental Impact Statement (DEIS comment ID 8659). In this comment, NP requested among other things that Alternative 4a should be dropped from the EIS as nonviable. However, all of the issues presented by NP in support of this request are untrue, based on pure conjecture, or easily surmountable. Alternative 4a is, in fact, a fully viable alternative. I will devote the following paragraphs to refuting each of the assertions made by NP in their 1/11/16 comments regarding Alternative 4a, because it is important for DOE to realize that these assertions are groundless, and that alternative 4a is fully viable in all respects.

In its 1/11/16 comment, NP asserted that Alternative 4a and several other alternatives in the DEIS "are not alternatives that appear to enjoy any particular public support." This is manifestly untrue. In fact, Alternative 4a, and the concept of burying the power transmission line along interstate highway corridors, is by far the most popular alternative among members of the public who are willing to accept Northern Pass at all. This was demonstrated at the public hearing regarding the Northern Pass DEIS held by DOE on 3/11/2016 in Whitefield, NH. DOE's own record of this event will show that commenter after commenter, spanning the field from private citizens to non-governmental organizations (NGOs) to members of the NH legislature, voiced support for Alternative 4a, and/or burial of the transmission line in interstate corridors. The same has been true at all of the public hearings so far held by SEC regarding the Northern Pass project. Alternative 4a definitely enjoys far more public support than NP's preferred alternative (Alternative 7), which has been roundly opposed and criticized at all of these public fora. If public support were the criterion for determining which alternatives were retained in the FEIS, Alternative 4a would certainly be featured, while Alternative 7 would be eliminated.

In its 1/11/2016 comment NP quoted portions of the NH Department of Transportation (DOT) 02/2010 Utility Accommodation Manual (UAM) as a supposed legal barrier to burial of the NP transmission line along I-93. NP's comment stated in part:

> "'Longitudinal installations are not permitted within the LAROW [limited access right-of-way] lines parallel to either the through roadway [of an interstate freeway] or its ramps.'

0035-1

0035-2

0035-1
Thank you for your comment. No changes to the range of alternatives considered in detail have been made in the final EIS. The potential impacts of all action alternatives, including those buried in state roadway corridors, are analyzed in the EIS. Constraints related to use of existing road corridors for burial of the transmission line are discussed in the EIS. The New Hampshire Site Evaluation Committee has siting authority for the Project in the state of New Hampshire.

0035-2
Thank you for your comment. Alternative 4a is analyzed in detail in the EIS. The regulatory framework governing the location of underground transmission in roadway corridors is discussed in the Land Use Technical Report and the land use discussion in the EIS, see Section 3.1.6.4. The Applicant would be responsible for securing all necessary rights and land use approvals to utilize any route permitted by the SEC. For the purposes of eminent domain, the New Hampshire Public Utilities Commission has authority to rule on matters of eminent domain for electric transmission lines pursuant to Chapter 498-A of the Eminent Domain Procedures Act.

0035-2 cont'd

0035-2
Continued

> 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…." 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."

However, as of this writing, NP has failed to show that other public roadway options are do in fact exist. NP has failed to demonstrate that it has the right to construct underground transmission infrastructure under all portions of the smaller state roads included in NP's preferred alternative. NP faces multiple challenges from abutting landowners whose deeds indicate that the abutters own the land under the road. Their deeds grant the State an easement to use the roadway corridor, but these easements are very specific, and do not encompass the burial of longitudinal power transmission lines. One such abutter has so far filed a motion with the NH Site Evaluation Committee (SEC) to have NP's application for a siting permit dismissed if NP cannot demonstrate that it has the right to construct its transmission line under the State roadway on this abutter's property. NP faces a lawsuit in NH Supreme Court from another abutter, challenging NP's right to use this abutter's property under the State roadway.

In 2011 the NH legislature enacted SB361, a bill creating a commission to study the feasibility of establishing energy infrastructure corridors within existing transportation rights-of-way. These corridors would be for the express purpose of siting projects like Northern Pass. The SB361 Commission included DOT staff, and worked very closely with DOT. The final SB361 Commission Report, published 11/30/2012, stated in part that:

> "The vast majority of state-maintained highways are constructed on easement rights-of-way. In such cases the State does not own the underlying land in fee. In fact, prior to 1992 land acquired via eminent domain (except for Limited Access Right of Way [i.e. interstate and divided highways]) were required to be taken as an easement for transportation purposes only. The use of these easement rights-of-way by the NH Department of Transportation (DOT) is restricted to construction, maintenance and operation of the roadway, which may impair their ability to identify these as potential locations of energy infrastructure corridors without further legislation. Limited access rights-of-way (interstate, turnpike and divided highways) are the only roadways where the state owns the underlying land in fee."

The SB 361 Commission Report goes on to state that DOT had identified four highway corridors as preferred energy infrastructure corridors. These included:

> "I-89 (between the intersection of I-93 and the Vermont border); I-93 (between the Massachusetts border and the Vermont border); I-95 (between the Massachusetts border and the Maine border)…"

DOT therefore recognizes the legal barrier to burying energy infrastructure under secondary State roads. Given this legal barrier, NP can clearly meet the requirement of the UAM to show that no alternatives to citing its power line along I-93 are available. NP could very well be eligible for the design exception provided for in the UAM, permitting construction in the I-93 corridor. Moreover, based on the SB361 Commission Report, DOT is clearly amenable to and in fact prefers the use of interstate corridors, including the portion of I-93 through Franconia notch, for the siting of projects such as Northern Pass. Thus it can be seen that in fact the UAM poses no insurmountable legal barrier whatsoever to Alternative 4a, or the siting of Northern Pass in the I-93 corridor, including through Franconia Notch.

NP's 1/11/16 comment included the following:

0035-2 cont'd

0035-2
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> "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….. 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…"

NP asserted that these access restrictions in the UAM represent an insurmountable legal barrier to installation of their proposed power transmission lines along I-93. However, the above is not a faithful citation of the UAM. The UAM does not require "extreme circumstances" at all for the direct access to construction sites from the highway. In fact, the UAM states that:

> "Such direct access shall not be permitted except for special cases where alternate locations and/or means of access are unavailable or impractical due to terrain and/or environmental constraints,…. Where direct access is requested, an access permit must be obtained from the Department [UAM, § XIII. B.6(e)(1)] ."

Clearly this access issue is not an insurmountable legal hurdle, as NP asserts. It is in fact no more than a matter of obtaining a permit, according to procedures provided for in the UAM. In short, the UAM in no way renders Alternative 4a nonviable.

In its 1/11/16 comment, NP stated:

> "… 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."

However, as shown above, NP would be eligible for a design exception, allowing NP to install its transmission line within the LAROW along I-93. Once granted a design exception, NP could locate its buried transmission line in the previously disturbed shoulder of the interstate corridor, avoiding the impacts listed above.

In its permit application to the SEC and in numerous statements at public hearings, NP has repeatedly assured the public that it would not cause any significant environmental impacts while installing its underground transmission line along the small state roads included in NP's preferred option. NP states above that doing so would cause only "temporary and much reduced impacts." However, NP fails to explain why it could install underground transmission line along NH Routes 18, 116, 112, 3, and other small roads with "temporary and much reduced impacts", yet in the I-93 corridor the very same installation would have extensive impacts on geology, vegetation and wetlands. It defies science and logic that the identical construction would have major impacts in interstate corridors, and yet minimal impact along scenic rural roads, and down the main streets of towns. NP's claim is specious at best, and in no way constitutes a credible argument for declaring Alternative 4a nonviable.

Finally, in its 1/11/2016 comment, NP raises the issue of the 1977 Memorandum of Agreement (MOA) signed by seven state and non-governmental parties, which cleared the way for the construction of I-93 through Franconia Notch. NP states:

> "The MOA….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)."

However, NP then goes on to state that in 1993 additional construction through the Notch (the addition of a median divider) was in fact permitted, through a process of modification to the MOA. Precedent therefore shows that this MOA does not constitute an insurmountable barrier to additional construction in the Franconia Notch. NP speculates in its 1/11/2016 comment that parties to the MOA, and specifically DOT, would oppose the installation of a buried transmission line through Franconia Notch. However, this is completely unsupported speculation. The SB SB361 Commission Report cited above demonstrates that, far from opposing the construction of NP's transmission line through Franconia Notch, DOT has already identified the I-93 corridor, including the section through Franconia Notch, as a preferred energy infrastructure corridor suitable for projects exactly like the Northern Pass. Other parties to the MOA have indicated in private conversations with me that they would also be amenable to the location of the NP transmission line in Franconia Notch, under the right circumstances.

NP presents no evidence that the MOA constitutes a barrier to Alternative 4a, and the available evidence suggests that it would not do so. Certainly the unsupported speculation provided by NP in its 1/11/2016 comment is no basis for declaring Alternative 4a nonviable.

As the foregoing demonstrates, NP has clearly not made a credible case for the nonviability of Alternative 4a. Alternative 4a is completely viable, and, based on logic and on the findings the DEIS, 4a is the optimal alternative for siting a high-voltage power transmission line from North to South through New Hampshire.

2. The State Road Alternatives Are Nonviable, and Should Be Dropped From the FEIS

NP's 1/11/2016 comment on the DEIS included the incredible statement that:

> "…the I- 93 alternatives offer no offsetting environmental benefits that might make those alternatives worth the challenge of pursuing them."

This statement is tantamount to saying that construction of an underground transmission line along the roads included in the DEIS state road alternatives would entail no environmental impact. Nothing could be farther from the truth. The construction of Northern Pass on any of the DEIS state road alternatives would entail extensive and serious environmental and socioeconomic impacts. Most of these negative impacts would be avoided almost entirely by adoption of Alternative 4a.

The smaller roads included in the state road alternatives are almost all narrow, winding, hilly roads. They are lined on both sides by large old trees, often close to the road's shoulder. They are the neighborhood roads for thousands of NH residents. They include state-designated scenic byways. Tourists travel from throughout the region, the country, and even the world, to experience the pleasure of these byways, whether by car, motorcycle, bicycle, or on foot. Homes line these roads, in many cases located only several feet from the road boundary. Many of the roadside buildings and wells are historic structures, founded on fieldstones placed by hand many years ago. They are vulnerable to damage from construction vibration and blasting.

The proposed route runs right down the main streets of several towns. Installation of a high-voltage, underground power transmission line under these main streets poses numerous serious negative impacts. These towns will face serious and permanent hardships when trying to install, replace, repair, or expand

0035-2 cont'd

0035-2
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0035-3
Thank you for your comment. No changes to the range of alternatives considered in detail have been made in the final EIS. The EIS analyzes in detail several alternatives that involve underground cable in roadway and interstate corridors, including Alternatives 4a, 4b, 4c, 5a, 5c, 6a, 6b, and 7. The potential impacts of all action alternatives, including those buried in state roadway corridors, are analyzed in the EIS. These potential impacts include construction disturbance and damage, EMFs, and effects on property values. The regulatory framework governing utilities in roadway corridors is discussed in the land use section of the EIS, see Section 3.1.6.4. The New Hampshire Site Evaluation Committee has siting authority for the Project in the state of New Hampshire.

0035-3

0035-3 cont'd

0035-3
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any infrastructure near the power line route, particularly as all water and sewer lines must be buried more deeply than, and must therefore be installed underneath, the proposed power line.

By far the greatest difference between the DEIS state road alternatives and Alternative 4a is the presence of abutters along the roads included in the state road alternatives. Alternative 4a would affect few abutting private properties. By contrast, the state road alternatives would affect many hundreds of abutters. Serious impacts to these abutters resulting from Northern pass would include:

- Disturbance buy noise, vibration, and dust during the construction phase;
- Damage to foundations, wells, and homes due to close-proximity construction vibration and blasting;
- Disruption of lives due to obstruction of roadways during the construction phase;
- Loss of business due to avoidance of the Northern Pass area by customers;
- Long-term damage to roadside aesthetics and environmental quality;
- Long-term concerns about possible deleterious health effects of electro-magnetic fields (EMF) caused by HVDC power lines;
- Loss in property values and significant reduction in the equity held by abutting landowners due to the reduced desirability and marketability of properties abutting the Northern Pass route.

These impacts are an unavoidable result of construction of Northern Pas along smaller state roads, but could be almost entirely avoided through the adoption of Alternative 4a.

With regard to environmental impacts, NP has repeatedly asserted that the Franconia Notch is one of the most sensitive and attractive places in New Hampshire from an environmental standpoint, and that construction of Northern Pass through Franconia Notch should therefore be avoided. There is no question that the Notch is unique and beautiful. However, there is an interstate highway running right through it. The incremental impacts of a buried power transmission line along the I-93 interstate corridor would be practically unnoticeable.

NP asserts that Alternative 4a offers no offsetting environmental benefits, suggesting that the environmental impacts associated with the DEIS state road alternatives would be insignificant. However, the facts are that there are just as many if not more sensitive and valuable environmental resources along the smaller state roads included in the DEIS state road alternatives as there are along I-93 and in Franconia Notch. As an example, NH Routes 18 and 116 through Franconia and Easton traverses multiple large, relatively pristine wetland areas. The route passes through the headwaters of the Ham Branch River, a pristine trout fishery, crossing the Ham Branch and several of its tributaries in more than a dozen locations. The route crosses the Gale River, another trout fishery, and runs parallel to this river's bank for many hundreds of feet. The Ham Branch and the Gale River are tributaries to the Ammonoosuc River, a designated State protected river.

NP maintains that impacts to these water bodies would be minimized through the use of horizontal directional drilling rather than trenching to install power line cable under water body and wetland areas. If this is true, then the same techniques could be used reduce or eliminate impacts to wetlands and water bodies in Franconia Notch, and in other sensitive areas along the I-93 corridor.

The above brief discussion of the environmental and socioeconomic impacts associated with the DEIS state road alternatives is intended to point out that;

- The DEIS state road alternatives would entail environmental impacts at least equal to, and probably greater than, those associated with Alternative 4a;

- The DEIS state road alternatives would necessarily entail extensive and severe socioeconomic impacts, which could be almost entirely avoided by adoption of Alternative 4a.

0035-3 cont'd

0035-3
Continued

The extensive, severe, and almost entirely unnecessary socioeconomic impacts associated with the DEIS state road alternatives make these alternatives unacceptable. The state road alternatives (Alternatives 4b, 4c, 5b, 5c, 6b, and 7) should be dropped from the FEIS as nonviable for this reason.

Additionally, as discussed above, there remain significant legal barriers to the DEIS state road alternatives. To date, NP has failed to demonstrate that it has the legal right to install its proposed underground transmission line on all portions of its preferred route, and significant doubts remain as to whether NP would have the legal right to utilize any of the roads included in the DEIS state road alternatives. NP has failed to demonstrate that any of these alternatives, including NP's preferred alternative, is in fact legally viable. Unless NP can demonstrate that it has acquired the rights to construct Northern Pass on all abutters' properties under State Roads by either (a) purchase of these rights or (b) adjudication by a court of competent jurisdiction, the state road alternatives should be dropped from the FEIS as nonviable.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Mar 28, 2016

ID: 8912

Date Entered: Mar 28, 2016

Source: Website

Topics: Other

Organization:

Comment: Thank you for allowing me to give my full support to the Northern Pass Project. I feel this project is necessary to maintain a high level of energy to our depleting system with loss of nuclear plants in the Northeast and the push for clean energy. I feel that viewing overhead power lines in Right of Ways is much easier on the eyes than windmills and solar fields.
I also feel that we would be better served by having the new system completely overhead and refrain from underground installation. Overhead lines are much easier and more cost effective to maintain and have a much longer life. Lets face it, the current lines in the proposed right of way are already overhead.

0037-1

0037-1
Thank you for your comment. Section 1.4 of the EIS discusses the project's objectives of providing a diverse, low-carbon, non-intermittent electricity supply to New England. The EIS analyzes the potential environmental impacts from twelve alternatives, and the alternatives include a variety of overhead and underground configurations as well as a No Action Alternative.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 9, 2015

ID: 8254

Date Entered: Aug 9, 2015

Source: Website

Topics: Quality of Life

Name: Vicky Ballentine

Organization:

Country: US

Comment: no to Northern Pass . or IF it must go through at least go under ground the entire route . There will be short term damage that way like when you clear cut the forest . BUT the HUGE UGLY Dangerous Noisy TOWERS will be there forever NO one will com back and tear them down when they are no longer needed or used . They will just stand there continuously Ugly . So do NOT Build them !!!!!

0038-1

0038-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 10, 2015

ID: 8255

Date Entered: Aug 10, 2015

Source: Website

Topics:

Organization:

Country: US

Comment: Simulated view from AT
Half tower!
Missing; 41.

0039-1

0039-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9185

Date Entered: Apr 4, 2016

Source: Website

Topics: Purpose and Need, Alternatives, Health and Safety, Vegetation, Wildlife, Viewshed/Scenery, Water / Wetlands, Soils, Recreation

Organization: Campton Conservation Commission

Comment: Campton Conservation Commission
12 Gearty Way
Campton, NH 03223

March 27, 2016

Dear Sir(s) and/or Madam(s)

Upon reviewing the Draft Environmental Impact Statement that your department has prepared regarding the Northern Pass Transmission Line Project, we respectfully submit the following comments:

Overall, this project fails to make a strong case for being worthwhile to the people living along the corridor or throughout the state of NH and New England. When we consider negative impacts to water resources, wildlife, vegetation, geology and soils, scenic and recreational resources, the costs seem to greatly outweigh the benefits of this project.

Our primary concerns affecting our water resources are the impacts to waterways, wetlands and vernal pools. Within several towns, including the Town of Campton, the proposed burial route parallels the Pemigewasset River, often along steep and unstable banks. We are not convinced that the use of silt fencing will prohibit sediment entering the waterway, particularly during rainstorms and high flow events. Vernal pools have been widely acclaimed as havens for sensitive wildlife species. Because of their temporary and localized nature, there is not currently an existing data layer for the location of numerous vernal pools. While a few vernal pools have been identified and impacts discussed in the Draft EIS, we feel that DOE has not gone far enough to quantify the existence of and impacts to these fragile environments.

Despite work to study and mitigate the adverse impacts to the Federally Endangered Karner Blue

0042-1

0042-2

0042-3

0042-1
Thank you for your comment. Section 4.1.13 in the EIS describes, in general, potential impacts to water resources from the proposed project, including soil erosion related to stream and river banks, with more detail provided under each alternative in each geographic section. Best management practices (BMPs), including silt fence installation, intended to avoid and minimize impacts to these resources are included in those and related geographic sections, as well as in Appendix H of the EIS. Impacts to vegetation (Section 4.1.12 of the EIS) and geology and soils (Section 4.1.14.1 of the EIS) also discuss issues related to water resource protection. Section 1.7.2 of the EIS discusses a variety of federal and state permits required for the Project, including the New Hampshire Rivers Management and Protection Program. See Section 1.5.2 in the Water Resources Technical Report for additional discussion of state permitting related to water resources. These permits have additional measures to protect, monitor, and mitigate impacts. If the Campton Conservation Commission takes issue with specific measures such as silt fencing, they should consult with relevant state agencies responsible for water quality regulation. Potential Project impacts at the Pemigewasset River crossings are not expected to impact the potential future designation of the river because there is already an existing road crossing and cables would likely be installed underneath existing bridges.

0042-2
Thank you for your comment. The commenter's concern regarding potential impacts to vernal pools is noted. Impacts to vernal pools are described in the EIS (see Sections 4.1.13, 4.2.13, 4.3.13, and 4.5.13). Vernal pools were identified based on landscape position and other indicators of seasonal hydrology. While vernal pools were identified in the Northern, Central, and WMNF Sections, no indicator species were present at any vernal pools. Mitigation measures for vernal pools are discussed in Section 3.1.2 in the Water Resources Technical Report. If the project is approved, specific impacts at specific locations would be evaluated in more detail during subsequent federal and state oversight and permitting processes.

0042-3
Thank you for your comment. Endangered Species Act consultation with U.S. Fish and Wildlife Service for the Project was ongoing at the time of publication of the draft EIS. Updated and additional discussion of impacts and mitigation for the Karner blue butterfly and wild lupine has been added to the revised Wildlife Technical Report for the final EIS. Additional information

was added to the following sections of the final EIS: Section 2.5.11 (Wildlife), Table 2-16 (Determination Summary of Project-wide Effects for Federally-Listed Wildlife Species); Section 2.5.12 (Vegetation), Table 2-19 Comparison of Project-Wide Effects for State-Listed Plant Species; Section 4.1.11 (Wildlife), Table 4-60, Determination Summary of Project-wide Effects for Federally-Listed Wildlife Species; Section 4.1.12 (Vegetation), Table 4-63, Comparison of Project-wide Effects for State-Listed Plant Species; Section 4.4.11.2 (Wildlife, Alternative 2), Terrestrial Species, Section 5.1.11.3 (Wildlife, Alternative 2), Scope of Analysis, Past, Present, and Reasonably Foreseeable Future Actions; Section 5.1.11.4 (Alternative 3); Section 5.1.11.11 (Alternative 6a); 5.1.11.12 (Alternative 7); and in the Wildlife Technical Report in Sections 3.4.2.1.3 (Listed Species under Alternative 2), as well as other respective Listed Species sections for each project alternative in the Southern Section.

Butterfly, this does not seem to go far enough when
NH Fish and Game has spent much time and money since 2000 restoring habitat for Karner Blue butterflies in the Concord Pine Barren region. The undoing of this progress should be included in the cost estimates for the project. What precedent does this set for future proposals that threaten the good progress that NH Conservationists have made to date?

Scenic resources are a concern for conservation commissions, as they are inventoried as part of each town's natural resource inventory. The multitude of transmission lines north of the US/Canadian border create a far different visual impact than that of Northern New Hampshire's relatively pristine lakes and mountains. Though unsightly to southern visitors, the lines that crisscross southern Quebec's flat, seemingly barren terrain still pale in comparison to the visual scar that these types of structures will have on Northern and Central New Hampshire's topographically varied and majestic landscape.

For scenic and recreational resource impacts, the DOE Report attempts to quantify these changes as a result of the potential project. Quantifying the changes in millions of visitors' experiences with a "visual index" and/or numbers merely representing miles of affected trails does not seem adequate. The emotions and memories that one mentally catalogs when looking out from atop a mountain or local viewpoint simply cannot be measured, but they can be permanently altered, and high-voltage transmission lines will do just that.

Although the draft EIS statement repeatedly states that the effects to our natural resources are temporary, acute, and or mitigated, this does not mean that the project should be allowed to go forward when the need has not been proven.

We also have concerns about state agency oversight. Our commission has consulted and worked with DES and Fish and Game on various projects over the years, with mostly positive outcomes. What we have learned through our work, however, is that these agencies, though competent and professional, are understaffed and under resourced, particularly in the area of enforcement. We are not confident that there will be proper state agency oversight, and feel that recommended Best Management Practices for minimizing or avoiding environmental impacts will be left up to contractors hired by Northern Pass. This must be considered as part of the DOE decision. Northern Pass has chosen the State of NH as its preferred site for a reason. We are behind in comparison to our neighboring states in environmental regulation, our small towns have yet to adopt adequate zoning ordinances and restrictions, and Northern Pass intends to take full advantage of this reality.

For all of the reasons described above, when considering the impacts to water resources, wildlife, vegetation, geology and soils, scenic and recreational resources, Alternative 1: No Action is clearly the best choice in our opinion. The Northern Pass Transmission Line Project has failed to make the case that this proposal is necessary, nor that it will benefit the people of New Hampshire in such a way that the costs to our natural resources are outweighed.

Respectfully,

The Campton Conservation Commission
12 Gearty Way
Campton, NH 03223

0042-3 Continued

0042-3 cont'd

0042-4

0042-4
Thank you for your comment. The EIS and Visual Impact Assessment Technical Report analyze potential impacts to visual resources resulting from the Project. Visual impacts in the Northern Section are analyzed in Section 4.2.1 of the EIS, and impacts in the Central Section are analyzed in Section 4.3.1 of the EIS. The methods for quantifying the impacts are described in Section 2.4 of the Visual Impact Assessment Technical Report. DOE has considered this comment and no change to the EIS was made.

0042-5

0042-5
Thank you for your comment. Socioeconomic impacts are addressed in the EIS in Section 4.1.2. Additionally, the EIS includes an analysis of potential disproportionate impacts on minority and low-income residents of New Hampshire (see Section 4.1.9 of the EIS). Other elements of this comment are specifically related to the State of NH review process and do not necessitate revision/response within the EIS.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Nov 15, 2015

ID: 8507

Date Entered: Nov 15, 2015

Source: Website

Topics: Other

Name: R. Eric Jones

Organization:

Title: Mr.

Email: legacyforest@gmail.com

Mailing Address: 1416 Route 25

City: Glencliff

State: NH

Zip: 03238

Country: US

Comment: Overall, Alternative 2 (the Eversource Proposed Alternative)would impose the greatest environmental impacts as compared to the other action alternatives primarily because of visual impacts, vegetation removal and ground disturbance required for Summary U.S. Department of Energy
July 2015 S-15 the creation of a new 40-mile (64 km) long, 150-foot (64 m) wide route in the Northern Section of the Project. Alternative 2 would also have the least cost of construction (approximately $1.06 billion). While the least cost construction alternative is favorable to the Applicant, as compared to the other action alternatives, it is the least advantageous to local taxing jurisdictions because tax revenues would be based on the value of the construction/infrastructure costs.
The alternatives that would be constructed underground along existing roadways (Alternatives 4a, 4b, 4c, 6a, and 6b) would impose the fewest environmental impacts due to the lack of visual impacts and use of already disturbed roadway corridors. However, all of the underground alternatives (including Alternative 3) would have the highest construction costs (between approximately $1.83 billion [Alternative 6a] and approximately $2.11 billion [Alternative 4b]). Because of the higher construction cost, the underground alternatives would be disadvantageous to the Applicant but provide additional tax revenue to local taxing jurisdictions as compared to Alternative 2.

0043-1

0043-1
Thank you for your comment. The potential environmental impacts of all alternatives are analyzed throughout the EIS, including impacts to all resource areas. The impacts are compared in comparative form in Section 2.5 of the EIS.

The alternatives that would be constructed overhead along most of the route and constructed underground in the vicinity of the WMNF (Alternatives 5a, 5b, and 5c) would avoid visual impacts to the WMNF in general, and the Appalachian National Scenic Trail (ANST) in particular. These alternatives would require the same vegetation removal and ground disturbance in the Northern Section
as under Alternative 2, resulting in the same types of adverse environmental impacts in that area. Construction costs would higher than Alternative 2, ranging from approximately $1.15 billion to approximately $1.20 billion, but not as high as the fully underground alternatives. Alternative 2, and the alternatives that would be constructed overhead along most of the route and constructed underground in the vicinity of the WMNF, would result in fewer short-term and permanent jobs as compared to the fully/extensively underground alternatives. The overhead alternatives would be expected to create between 5,000 and 6,000 short-term jobs (over a three-year period) and approximately 900 permanent jobs, while the underground alternatives would be expected to create between 9,000 and 10,000 short-term jobs (over a three-year period) and between 1,300 and 1,500 permanent jobs.
Alternative 2, and Alternative 5b, would be constructed with a 1,200 MW delivery capacity. As a result, these two alternatives would produce the greatest decrease in wholesale electricity costs in New Hampshire ($22 million reduction) and in the ISO-NE region ($149 million reduction). Additionally, these two alternatives would also be expected to reduce CO2 emissions by 8 percent across the region.
Comparatively, alternatives with a delivery capacity of 1,000 MW (Alternatives 3, 4a, 4b, 4c, 5a, 5c, 6a and 6b) would result in a decrease in wholesale electricity costs of $18 million within New Hampshire, and $134 million within ISO-NE. These alternatives would be expected to reduce CO2 emissions by 7 percent annually across the region.
Alternative 4a = complete burial / route 3 in the north & Interstate 93 in the rest / least environmental impacts / most tax dollars to towns and state / decrease in wholesale electricity costs of $18 million within New Hampshire / reduce CO2 emissions by 7 percent annually across the region.
4a All The Way

0043-1
Continued

0043-1 cont'd

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9205

Date Entered: Apr 4, 2016

Source: Website

Topics: Forest Service Lands

Organization: Northern Pass Transmission LLC

Email: maryanne.sullivan@hoganlovells.com

Mailing Address: 781 N. Commercial Street

City: Manchester

State: NH

Zip: 03101

Country: US

Comment:

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.

0045-1

0045-1
Thank you for your comment. The commenter's opinions regarding Alternative 7 are noted, however, most alternatives would not require a Forest Plan Amendment as the commenter suggests. As described in Section C.2 in Appendix C of the EIS, Forest Plan Amendments would only be required under Alternative 2 or Alternative 5b. All other alternatives would be consistent with Forest Plan Standards and Guidelines, so no amendments would be necessary for these alternatives, including Alternative 7.

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.

0045-2

0045-2
Thank you for your comment. The commenter's observations are noted regarding the applicability of standards and guidelines in the Forest Plan on the existing PSNH right-of-way. This applicability is discussed in Section 3.5.6.5 of the EIS.

0045-3

0045-3
Thank you for your comment. Commenter's observations are noted regarding WMNF management standards and the potential impacts of Alternative 7 on those standards. The final EIS has been updated to incorporate full analysis of Alternative 7 - Proposed Action. Information on Forest Plan amendments for all alternatives, including Alternative 7, are described in Appendix C.

0045-3 cont'd

0045-3
Continued

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; s*ee 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.

0045-4

0045-4
Thank you for your comment. Potential visual impacts from the current Proposed Action, Alternative 7, were presented in the supplement to the draft EIS published in November 2015. The final EIS includes specific analysis of visual impacts of Alternative 7 - Proposed Action in the WMNF Section (see Section 4.5.1). DOE has considered this comment and no change to the EIS was made.

0045-5

0045-5
Thank you for your comment. The commenter's observations are noted regarding the potential impacts of Alternative 7 relative to other alternatives.

0045-6

0045-6
Thank you for your comment. The commenter's preference for Alternative 7 due to reduced impacts to recreational sites and activities is noted.

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 CO_2 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 NOx, CO, and CO_2 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:

0045-6 cont'd

0045-6 Continued

0045-7

0045-7 Thank you for your comment. The impacts to the ANST resulting from Alternative 7 are analyzed in Section 4.5.3.12 of the final EIS.

0045-8

Thank you for your comment. The commenter's opinion is noted regarding the degree of impairment of river crossings and vernal pool among the proposed alternatives. Section 4.2.13 in the EIS evaluates potential impacts to water resources, including river crossings and vernal pools.

0045-9

0045-8 Thank you for your comment. Several alternatives analyzed in detail in the EIS include segments of underground cable within the I-93 corridor, including Alternatives 4a, 4b, 4c, 5a, 6a, and 6b. Alternatives 4a, 5a, and 6a include burial through Franconia Notch in the I-93 corridor. Construction of underground cable in the I-93 corridor is described in Section 2.3.4.5 of the EIS. Laws and regulations governing the installation of utilities in interstate highways are discussed in Section 3.1.6.4 of the EIS, and the Memorandum of Agreement (also known as the 1977 Consent Decree) related to the maintenance of I-93 within Franconia Notch State Park is acknowledged and described in Section 3.3.6.4 of the EIS. As described in Section 4.1.6.1, the Applicant would be required to obtain relevant authorizations to construct the Project in roadway corridors. A particular discussion of construction in Franconia Notch is located in Section 4.3.6.4 of the EIS. DOE has considered this comment and no change to the EIS was made.

0045-9

0045-9 cont'd

0045-9
Continued

- 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.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 28, 2015

ID: 8236

Date Entered: Jul 28, 2015

Source: Website

Topics:

Name: L E Higginson

Organization:

Email: lehigginson@hotmail.com

Mailing Address: 3 Ryan Way

City: Durham

State: NH

Zip: 03824

Country: US

Comment: NH is a tiny but mighty state. It's environs, natural beauty and unspoilt land is the main reason it is such a desirable place to visit and live.
We should not sacrifice this incredible treasure. This project is on par with Onasis' desire in the 1970's to build an oil refinery in great bay (a now unfathomable prospect). We must say no to northern pass.

0046-1

0046-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 11, 2015

ID: 8274

Date Entered: Aug 11, 2015

Source: Website

Topics: Purpose and Need, Vegetation, Wildlife, Viewshed/Scenery, Recreation, Private Property/Land Use, Historic/Cultural, Economic, Tourism, Quality of Life, Noise, Environmental Justice

Organization: Percy Lodge and Camp Ground

Comment: Stark, NH is our home base. We also own 23 acres of land that has the electric lines running along the northern property line, along with 72 acres which is across the road. Route 110 travels through the landscape of Stark. These electric lines today are low enough to not be seen while driving on Route 110. With the Northern Pass Project, these lines will be seen all through the Town of Stark's landscape. Both of these parcels of land are being developed into recreational areas. For Lodging, RV's and tenting. This Project, if allowed to start, will not only effect the View Shed & Scenery, of this private property & land use, it will also have an impact on recreation, historic, cultural issue, and most important, tourism.

0047-1

0047-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 11, 2015

ID: 8275

Date Entered: Aug 11, 2015

Source: Website

Topics:

Organization:

Country: US

Comment:

0048-1

0048-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 11, 2015

ID: 8276

Date Entered: Aug 11, 2015

Source: Website

Topics: Alternatives

Name: dennis moloney

Organization:

Email: moloney.dennis@gmail

Mailing Address: 5 waters edge lane

City: new Hampton

State: NH

Country: US

Comment: Bury it

0049-1

0049-1
Thank you for your comment.

Thank you very much. My name is Joe Casey, and I am a construction representative from the International Brotherhood of Electrical Workers. So the IBEW has a membership here in the State of New Hampshire of construction workers that work on large scale electrical projects such as these, and we have a great training program. We require our Applicants for our apprenticeship program to either have a high school diploma or a GED, and they can apply to our programs. There are a lot of kids in this state that have no intentions on going on to four-year colleges. They're hands-on people, they like to work with their hands, and they like to make and would like to make a decent living. There aren't a whole heck of a lot of jobs in this state where you can make a decent living with a hands-on work-related apprenticeship program. Now, I've been working on projects' approvals in the State of New Hampshire for the last 13 years, and it a very difficult place to get project approvals, whether it's through the state legislature or the SEC or other means, and our membership has declined greatly over the last ten years. Certainly, the rescission played a major role in that. Over the those 13 years, I was the chairman of our apprenticeship program, and I can tell you along with a lot of my other duties, number one duty, the number one job I had was being able to offer an opportunity to an individual, male or female, to come into our apprenticeship program. I have seen so many people come into our program with absolutely nothing, you know, beat right down to the ground, start our apprenticeship program and learn a skill and become productive members of our community. It's the number 1 best thing that I was able to participate in. Since the recession we have not been able to increase our apprenticeship programs. We can't offer opportunities to people if it's all directly related to the construction that's going on in the state, the region in the country. And now, we're always fighting for projects, what we believe, the things that we put in and we create, whether it's underground, overhead or whatever, we believe it's a great product and we're proud of what we do, and I'm proud of my people that do it, and they work hard and they're good people and they're neighbors and brothers and sisters and friends of a lot of people in this state. And I believe the flight of the kids out of the state, the drug epidemics that we're going through, are all directly related to the lack of opportunity and the lack that people can feel good about themselves with a good paying honest job, and if we keep saying no, you know, there's going to come a point where this job becomes unfeasible for Northern Pass people to put in the ground which is going to be, you know, very acceptable to a lot of people, but there are a lot of people in this state and there are a lot of families that will suffer because of it. We're going to create a bunch of jobs. We're going to train a bunch of people. The electrical infrastructure in this country is crumbling. If we're going to stay in this world economy, we have to train people that are going to go out and make our grid and bring things back to life than we have. There's no secret that all the construction, and we've got people retiring and we're not being able to replace them with new people because we don't have the projects. I seriously hope you will consider approving this project, putting a lot of good people in this state to work. Thank you.

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Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS, including impacts on employment and income in New Hampshire.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9203

Date Entered: Apr 4, 2016

Source: Website

Topics: Purpose and Need, Alternatives, Wildlife, Viewshed/Scenery, Water / Wetlands, Recreation, Historic/Cultural, Economic, Tourism, Quality of Life, Cumulative Effects, Forest Service Lands, NEPA Process, Design Criteria / Mitigation Measures, Other

Name: Kenneth Kimball

Organization: Appalachian Mountain Club

Title: Director of Research

Email: kkimball@outdoors.org

Mailing Address: PO Box 298

City: Gorham

State: NH

Country: US

Comment: Comments of the Appalachian Mountain Club on the DEIS and Supplement

RE: COMMENTS OF THE APPALACHIAN MOUNTAIN CLUB ON THE U.S. DEPARTMENT OF ENERGY'S DRAFT ENVIRONMENTAL IMPACT STATEMENT AND SUPPLEMENT FOR NORTHERN PASS, LLC's, PRESIDENTIAL PERMIT APPLICATION FOR THE NORTHERN PASS LINE PROJECT [DOE DOCKET NO. PP371]

INTRODUCTION

The Appalachian Mountain Club (AMC) submits the following comments on the U.S. Department of Energy's ("DOE") Draft Environmental Impact Statement (July 2015) and November 2015 Supplement ("DEIS") concerning Northern Pass Transmission, LLC's ("NPT, Applicant") application for a Presidential Permit (the "Application") to construct and operate an electric transmission line that crosses the United States-Canada border. The AMC is an intervener in the above-referenced docket and its standing in this case is described in our motion to intervene of Dec. 15, 2010 and is not repeated here. AMC offers these comments on the DEIS without prejudice to any and all legal rights AMC may have, which are hereby expressly reserved.

PROCEDURAL ISSUES

A. DOE Should Prepare a Comprehensive EIS Addressing Energy Imports from Canada into the Northeastern United States.

The Applicant's proposed importation of 1,090 megawatts ("MW") of Hydro-Québec-generated electricity is part of a long-term, large-scale strategic plan developed by Hydro-Québec and the Province of Québec[1] to expand hydro-electric generation and increase exports to the United States. This plan is a

[1] The Province of Québec's ten-year energy strategy (2006-2015) called for increasing generation capacity through new hydroelectric and other projects totaling 4,500 MW and, with this increased capacity, stepping up exports of power to neighboring areas, including New England and New York. *See* Québec Energy Strategy (2006-2015), English summary at 9-10, *available at* http://www.mrnf.gouv.qc.ca/english/publications/energy/ strategy/energy-strategy-2006-2015-summary.pdf ("The 4,500 MW added capacity will be sufficient to meet Québec's long-term demand, promote wealth-creating industrial development, and support exports. . . . The Government also intends to ensure that Québec is able to increase its electricity exports, once its own needs have been met. It has mandated Hydro-Québec to begin discussions with potential partners in view of signing electricity export agreements."). Québec has also announced an economic development plan for its northern territory through 2035—"Plan Nord"—that emphasizes new generation projects totaling an additional 3,500 MW, including 3,000 MW of hydroelectric capacity, to support Québec's energy strategy. *See, e.g.*, Plan Nord Working Document (Nov. 2009), available at http://www.plannord.gouv.qc.ca/english/documents/plan-nord.pdf. Similarly, a major objective of Hydro-Québec's strategic plan (2009-2013) is increased generation capacity to step up exports to New York and New England. *See* Hydro-Québec Strategic Plan (2009-2013) at 19-27, *available at* http://www.hydroquebec.com/publications/en/strategic_plan/pdf/plan-strategique-2009-2013.pdf ("As a result of recent and ongoing hydroelectric development projects, Hydro-Québec Production expects to have the generating capacity needed to ensure export growth. By 2013, we will have nearly 24 TWh at our disposal. This margin of flexibility will enable us to increase the volume of our exports."); *id.* at 42 ("We will continue our initiatives to increase interconnection capacity with the U.S. Northeast and neighboring Canadian provinces. Furthermore, subject to confirmation of requests for transmission services, we plan to build a 1,200-MW interconnection with New England by 2014. . . . We also plan to upgrade the New York interconnection (Châteauguay substation). With import and export capability, this interconnection plays a major role in energy interchanges between Québec and the United States. We will coordinate the work with the U.S. operators to reduce impacts on service. We are considering other projects to ensure long-term operability and are keeping up our efforts to maintain or increase the exploitable capacity of all our interconnection facilities."). Hydro-Québec also envisions using increased interconnections with the Ontario grid to extend the reach of its exports to western New York and the U.S. Midwest. *See id.* at 26.

business strategy, and therefore does not touch on the question before DOE of whether, and how much, importation of Canadian power is in the best interests of the United States generally, and New England and other Northeastern states in particular. Because this specific proposal could impact the energy future of the region, it is essential that it not be viewed in isolation. This seems especially obvious in light of the fact that DOE recently issued Presidential Permits for the Champlain Hudson Power Express PP-362, Oct 2014 ("CHPE"), which is intended to import from Hydro-Quebec 1,000 MW of electric power into the New York grid via underground and submerged High Voltage Direct Current ("HVDC") transmission lines, and the New England Clean Power Link for another 1,000 MW into Vermont (DOE FEIS # 0503 issued Oct. 2015). Additional Canadian hydropower has been bid into the recent 3-state (MA-CT-RI) New England Clean Energy RFP (http://cleanenergyrfp.com/bids/).

The rationale given for this proposed project is in part to promote electricity diversity[2] due to the rapid transition to dependence on natural gas power generation. Hydro-Quebec currently has an export capacity into New England of approximately 2,275 MW[3] and the DEIS projects that this project would increase it by another 31+%[4]. Should the Northern Pass (1,090 MW), the New England Clean Power Link (1,000 MW), and Vermont Green Power Line (400 MW) transmission projects all come to fruition, this would increase the region's dependency on Hydro-Quebec to over 4,760 MW of capacity. This excludes additional imports from other Canadian provinces. New England-ISO currently has ca. 31,000 MW of capacity[5], therefore if Hydro-Quebec were to backfill for generation being retired it has the potential to become a dominant source of the New England-ISO generation capacity. In 2015 Canadian hydropower approximated 13% of the region's net electric energy load and the DEIS estimates that Northern Pass would increase this by 31%. Based on the New England-ISO consumption of 126,874 gigawatt-hours (GWh) in 2015 and an 80% capacity-use factor for all proposed Hydro-Quebec transmission lines, Hydro-Quebec could approach one quarter of the region's power generation consumed (GWh). The DEIS at Section 2.5.2 suggests ca. 20%, but that calculation needs to be updated as it appears to not include additional Hydro-Quebec generation separately bid into the CT/MA/RI RFP (Vermont Green Power Link), or recently permitted transmission (e.g. NECPL) designed to host Hydro-Quebec generation. And this excludes other Hydro-Quebec exports to the US from its subsidiaries in New Brunswick and Newfoundland/Labrador. In summary a continued transition to Hydro-Quebec generation will shift today's dependency on natural gas towards a dependency on Hydro-Quebec, a shifting of the electrical diversity problem but not necessarily the solving of it. It would put the region's grid and markets at risk with this increased reliance on power from a sole source provider, a dependency on a few multi-thousand mile long transmission lines which have historically suffered major disruptions about every decade[6], and the likelihood that if an energy shortage occurred, Quebec's internal power needs would trump those of New England given that Hydro-Quebec is owned by the Province of Quebec. And like California hydropower this past drought year, future Canadian hydro power generation during the tenure of the Northern Pass project could become less certain due to climatic changes in temperature and precipitation.

Without considering this project in the context of ongoing, recently permitted, and potential future projects, and without taking a comprehensive look at the energy needs and potential sources to meet those needs in the Northeastern United States, including but not limited to imported hydropower from Quebec, DOE will be permanently mired in a reactionary and piecemeal mode of responding to projects driven by Hydro-Québec's business plan.

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[2] DEIS Volume 1 at Section 1.4.1.
[3] http://www.hydroquebec.com/transenergie/en/reseau-bref.html
[4] DEIS Supplement Section 4.2, Table 4, Alternative 7
[5] http://www.iso-ne.com/about/key-stats/resource-mix
[6] 1989 Geomagnetic storm; 1998 ice storm; 2004 hydro tower bombing - https://en.wikipedia.org/wiki/Hydro-Qu%C3%A9bec%27s_electricity_transmission_system#Major_disruptions

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Thank you for your comment. Section 1.4.1 of the final EIS has been updated to include new information on market trends and energy use since the draft EIS was published in 2015. The analysis of electricity system infrastructure in the EIS and Socioeconomic Technical Report considers the most up-to-date information about energy supply in the ISO-NE region (see Section 3.1.2.5 of the EIS). The analysis of socioeconomic impacts in the EIS and Socioeconomics Technical Report (including the summary tables in Section 2.5.2 of the EIS) has also been updated to account for the changing baseline condition of the New England electricity market. The modeling conducted by GE Energy for the analysis does include current information regarding planned plant retirements and new sources of generation and transmission scheduled to occur. Data in the Socioeconomic Technical Report does provide the portion of supply to the ISO-NE region attributable to importation, but does not disaggregate the data by individual supplier. NEPA's purpose is to analyze and consider the potential environmental impacts of a proposed major federal action. In deciding whether the issuance of a Presidential permit would be consistent with the public interest, DOE assesses the environmental impacts of the proposed project and reasonable alternatives, the impact of the Proposed Action on electric reliability, and any other factors that DOE may also consider relevant to the public interest. The EIS analyzes potential environmental impacts to the electricity system in the socioeconomics section (Section 4.1.2 of the EIS). The reliability study, completed in cooperation with ISO-NE, provides a separate analysis of impacts of the proposed federal action on the electricity system.

0051-2

0051-2
Thank you for your comment. The purpose and need for DOE's action is to determine whether or not to grant the requested Presidential permit for the Project, which is a proposed approximately 187-mile, high-voltage electric transmission line crossing the international border between the United States and Canada in New Hampshire. This EIS therefore presents project-focused analyses of the potential impacts to all resources associated with Presidential permit application for the Project (DOE Docket Number PP-362), and is not a programmatic environmental review of the energy needs of the Northeastern United States as suggested by the commenter. A programmatic evaluation of the energy needs of the Northeastern United States is outside the scope of this project-specific EIS. In order to assess potential impacts associated with the proposed Project in a broader context of other actions in the region, Chapter 5 of the

EIS discusses potential cumulative impacts to all resource areas under all project alternatives. Specifically, Section 5.1.2 of the EIS analyzes the cumulative impact of a number of other past, present, and reasonably foreseeable energy generation projects, including those that may have been permitted by DOE under the authority of its Presidential permit program in the past or may be in the future (See Appendix D).

DOE should stay this proceeding and instead initiate a broad, comprehensive, and programmatic EIS to study the extent of need in the Northeast for Canadian hydro-power, taking into account the nation's and region's energy policies and goals, the most efficient, least impacting means of importing Canadian power to meet any such need, the risks involved, the impact on US- based renewable energy resources, and how such projects could further increase the US trade deficit with Canada (typically $30+ billion/annum). Such a programmatic EIS would effectively establish a master plan for the region's importation of Canadian power, including whether and how that power fits into the region's broader energy needs, risk assessment, and policies. Such a plan would also ensure we avoid potential duplication of major transmission lines that would unnecessarily impact the Northeast. Project-specific Presidential Permit determinations should follow, not precede, the creation of such a region-wide, comprehensive energy plan. And conversely it would allow for an assessment of how dependent the northeastern grid is or will become on a sole source provider, a concern currently with the region's dependency on natural gas. Without such a plan it is nearly, if not entirely, impossible to assess the cumulative impacts of separate project proposals given the complexity involved in each. A programmatic, geography-based approach is supported by CEQ's National Environmental Policy Act Regulations[7].

B. DOE Should Define the Purpose and Need for Action More Broadly.

Before the specifics of the Project are even considered, the FEIS must establish the need for a new source of long-distance power supply to the NE-ISO region. NEPA requires a declaration of public need and the taking of a "hard look" at new proposals as well as at a full range of alternatives and strategies that could also satisfy the Project's stated purpose. The DEIS at Section 1.2 narrowly and wrongly describes the purpose and need for the project as follows:

The purpose of, and need for DOE's action is to decide whether or not to grant a Presidential Permit for the project at the international border crossing proposed in the amended Application.

Under the Action alternative, DOE would grant the Northern Pass application for a Presidential Permit for the proposed international electric transmission line. Under the No Action alternative, DOE would deny the Northern Pass application for a Presidential Permit for the proposed international electric transmission line.

The DEIS at Appendix B.2.1 *Purpose and Need*, incorrectly argues that it is permitted to apply such a narrow interpretation based on 10 CFR part 250. However, this narrow interpretation violates NEPA's mandate that "an agency cannot define its objectives in unreasonably narrow terms"[8]. A purpose and need

[7] Forty Most Asked Questions Concerning, 46 Fed. Reg. 18,026, 18,033 (Mar. 23, 1981) ("Forty Questions") ("The preparation of an area-wide or overview EIS may be particularly useful when similar actions, viewed with other reasonably foreseeable or proposed agency actions, share common timing or geography. For example, when a variety of energy projects may be located in a single watershed. . . the overview or area-wide EIS would serve as a valuable and necessary analysis of the affected environment and the potential cumulative impacts of the reasonably foreseeable actions under that program or within that geographical area.")

[8] http://www.northernpasseis.us/images/uploads/documents/CEQ-40Questions.pdf *"A fourth possibility is that a commentor points out an alternative which is not a variation of the proposal or of any alternative discussed in the draft impact statement, and is a reasonable alternative that warrants serious agency response. In such a case, the agency must issue a supplement to the draft EIS that discusses this new alternative. For example, a commentor on a draft EIS on a nuclear power plant might suggest that a reasonable alternative for meeting the projected need for power would be through peak load management and energy conservation programs. If the permitting agency has failed to consider that approach in the Draft EIS, and the approach cannot be dismissed by the agency as unreasonable, a supplement to the Draft EIS, which discusses that alternative, must be prepared. (If necessary, the same supplement should also discuss substantial changes in the proposed action or significant new circumstances*

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Thank you for your comment. As described in Appendix B, B.2.12, pursuant to Executive Order 10485, DOE is responsible for receiving "applications for permits for the construction, operation, maintenance, or connection at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country" and determining whether to issue the requested permit. Currently before DOE is an application from Northern Pass seeking a permit for a single international border crossing for a transmission line project. DOE's purpose and need is to determine whether or not to grant the requested Presidential permit for the Project at the international border crossing proposed in the further amended Presidential permit application (August 2015). The comment includes a request for a programmatic/comprehensive EIS that would assess issues such as regional energy needs and goals and potential sources to meet those needs as well as assess regional importation of Canadian hydropower. There is not, however, before DOE a proposed regional plan for the importation of Canadian hydropower that would serve as the subject of a programmatic EIS. Further, DOE does not have the authority to determine underlying regional energy needs and goals within the New England regional transmission system or to establish a master plan for regional importation of Canadian hydropower. Regional energy needs and a plan for meeting those needs within the New England region would be determined by ISO-NE in coordination with the New England states. DOE does, however, assess the impacts associated with past, present, and reasonably foreseeable future actions (such as other regional transmission lines) that could, along with implementation of the Project, have cumulative environmental impacts. Sections 5.1 and Appendix D of the final EIS contain the cumulative impacts analysis.

0051-4
Thank you for your comment. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as

appropriate, a permit for [the] construction, operation, maintenance, or connection" (EO 10485). DOE's purpose and need reflects this limited authority. While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground/overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, 17 alternatives were considered but eliminated from further detailed analysis.

statement cannot lawfully be premised on the narrow objective of determining whether or not to grant a permit for a particular proposal. Indeed, as written, DOE's purpose and need statement allows for just one alternative to the approval of the Applicant's proposal: denial of the project as proposed.[9]

Such a narrow interpretation defeats the dual role that this DEIS is intended to play, which is to serve as both the DOE Presidential Permit EIS, and the EIS for a US Forest Service Special Use Permit (SUP) from the White Mountain National Forest (WMNF) because the proposed Project would cross WMNF property (see Section 1.1.2). For the issuance of a SUP, "*Special uses must be managed to best serve the public interest, in accordance with the following: a)* ***Private uses of National Forest System land must not be authorized when such uses can be reasonably accommodated on other lands*** *(DEIS at Volume 2: Appendix at F-2, emphasis added).* The WMNF Forest Supervisor will also use the FEIS to inform the decision in selecting an Alternative. In its revised scoping comments (November 2013), AMC argued that the alternative of crossing the international border in Vermont and using a burial route south under Interstate-91 to Massachusetts and Connecticut be studied as it would totally avoid the WMNF. The DEIS does not address nor explain why this Alternative that would totally avoid the WMNF was never examined, or other reasonable alternatives that the DEIS rejected for analysis based solely on DOE criteria.

The statement of the agency's underlying "purpose and need" in an EIS is critical to identifying the range of reasonable alternatives. Obviously, if the "purpose and need" is defined too broadly, the number of alternatives requiring analysis would be virtually limitless. Conversely, it is inappropriate to define "purpose and need" so narrowly that only a single alternative could be identified for realistic and fair analysis (as is the case in this Application). As recognized in DOE's Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements, (Second Ed., Dec. 2004 at page 5), "*The proposed action is generally only one means of meeting the agency's underlying purpose and need for action*."

Furthermore, the DEIS posits that once the project crosses the international border it has no jurisdiction or siting authority over all of the other route alternatives examined. At the same time, through its scoping actions and the DEIS, the DOE by default takes the position that it also cannot examine any other international border crossing points than the one proposed by the Applicant. This approach undercuts the requirement cited above to consider other, possibly more reasonable, alternatives to that of the proposed action.

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or information, as required by Section 1502.9(c)(1) of the Council's regulations.) If the new alternative was not raised by the commentor during scoping, but could have been, commentors may find that they are unpersuasive in their efforts to have their suggested alternative analyzed in detail by the agency. However, if the new alternative is discovered or developed later, and it could not reasonably have been raised during the scoping process, then the agency must address it in a supplemental draft EIS. The agency is, in any case, ultimately responsible for preparing an adequate EIS that considers all alternatives."

[9] DEIS at Section 1.2, footnote 4 "*In accordance with its authority under EO 12038, DOE is considering whether to issue a Presidential permit for Northern Pass' proposed transmission line crossing of the international border with Canada into the State of New Hampshire. Although DOE has no siting or project alignment authority, DOE's decision to issue a Presidential permit (along with permits and approvals required from other federal and state agencies) would enable the Applicant to construct and operate a transmission line that crosses the U.S. border into New Hampshire. The construction and operation of the transmission line beyond the border crossing is an action "connected" to the border crossing. See 40 CFR 1508.28(a)(1). For that reason, DOE has analyzed the potential environmental impacts of the proposed transmission line from the border crossing to the terminus (i.e., first connection to the electrical grid) in accordance with NEPA and the CEQ regulations*."

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Continued

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Thank you for your comment. The USFS will consider the application for use of National Forest System lands and determine if the Project is in the public interest and is appropriate, based on the WMNF Forest Plan (USDA Forest Service 2005a). The Forest Supervisor will use the EIS to inform the decision regarding: 1) whether to issue a Special Use Authorization under the Federal Land Policy and Management Act; 2) the selection of a preferred alternative; 3) any need to amend the Forest Plan; and 4) what specific terms and conditions should apply if a SUP is issued. Information gained through scoping and resource analysis was used to generate a range of alternatives, including the No Action Alternative and eleven action alternatives, that have been analyzed in detail in the EIS. These alternatives include a variety of alignments and overhead and underground configurations that address resource issues with the original Project (as described in the 2013 amended Presidential permit application). Many of the action alternatives were generated in response to resource concerns and Forest Plan inconsistencies in the WMNF. Additionally, seventeen alternatives, including two alternative border crossings, were considered but eliminated from further detailed analysis (see Section 2.4 of the EIS). In response to comments received on the draft EIS, DOE considered a second alternative border crossing in Vermont, specifically identified as a border crossing at Derby Line, VT that would utilize I-91. DOE determined that this alternative is not reasonable. Section 2.4.17 of the final EIS has been added to reflect consideration of this alternative and DOE's determination. Additional discussion of the basis for elimination has been incorporated into Section 2.4 of the final EIS. The range of alternatives in the EIS satisfies the USFS need for alternatives. Alternative 7 - Proposed Action would still require a SUP for the Project to traverse the WMNF as an underground cable. This has been clarified in Section 1.1.2 of the final EIS.

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Thank you for your comment. Northern Pass has applied to the Department of Energy for a Presidential permit for an international border crossing associated with an HVDC transmission line that would run from Quebec, Canada to Deerfield, NH. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the

construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE, however, does not have siting authority for the Project. In this case, the New Hampshire Site Evaluation Committee has siting authority for the Project in the state of New Hampshire. Additionally, the USFS has siting authority for portions of the Project located in the White Mountain National Forest. (For further discussion, see Sections 1.1-1.3 of the final EIS.) DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant. DOE's purpose and need statement appropriately reflects this limited authority. In response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from detailed analysis. Section 2.4 of the final EIS has been updated with additional information on alternatives considered but eliminated from detailed analysis. Among these alternatives, DOE considered two alternate border crossings. One was an alternative that would utilize the existing National Grid Phase I/II route, including its border crossing in Vermont. Based on its review of the National Grid alternative DOE determined that this alternative is not reasonable. Section 2.4.3 of the final EIS has been updated with additional information related to the National Grid alternative. Separately, in response to comments received on the draft EIS, DOE considered a second alternative border crossing in Vermont, specifically identified as a border crossing at Derby Line, VT that would utilize I-91. DOE determined that this alternative is not reasonable. Section 2.4.17 of the final EIS has been added to reflect consideration of this alternative and DOE's determination.

The "purpose and need" statement must be defined by the nature of a proposed project and the impacts associated therewith, and it must be framed in such a way as to allow for a reasonable range of alternatives to be identified and analyzed. The Applicant's stated purpose of the proposed Project is to import into New England 1,090 MW of energy generated in Canada by Hydro-Québec.[10] The need for the Project, as characterized by the Applicant and repeated by DOE in the DEIS, is to meet New England's need for clean, competitively priced power that will reduce greenhouse gas emissions and reduce price volatility, with an emphasis on the region's need for clean, low-carbon power. DOE should broaden its "purpose and need" statement, and frame it not only in the terms offered by the Applicant, but such that the full range of reasonable alternatives can be analyzed. Specifically, DOE should adopt a "purpose and need" framework for the EIS based on the purpose of importing energy into New England from Hydro-Québec, an assessment of whether and to what extent the New England region has a need for Hydro-Québec imports to advance the goals of a clean, low-carbon energy future for the region, whether the proposed Project or one or more of the full range of reasonable alternatives can best fulfill any such need, and a full assessment of their environmental impacts.

C. The FEIS Must Include a Thorough Analysis and Comparison of All Reasonable Alternatives and Their Impacts.

The FEIS should provide a detailed description and discussion of potential alternatives and reasonable geographic routes. A documented analysis of sufficient detail should be provided as to why certain Alternatives recommended during scoping were excluded from analysis. The rational provided in the DEIS (Section 2.4) on why certain recommended alternatives were excluded are cursory, poorly substantiated, and questionably legal. It limits all alternatives studied to a single international border crossing and to alternative corridors only in NH, and yet the project is not intended to provide power to New Hampshire, but rather southern New England. The FEIS should include a proper assessment of the following alternatives:

i) Energy Conservation and other sources of energy

The DEIS takes the questionably legal position that "*Other sources of electricity generation are not the subject of this Application for a Presidential Permit, and, therefore are the outside of the scope of this draft FEIS*." (DEIS at 2-37, Section 2.4.8). This fails to acknowledge that this EIS also needs to meet WMNF SUP needs for alternative analysis, and contradicts the Council of Environmental Quality (CEQ) requirements for an EIS[11].

[10] The purpose statement must not include specific project parameters proposed by the Applicant, such as the volume of electricity proposed to be imported; the entry- and end-points of the proposed transmission line; and the proposed transmission route and design. *See* DOE NEPA Guidance, *supra*, at 5 ("Do not include requirements (e.g., conceptual design specifications) in the statement of purpose and need that unreasonably narrow or bias the range of reasonable alternatives.").

[11] DOE's analysis of alternatives to the proposal is "the heart of the environmental impact statement," and "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." 40 C.F.R. § 1502.14. Council on Environmental Quality ("CEQ") regulations make clear DOE must "rigorously explore and objectively evaluate all reasonable alternatives. . . devot[ing] substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits." 40 C.F.R. §§ 1502.14(a)-(b). DOE must consider the "no action" alternative and all reasonable alternatives, including those that are not within DOE's or the applicant's capabilities. *See* 40 C.F.R. § 1502.14(c)-(d); Forty Questions, *supra* ("In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant" DOE's alternatives analysis must also include any "appropriate mitigation" that has not yet been proposed. *See* 40 C.F.R. § 1502.14(f).

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Thank you for your comment. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE's purpose and need reflects this limited authority. As discussed in Section 1.4 of the EIS, Northern Pass set forth a range of project objectives and benefits in its permit application. DOE and the cooperating agencies reviewed this documentation and determined that the project objectives include addressing three primary needs concerning New England's electricity supply: diverse, low-carbon, non-intermittent electricity. While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from further detailed analysis.

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Thank you for your comment. In addition to the Proposed Action, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from detailed analysis. Section 2.4 of the final EIS has been updated with additional information

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on alternatives considered but eliminated from detailed analysis. Among these alternatives, DOE considered two alternate border crossings. Section 2.4.3 of the final EIS has been updated with additional information related to the National Grid alternative, and Section 2.4.17 of the final EIS has been added to reflect consideration of a border crossing at Derby Line, VT and DOE's determination.

0051-9

Thank you for your comment. A power generation alternative was considered but was eliminated from detailed analysis in the EIS because it is not a reasonable alternative. Section 2.4.8 of the final EIS has been updated with additional information about this alternative. Additionally, a power generation alternative does not meet the purpose and need for USFS's action. As described in Section 1.3 of the EIS, the purpose of, and need for, the USFS's action is to decide whether to grant a special use permit (SUP) for the Project. The USFS will consider the application for use of National Forest System lands and determine if the Project is in the public interest and is appropriate, based on the WMNF Forest Plan (USDA Forest Service 2005a). The Forest Supervisor will use the EIS to inform the decision regarding: 1) whether to issue a Special Use Authorization under the Federal Land Policy and Management Act; 2) the selection of a preferred alternative; 3) any need to amend the Forest Plan; and 4) what specific terms and conditions should apply if a SUP is issued. Other sources of electricity generation are not the subject of the application for a SUP. DOE worked with the USFS to ensure that the range of alternatives analyzed in the EIS (twelve total) meets the USFS's needs in this NEPA analysis.

a) Energy Conservation: The DEIS summarily rejects the analysis of energy conservation as not meeting DOE's narrowly defined "purpose and need" (Vol. 1, Section 2.4.9). This needs to be reversed in the FEIS. Reasonable alternatives to meet the alleged energy need described by the Applicant for "low carbon sources of energy" should include energy conservation and demand side management alternatives. These methods are by far the most "low carbon" conceivable. By reducing energy use, they reduce concerns about energy diversity created by the current reliance on natural gas. Furthermore, since the DEIS was prepared, there have been major changes in the NE-ISO energy market and options. In particular[12]:

- Demand resources (DR) and increasing investment in energy-efficiency (EE) measures, an example of passive DR, is essentially keeping regional energy use flat and slowing the growth of peak demand based on the 10-year EE forecast. Currently several hundred megawatts of active demand response resources which reduce power consumption to relieve grid demand participate in the region's energy market.
- "Smart" technologies--from smart meters to smart refrigerators, and all kinds of new technologies and devices--are enabling consumers to have more control over their electricity use.

On January 25, 2016, the US Supreme Court disagreed with a lower court's decision, and reaffirmed FERC's jurisdiction over demand response. This means that the NE-ISO can complete the full integration of demand response in the wholesale electricity marketplace. Completing this full integration is expected by June 1, 2018.

b) Power generation alternatives: Power generation alternatives are a reasonable method to meet the region's energy needs. Again citing NE-ISO's January 2016 report:

- Wind-powered resources—Over 800 megawatts (MW) of wind power have already come on line in New England, with over 4,200 MW from new wind projects proposed as of January 2016.
- Solar photovoltaic (PV) resources—Over 900 MW of PV went live through 2014, and the ISO projects about 2,400 MW of PV by 2024 in their 10-year PV forecast. Most PV is in the form of small-scale systems, such as rooftop residential systems. ISO-New England recently estimated that new rooftop solar installations reduced overall demand in the region by 390 megawatts, the equivalent of 57 percent of the output of Pilgrim Nuclear Power Station, which is slated for retirement. The NH Electric Coop released a study[13] they commissioned showing that net metered solar was not unfairly raising customer rates since it comes on line when demand and electric rates are highest. U.S. rooftops could generate 80 percent more energy from solar panels than previously thought, according to a new analysis from the National Renewable Energy Laboratory[14]. Using a combination of aerial surveys, on-the-ground counting, and supercomputing, researchers found rooftop solar holds the potential to generate 1,432 terawatt-hours of annual energy, up from the estimated 800 terawatt-hours in 2008. The amount of possible installed capacity from rooftop solar photovoltaics also jumped from 664 gigawatts to 1,118 GW. The three-year analysis projected the level of energy that could be generated in theory if PV systems were installed on all suitable U.S. business and residential rooftops.
- For the first time, grid-scale battery storage projects sought interconnection to New England's power system in 2015—almost 100 MW as of January 2016. And advances in small-scale energy storage options, including electric vehicles, are expanding the ability of the region's households

[12] http://www.iso-ne.com/about/regional-electricity-outlook/grid-in-transition-opportunities-and-challenges/integration-of-new-technologies
[13] http://www.nhec.com/filerepository/nhec_above_the_cap_net_metering_recommendations_1.pdf
[14] http://www.nrel.gov/docs/fy16osti/65298.pdf

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Thank you for your comment. An energy conservation alternative was considered but was eliminated from detailed analysis in the EIS because DOE determined it is not a reasonable alternative, in part because energy efficiency and conservation cannot alone meet the growing demand for electricity in ISO-NE. Section 2.4.9 of the final EIS has been updated with additional information about this alternative. Section 1.4 of the final EIS has been updated to include new information on market trends and energy use since the draft EIS was published in 2015.

0051-11

Thank you for your comment. A power generation alternative was considered but was eliminated from detailed analysis in the EIS because it was not reasonable. Section 2.4.8 of the final EIS has been updated with additional information about this alternative. DOE does not have the authority to determine underlying regional energy needs and goals within the New England regional transmission system or to establish a master plan for regional importation of Canadian hydropower. Regional energy needs and a plan for meeting those needs within the New England region would be determined by ISO-NE in coordination with the New England states. DOE does, however, assess the potential environmental impacts associated with past, present, and reasonably foreseeable future actions (such as other regional transmission lines) that could, along with implementation of the Project, have cumulative environmental impacts. Sections 5.1 and Appendix D of the final EIS contain the cumulative impacts analysis. The New Hampshire 10-Year State Energy Strategy (2014) is cited in Section 1.4 of the final EIS.

and businesses to meet their own energy needs. The U.S. energy storage market surged 243% in 2015 and is estimated to hit the 1 gigawatt threshold by 2019.

The record shows that power generation alternatives and energy efficiency are not theoretical but are currently an important part of the ISO-NE network. Distributed generation like solar, and energy efficiency are reasonable alternatives that create at least as many new jobs (with a much higher probability of hiring NH workers), have the least environmental impact, and help reduce the United States' trade deficit. Energy efficiency and distributed generation are prioritized in New Hampshire's 2014 update of the State's 10-Year Energy Strategy[15], which is not cited or recognized in the DEIS as it should be. Based on Moody's most recent analysis from last month, the NE region's Forward Capacity markets are expected to be depressed due to the above factors. Power generation alternatives (2.13) and energy conservation (2.14) were part of the Scoping Report Alternatives Addendum[16] and should be fully analyzed in the FEIS.

ii) Alternative Routes and Sites

a) Different international border crossing and route: The DEIS fails to look at alternative international border crossing locations, focusing only on the single one proposed by the Applicant. Yet the international crossing is what DOE has jurisdiction over when issuing a Presidential Permit. The DEIS examines alternative routes and burial options only in New Hampshire, but at the same time DOE acknowledges it has no role in selecting these alternatives or options. But the route alternatives and burial options change dramatically if an alternative border crossing is considered. For example, a much more direct and shorter route with far less environmental impact or economic cost would be to cross the Canadian border into Vermont rather than New Hampshire, and from there follow a buried route along I-91 south to the intended markets for this power in MA, CT and RI (that the intended market for this power is southern NE even the Applicant has been clear about, and is further supported by the fact that in 2016 the Applicant bid the Northern Pass project into the New England Clean Energy RFP for these three states). In addition, underscoring this route as a logical and reasonable alternative is that I-91 goes directly by the Vermont Yankee nuclear power plant in Vernon, VT, which is now undergoing decommissioning, and its still functional grid switchyard is now without power. The Governor of Vermont in 2014 stated that Vermont stands ready to consider such a concept. Finally, the Applicant itself claims that the need for Northern Pass is in part to fill the gap caused by the Vermont Yankee Nuclear Power Plant going off line.

A variation to this alternative is burial along I-91 in Vermont to I-89 and I-93 in NH to Londonderry, the intended terminus for the currently proposed project. An additional hybrid would be follow this same route, but terminate in Bow, New Hampshire where Merrimack Station (a coal-fired power plant owned by NPT partner Eversource NH) is now for sale due to its non-competitive position in today's market, and is considered likely to be retired (see following section) .

b) Location of the Converter Station and Substations. The Applicant's selection of Franklin as the location of its proposed DC-AC converter station should not limit DOE's evaluation of other potential sites. Relocation of the converter station from Franklin, NH to another location would facilitate consideration of alternative transmission routes with potentially fewer environmental, cultural, and socio-economic impacts. The FEIS should consider Merrimack Station, the coal fired power plant in Bow, NH which is for sale by Eversource NH and at risk of closure as noted above. Merrimack Station is NH's largest coal-fired power plant, one of New England's top sources of toxic and greenhouse gas pollution,

[15] https://www.nh.gov/oep/energy/programs/documents/energy-strategy.pdf
[16] The Northern Pass transmission line Project Environmental Impact Statement (DOE/EIS-0463) Scoping Report Alternatives Addendum, May 2014)

0051-11 cont'd

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Continued

0051-12
Thank you for your comment. DOE did consider alternative border crossings. One alternative border crossing that DOE considered but eliminated from analysis was an alternative that would utilize the existing National Grid Phase I/II route, including its border crossing in Vermont. Based on its review of the National Grid alternative DOE determined that this alternative is not reasonable. Section 2.4.3 of the final EIS has been updated with additional information related to the National Grid alternative. Separately, in response to comments received on the draft EIS, DOE considered a second alternative border crossing in Vermont, specifically identified as a border crossing at Derby Line, VT that would utilize I-91. DOE determined that this alternative is not reasonable. Section 2.4.17 of the final EIS has been added to reflect consideration of this alternative and DOE's determination.

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Thank you for your comment. In response to comments received on the draft EIS, DOE considered a second alternative border crossing in Vermont, specifically identified as a border crossing at Derby Line, VT that would utilize I-91. DOE determined that this alternative is not reasonable. Section 2.4.17 of the final EIS has been added to reflect consideration of this alternative and DOE's determination. Alternative project terminus and converter station locations, including Bow, NH were considered in the final EIS, but were eliminated from detailed analysis because they are not reasonable alternatives. Section 2.4.14 of the final EIS has been updated with additional information about this alternative.

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and one of the most expensive sources of power in the region. Burying the NPT project under I-93 south to Bow would provide a reasonable site for a converter station and likely an open switchyard for moving the power to the grid. The demise of the Merrimack plant due to market pressures is very likely in the near term. Also as discussed above, using a burial route under I-91 in Vermont would provide direct access to the Vermont Yankee Power plant that is currently undergoing decommissioning. This would also provide both a location for a converter station and a major open switchyard for the power.

The FEIS should not accept the Applicant's filing[17] that burial in the Interstate-93 corridor is not feasible because it believes such is the case, and therefore that all Alternatives with burial in the I-93 corridor as a component should be discarded. The Applicant provides no actual evidence that such a clear-cut legal prohibition exists, nor has it provided evidence that (a) the Franconia Notch I-93 Settlement prohibits such an option (nor has it contacted any of the three signatories to that Agreement of which AMC is one); or (b) that NPT has officially requested such a use of the I-93 corridor from the NH Department of Transportation and been explicitly denied the use of the I-93 corridor.

c). Use of the New England Clean Power Link (NECPL) Transmission Project. The FEIS should compare the relative merits of using the NECPL transmission project versus this project as they are both proposed to meet the same need, are designed to transport the same amount of Hydro-Quebec Power, but have substantively different environmental impacts. NECPL has completed its FEIS for a Presidential Permit and received its State of Vermont permits.

In summary, the EIS must evaluate the **full range of alternatives** that would fulfill the purpose and need for the Project which includes "… meet[ing] New England's need for clean, competitively priced power that will reduce greenhouse gas emissions and reduce price volatility." The FEIS must evaluate competing proposals and/or technologies; efficiency and conservation initiatives; changing development/construction trends; changing economic/energy consumption trends; and more than a single international border crossing. A combination of alternative designs, technologies, and strategies should be fully reviewed in the FEIS. Because one strategy on its own may not be feasible to meet this purpose and need should not necessarily preclude it from consideration. A strategy not practical on its own, but done thoughtfully in combination with other strategies, may be entirely reasonable and feasible. And it is not sufficient for DOE to rely solely on the Applicant's representation that an alternative is uneconomic or impractical, without technical or expert analysis to support such an assertion.

To clarify, the above recommendations for alternatives analysis in the FEIS should not be construed to imply that they are a sufficient substitute for the proposed Programmatic and Comprehensive EIS discussed above.

D. Rationales for Selection and Rejection of Alternatives to be Studied in the EIS

AMC argues that if DOE excludes certain alternatives from detailed consideration, DOE is obligated to independently justify and document its decision with respect to each excluded alternative with expert analysis and appropriate rationales using an independent assessment of costs, technical issues, and other constraints. This Project has not been ruled grid essential by ISO-NE, is privately funded, and is structured to maximize very significant profits for the Project sponsors. The DEIS's shorthand exclusion of reasonable alternatives undermines the importance of the NEPA process in protecting the public interest. The FEIS must not reject reasonable alternatives proposed during scoping, and again herein, without ample evidence or explanation.

[17] http://www.northernpass.us/assets/permits-and-approvals/Northern%20Pass%20Comment%20to%20DOE_%2001.11.2016.pdf

0051-13 cont'd

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Thank you for your comment. Because an EIS is intended to inform decisionmakers and the public about potential impacts of a major federal action, DOE analyzes in detail several alternatives that involve underground cable in the I-93 corridor, including Alternatives 4a, 4b, 4c, 5a, 6a, and 6b. The regulatory framework governing utilities in roadway corridors, including through Franconia Notch (Section 4.3.6.4 of the EIS), is discussed in the Land Use Technical Report and the EIS, see Section 3.1.6.4. DOE has considered this comment and no change to the EIS was made.

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Thank you for your comment. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from detailed analysis, including energy conservation, alternate border crossings, the use of other transmission projects and alternate alignments. Discussion of these, and other alternatives considered but eliminated, and DOE's basis for concluding they were not reasonable can be found at Section 2.4 of the final EIS. Section 2.4 has been updated with additional information and analysis since the draft EIS. As described in Appendix B, B.2.12, pursuant to Executive Order 10485, DOE is responsible for receiving "applications for permits for the construction, operation, maintenance, or connection at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country" and determining whether to issue the requested permit. Currently before DOE is an application from Northern Pass seeking a permit for a single transmission line project. DOE's purpose and need is to determine whether or not to grant the requested Presidential permit for the Project at the international border crossing proposed in the amended Presidential permit application (August 2015). The comment includes requests for analysis of an unspecified combination of alternative designs, technologies and strategies and for a programmatic/comprehensive EIS that would assess issues such as regional energy needs and goals and potential sources to meet those needs as well as assess regional importation of Canadian hydropower. There is not, however, before DOE a proposed regional plan for the importation of Canadian hydropower that would serve as the subject of a programmatic EIS. Further, DOE does not have the authority to determine underlying regional energy needs and goals within the

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New England regional transmission system or to establish a master plan for regional importation of Canadian hydropower. Regional energy needs and a plan for meeting those needs within the New England region would be determined by ISO-NE in coordination with the New England states. DOE does, however, assess the impacts associated with past, present, and reasonably foreseeable future actions (such as other regional transmission lines) that could, along with implementation of the Project, have cumulative environmental impacts. Sections 5.1 and Appendix D of the Final EIS contain the cumulative impacts analysis.

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Thank you for your comment. Information gained through scoping and resource analysis was used to identify a range of alternatives, including the No Action Alternative and eleven action alternatives, that have been analyzed in detail in the EIS. These alternatives include a variety of alignments and overhead and underground configurations. Additionally, seventeen alternatives were considered but eliminated from detailed analysis. These are discussed in Section 2.4 of the EIS. Additional discussion of the basis for elimination has been incorporated into Section 2.4 of the final EIS.

E. EIS Must Include a Rigorous Assessment of the Impacts of the Proposed Project and Alternatives.

NEPA requires a comprehensive assessment of the environmental impacts of the proposed Northern Pass project, and all reasonable alternatives, including those discussed above. The EIS must also provide a "full and fair discussion" of these impacts that will provide the "scientific and analytic basis" for meaningful and technically sound comparisons of alternatives. (40 C.F.R. § 1502.16.), including direct, indirect, and cumulative impacts, whether they be local, regional, or international. The DEIS fails to meet these requirements as follows:

i) *Environmental Impacts of Generation and Transmission in Canada*

To claim and justify that the NPT power is "clean, low carbon," it is essential to look across the international border and consider the source of this power. If the Applicant and DEIS are to invoke the benefits of this "clean, low carbon" power as a rationale for permitting the proposed Project, it is only appropriate that this claim for the Project also be subject to a comprehensive, fair, and balanced review of all of the environmental impacts of the Project as a whole.

The Applicant[18], and by default the DEIS, takes the position that the project will provide "clean, low carbon" electricity generated in Canada for US markets. However, all hydro power is not the same. "Renewable" hydro power is generally defined as power from free-running rivers such as that from Niagara Falls and the St. Lawrence River. Such is not the case for most of Hydro-Quebec's hydropower, which relies on massive flooding of forestlands and huge diversions of river systems.

The impacts of Hydro-Quebec hydroelectric generation and transmission projects on the natural environment and on cultural resources in Canada are dramatic in scale and a subject of tremendous controversy. For perspective, Hydro-Quebec's reservoir flooding equivalent for the generation of 1090 MW based on HQ's overall cumulative reservoir areal flooding and power output equates to the flooding of about 280 square miles of mostly boreal forest land and soils, about 60% of the surface area of Lake Champlain, VT. This is a very significant impact. The impacts include but are not limited to:

- Damming of rivers, converting them from free flowing ecosystems to huge impoundments that flood thousands and thousands of acres of terrestrial habitat;
- Creating impoundments with extensive drawdown regimes that can be subject to hypolimnetic oxygen depletion;
- Flooding of existing high-quality wetlands and the creation of low quality new wetlands due to markedly fluctuating reservoir water levels, and loss or diminishment of riverine wetlands due to altered downstream river flows;
- Hugely altering downstream flow regimes that disadvantage or eliminate many instream and riparian aquatic organisms;
- Extensive blocking of connectivity for aquatic organisms;
- Accelerating the methylation of mercury and its bioaccumulation in the food chain;
- Extensive inter-basin water transfers;
- Disrupting and altering freshwater flows into the ocean that could impact sea ice conditions and seasonal salinity;
- Disrupting the functioning of river deltas where impacted rivers reach the ocean;
- Increasing emissions of greenhouse gases from soils inundated by the reservoirs;
- Loss of terrestrial ecosystems at a landscape level scale from reservoir inundation;

[18] Northern Pass Application at page 18.

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Thank you for your comment. Potential impacts in Canada from the construction and operation of electricity infrastructure, including hydropower generation and transmission in Canada, are beyond the scope of this NEPA analysis. NEPA does not require an analysis of potential environmental impacts that occur within another sovereign nation that result from actions approved by that sovereign nation. Additionally, the construction and operation of Hydro-Quebec power generation projects and electricity transmission line projects in the bulk Hydro-Quebec system will occur regardless of and independent to whether DOE issues a Presidential permit for the proposed Northern Pass Project international border crossing. For these reasons, potential environmental impacts in Canada are not addressed in this EIS. Section 1.5.4.1 of the Final EIS has been updated in response to this comment.

- Disrupting and degrading terrestrial ecosystems due to the vast network of transmission lines required to transport electric power generated in far northern Québec to the United States border.

It is clear from the previously-referenced Canadian strategy documents[19] that the present and future impacts of generation and transmission in Canada, including continued and increased utilization of existing facilities, and the development of new facilities, are "reasonably foreseeable" impacts of developing the Northern Pass project. Future impacts include those in Canada from continued expansion of transmission and generation capacity, as well yet more transmission lines within the United States. Given that the DEIS accepts the Applicant's claims about the "clean, low carbon" nature of this power as an argument for the Project, the FEIS is obligated to consider these additional impacts in its cumulative temporal and spatial impact analyses.

Although the generation facilities that will supply the power, and some of the transmission facilities that will connect those facilities to the United States, are in Canada, under NEPA the DOE must describe and consider in the FEIS for international transmission lines requiring Presidential Permits the environmental and other impacts in Canada itself[20]. DOE's statements to date that it intends to exclude impacts in Canada from its environmental review are erroneous as a matter of law and must be reconsidered and reversed in the FEIS to ensure compliance with NEPA.

ii) Greenhouse Gas Emissions

The FEIS must assess the Project's net effect on greenhouse gas emissions, including the direct emissions caused by generating facilities utilizing the Project, and the indirect changes in emissions from other facilities and in energy usage in New England. Greenhouse gas emissions from the reservoirs used to generate the hydroelectric power for this Project are not insignificant. For equal electric energy outputs, Hydro-Quebec's Eastmain 1 data suggest that, in addition to any indirect emissions from facility construction, newly flooded boreal reservoirs may emit CO2 at a rate close to 32 to 63% that of a natural gas plant[21]. Increased export of hydroelectricity by Hydro Québec to the United States can also be a contributor to increased generation from fossil fuel-fired sources in other regions in Canada. A detailed assessment is required under NEPA because electricity generation is one of the most significant sources of greenhouse gas emissions in the region, and the project has critically important implications for electric systems in New England and Canada, as outlined above.

iii) Energy Resources

The FEIS must address the project's impacts on energy resources, use, markets, reliability, and prices. In particular, DOE must analyze the effects of the Project and all reasonable alternatives on the specific issues discussed below. NPT's contention in the Application that the power is merely "excess" capacity

[19] *See* Hydro-Québec Strategic Plan (2009-2013), *supra.* "*As a result of recent and ongoing hydroelectric development projects, Hydro-Québec Production expects to have the generating capacity needed to ensure export growth*"); Québec Energy Strategy (2006-2015), *supra* ("*The 4,500 MW added capacity will be sufficient to meet Québec's long-term demand, promote wealth-creating industrial development, and support exports. . . . The Government also intends to ensure that Québec is able to increase its electricity exports, once its own needs have been met*."). *See also* NPT Transmission Service Agreement Filing, FERC Docket No. ER11-2377 (Dec. 15, 2010), at Attachment G, p. 28 (Charles River Associates, LMP and Congestion Impacts of Northern Pass Project) "*In reality, the additional transmission capacity provided by the NPT Line could lead to additional development of resources to support exports from Québec, leading to higher total exports in the case with NPT in service.*"

[20] Based on legal and policy considerations, CEQ has determined that agencies **must** include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States. https://ceq.doe.gov/nepa/regs/transguide.html

[21] http://www.clf.org/wp-content/uploads/2012/02/Hydropower-GHG-Emissions-Feb.-14-2012.pdf

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Thank you for your comment. Potential impacts in Canada from the construction and operation of electricity infrastructure, including hydropower generation and transmission in Canada, are beyond the scope of this NEPA analysis. NEPA does not require an analysis of potential environmental impacts that occur within another sovereign nation that result from actions approved by that sovereign nation. Additionally, the construction and operation of Hydro-Quebec power generation projects and electricity transmission line projects in the bulk Hydro-Quebec system will occur regardless of and independent to whether DOE issues a Presidential permit for the proposed Northern Pass Project international border crossing. For these reasons, potential environmental impacts in Canada are not addressed in this EIS. Section 1.5.4.1 of the Final EIS has been updated in response to this comment.

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Thank you for your comment. The socioeconomic consequences of the Project are analyzed in detail in Section 4.1.2 of the EIS. The analysis presented in the final EIS was updated to reflect current market conditions and inputs. The commenter is referred to sections 1.4 and 3.1.2.5 of the EIS which provides additional information about energy forecasts and the composition of the energy systems and markets in both New Hampshire and more broadly in New England. To further respond to the comment, the EIS does broadly address the anticipated impact of the Project on "prices" in terms of total wholesale energy expenditures in NH and across New England as a whole. The EIS does not specifically address potential affects to energy resources, markets or reliability. These latter elements will be addressed more broadly by ISO-NE and through the DOE's forthcoming determination of project reliability. Finally, Hydro Quebec has entered into a power service agreement with NPT under which it has committed to providing the necessary energy to supply the project, if approved and constructed. It is unclear from the comment which "strategic plans" or "analysis" provided by Hydro Quebec are being referenced.

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(*see, e.g.*, Application at page 4) is at odds not only with the Hydro-Quebec's strategic plans, but also with its own analysis.

(a) Renewable Energy Resources in New Hampshire and the Northeastern United States.

Major new imports of low-priced electric power from Canada will have profound effects on the development and maintenance of domestic energy resources, including new renewable sources such as solar, wind, efficient low-emitting biomass, and small-scale hydroelectric facilities. These impacts must be considered in the FEIS. Federal and state public policies, including federal and state tax incentives and renewable portfolio requirements, promote support for and development of these resources. DOE must also take into account the potential for legislative changes that might qualify large-scale hydroelectric power for renewable portfolio incentives. This is not speculative since it has already been achieved in Connecticut and is an ongoing debate in other New England states (promulgated by the Applicant and its surrogates). The potential effects of such changes on the market for renewable energy credits and the financing of existing and proposed renewable projects in the region would be significant, since they are contrary to the spirit and purpose of current renewable portfolio requirements, which are intended to spur investment in new renewable resources and the modernization of existing facilities in New England.

(b) Impacts on Demand Management, Demand Response, Energy Efficiency, and Conservation.

The FEIS must evaluate the effects of the Project on existing and potential non-generation resources, including demand management, demand response, energy efficiency investments, and conservation efforts. It should address this issue in detail by examining how adding substantial new capacity into the New England electric grid may diminish the economic incentive for these non-generation resources to continue to grow. These approaches are the least environmentally impacting available, and discouraging them by flooding the market with additional power has serious ramifications.

F. Forward NH Plan

CEQ rules require the use of best practical measures to *avoid, minimize,* or *mitigate* project impacts. Northern Pass has about one-third of the *avoid* correct with its revision to its Application for 60 miles of burial. In addition, the Applicant has promoted its 'Forward NH Plan' as the panacea to provide direct benefits to New Hampshire. But it is not a mitigation fund designed to deal with Project impacts, nor does it demonstrate such linkages. It is primarily a slush fund to enable Northern Pass to direct funding to where it most needs to bolster support or meet its internal needs. While the training of young lineman is noble, it's important to remember that with energy deregulation utilities cut their linemen training programs and they are now reaping the fruits of that short sightedness and experiencing a lineman shortage, since many are aging out of the workforce. In addition, much of the 'Forward NH Plan' money is being spent prior to completion of the EIS process, where mitigation needs are typically identified. FEIS mitigation plans and funds should be transparent, and directly address the project's actual impacts as defined throughout the EIS process. They should not be designed by the Applicant for the Applicant's gain. Until such time that the public has sufficient information to accurately scrutinize the claims for this plan, and understand the substance behind these promises, the 'Forward NH Plan' should not be considered in the Presidential Permit review process.

0051-19 cont'd

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0051-20 Thank you for your comment. The analysis conducted did not find evidence that the Project would reduce the construction or exploration of new renewable energy sources, other than by potentially affecting total expenditures for electricity within the market. Existing electricity system infrastructure is described in Section 3.1.2.5 of the EIS; this information has been updated for the final EIS. Section 1.4 of the EIS has also been updated to reflect current trends and conditions in the regional energy market. Additionally, the Socioeconomics Technical Report includes a discussion of modeling completed for this EIS, including a projection of future base case conditions in New Hampshire and the ISO-NE region through 2030. The modeling was updated for the final EIS to incorporate current market conditions and trends. The future base case condition was modeled based on the best available information from ISO-NE,

0051-21 including their estimates of energy conservation and other generation sources in the future. While the EIS analyzes possible impacts to the electricity system in the socioeconomics analysis, a detailed analysis of these impacts is performed through DOE's reliability study completed in cooperation with ISO-NE via a separate process.

0051-22

0051-21

Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS and include an assessment of impacts on electricity rates and the anticipated mix of current and future generation types. The analysis conducted did not find evidence that the Project would reduce or alter the construction of new, or reliance upon existing, renewable power sources in the U.S., other than by potentially affecting the general price of electricity within the market. Additionally, Section 2.4 of the EIS provides specific information detailing why the DOE specifically did not evaluate other generation resources, demand management or energy conservation.

0051-22

Thank you for your comment. Appendix H of the EIS includes a list of Applicant-Proposed Impact Avoidance and Minimization Measures considered in the EIS process. The analysis of potential impacts in this EIS assumes that these measures would be applied during implementation of the Project, if approved. DOE's and USFS's decisions would be conditioned on the

implementation of these APMs, as well as any other requirements identified by other permitting processes (including the New Hampshire Site Evaluation Committee review, consultation with the U.S. Fish and Wildlife Service, etc.). The Applicant's Forward NH Plan is not being considered as mitigation in the EIS.

Substantive DEIS Issues

AMC provides the following substantive comments on elements of the DEIS.

A. Section 1.4 – Project Objectives

The DEIS Section 1.4.1 *Electrical Diversity* is outdated. It lists the winter of 2013/2014 as exemplary of extreme reliability concerns. It fails to acknowledge that the winter of 2014/2015 was even colder and did not experience similar reliability concerns or wild market price oscillations due to regulatory changes instituted by ISO-NE. New England's 2015 Average Wholesale Power Prices fell to their scond-lowest level since 2003[22]. The DEIS cites ISO_NE's 2013 Annual Market Report, whose conclusions have since markedly changed to a much more positive perspective. ISO-NE's Forward Capacity Market auction procured sufficient resources to meet demand in 2019-2020, including more than 1,400 MW of new generating capacity that will help replace recently retired and retiring generators. The 2016 auction clearing price is 25% lower than last year's auction[23].

The FEIS needs to update the information in this section to more accurately and fairly reflect recent market changes since this Application was originally submitted, ongoing investigations by FERC, and the new alternatives to this Project that are coming into the market to provide electrical diversity.

B. Section 2.2 Description of Geographic Analysis Section.

At Section 2.3.2.3 Southern Section, the DEIS describes the geographic limits of the analysis as terminating at the Deerfield Substation at MP 187. However, the proposed Project actually extends beyond to the Scobie substation in Londonderry, NH. The required re-conducting of the existing 345 kV line between Deerfield and Scobie will include tower replacements and considerable construction impacts to wetlands, both in the ROW and in order to access the ROW. The conclusion in Section 4.4.13 Water Resources that wetland impacts in the ROW are expected to "not be significant" is neither accurate nor supported by data. The FEIS must properly assess the impacts to wetlands from the Deerfield substation to the Scobie substation as it is an essential element of this project as proposed.

C. Visual Impact Analysis

Background: The impact on visual resources of the proposed Northern Pass Project is one of the most controversial components of this project with important economic implications. As currently filed before the New Hampshire Site Evaluation Committee (SEC) and vaguely described in Alternative 7 in the Supplement to the DEIS, Northern Pass would be 192 miles long, with 60 miles buried, but a remaining 132 miles of overhead transmission line including 32 miles of new corridor. It would impose over 1,100 new large industrial structures on the landscape. Though the DEIS visual impact analysis correctly identifies the Northern Section as currently having "high intrinsic visual quality"[24] and "minimal scenic impacts"[25], its overall visual analysis contains major flaws that underestimates the true "intrinsic visual quality" of the proposed corridor's landscape and the visual impact of the proposed Project.

The visual resource analysis uses two distinct approaches to analyze the visual impacts[26]:

[22] http://www.iso-ne.com/static-assets/documents/2016/03/20160329_prelim_2015_prices_release.pdf
[23] http://www.iso-ne.com/static-assets/documents/2016/02/20160211_fca10_initialresults_final.pdf
[24] DEIS Visual Assessment Technical Report, Figure 9)
[25] DEIS Vol. 1 at page 3-61
[26] DEIS at Section 3.1.1

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0051-25

0051-23
Thank you for your comment. As discussed in Section 1.4 of the EIS, Northern Pass set forth a range of project objectives and benefits in its permit application, which have remained consistent in all subsequent amendments (July 2013 and August 2015). DOE and the cooperating agencies reviewed this documentation and determined that the project objectives include addressing three primary needs concerning New England's electricity supply: diverse, low-carbon, non-intermittent electricity. Section 1.4 of the final EIS has been updated to include new information on market trends and energy use since the draft EIS was published in 2015.

0051-24
Thank you for your comment. Section 2.3.2.3 of the EIS has been updated to describe the geographic limits of the Project, including the Scobie substation in Londonderry, NH. Although the AC system support projects vary slightly between alternatives, impacts to water resources would be very similar. The only upgrade with potential impacts to water resources would be the expansion of the existing Scobie Pond Substation, which would impact roughly 5 acres (2 ha) of primarily upland vegetation. Of these 5 acres (2 ha), roughly 3 acres (1 ha) is forested habitat and 2 acres (1 ha) is scrub-shrub habitats with marginal amounts of wetlands and open water. The Scobie Pond Substation expansion would result in less than 0.5 acre (<0.5 ha) of disturbance to wetland communities. With implementation of APMs in Appendix H, most adverse impacts to wetlands would be indirect, short-term, and localized. Both short- and long-term impacts to water resources arising from the AC system support projects south of the Deerfield Substation to the Scobie Pond Substation are discussed in Section 4.4.13 in the EIS. These projects are described in 2.3.2.5 of the EIS.

0051-25
Thank you for your comment. The methods used in the landscape analysis, including a discussion of data sources, are described in detail in Section 2.4 of the Visual Impact Assessment Technical Report. Properties listed on the National Register of Historic Places were considered in this analysis when scenery was included in the criteria for their listing. Impacts to historic properties are analyzed in Sections 4.1.8, 4.2.8, 4.3.8, 4.4.8, and 4.5.8 of the EIS and the Cultural Resources Technical Report. Additionally, DOE will continue to consider historic and cultural resources through the process of compliance with Section 106 of the National Historic Preservation Act. In response to the commenter's concern about average indices,

a new calculation, the "aggregate scenic impact," was added to the final EIS and additional aggregate indices were added to the Visual Impact Assessment Technical Report to account for an increase in the size of the affected area. The final EIS and Visual Impact Assessment Technical Report have been updated to fully incorporate an analysis of Alternative 7 - Proposed Action. The visibility analysis for Alternative 7 used the new design information, including structure locations and heights. Seven new Key Observation Point (KOP) simulations have been added and evaluated to ensure that a range of representative conditions is presented along the corridor for all alternatives. All 73 simulations have also been updated in the final EIS to reflect all the alternatives. The two primary methods are intended to be independent and to provide different approaches. The GIS landscape assessment presents an overall view, while the Key Observation Point (KOP) simulations represent impacted views from a range of distances and landscape contexts, with some emphasis placed on designated scenic resources. As such, these two approaches are not intended to be "integrated." The final EIS and the Visual Impact Assessment Technical Report have the same organization. The KOP analysis is presented in Appendix E of the EIS and Appendices A and B of the Visual Impact Assessment Technical Report.

1. Big Picture - GIS (ArcMap) to conduct a:
   a. Visibility analysis (ZVI – zone of visual impact, or viewshed analysis)
   b. Landscape assessment (Scenic Impact)
   c. Evaluation of visual exposure from roads.
2. Specific Viewpoints - A more focused viewpoint assessment that includes:
   a. An extensive visual inventory of the existing conditions
   b. Preparation of representative photo-realistic visual simulations.

Problematic is the data limitation rule that the visual consultant applied, i.e. *"data sources or certain parameters would not be considered if necessary data attributes were absent or the data were geographically restricted"*.[27] Not all of the historic resources featured in the Section 106 report were incorporated into the visual assessment. Yet Section 106 is a stand-alone and separate process from the DEIS and these historic features can be an important part of the contextual visual landscape, e.g. an old farmhouse or barn in a field that contributes to the cultural as well as scenic elements of the landscape. Eliminating potentially important parameters, or using inappropriate surrogate data because the required data was not available in readily useable GIS format or across the whole study area, as occurred in the *Scenic Impact* model, are strategies of convenience, not accuracy. The *Scenic Impact* results are then averaged, which tends to dilute the high impact areas, homogenize real differences, and provides minimal sense of the range of variability around the averages. This can and does greatly compromise the results derived as will be discussed in the following sections.

The Specific Viewpoint approach in the Supplement to the DEIS is based on only six so-called "representative" photo simulations for 132 miles, some which use outdated 2014 engineering data. It is also not immediately apparent, if it was done at all, how the various distinct components of the analysis, e.g. ZVI, Scenic Impact Model, road miles exposed, and photo simulations, were cumulatively synthesized to assess the overall visual impact of the various alternatives. Rather, the Visual Resource Summary Impact Table[28] relies almost solely on the flawed *Scenic Impact* values (net change in average scenic impact, total average scenic impact) and road miles impacted.

Proper Summary context: Absent or outdated in the DEIS and its Supplement is a proper statistical description of the tower types, configurations, and heights as now proposed by the Applicant (its Application to the NH Site Evaluation Committee varies from that studied in the Supplement, for example). The 132-mile above ground overhead component will involve 32 miles of a new transmission corridor up to 120 feet wide, the installation of 1,176 new HVDC or 345-kV towers (733 lattice towers 60 to 160 feet tall; 258 monopole towers 60 to 145 feet tall; and 185 H Frame towers 48 to 120 feet tall). In addition the existing 115 kV line's visual impact includes 1,044 H Frame poles at ≤55 feet of which 378 will remain and 664 will be removed, and 403 monopoles ≤75 feet of which 403 will remain and 50 will be removed. Currently, structures in the ROW north of the White Mountain National Forest are dominantly wooden H frames. The 115 kV replacement poles, unlike many of their existing counterparts, are much larger structures that will be well above tree height, including steel monopoles up to 130 feet tall. Basic summary statistical tables on visually impacted acres by region, town, etc. as derived from the ZVI, and other informative statistics are mostly absent or obscure and should be included.

[27] 2.3.3 Data Limitations - *The visual inventory described in Section 2.4.4 is the only major effort at original data collection for the VIA. Otherwise, the VIA was limited to using existing public data that were available in a form suitable for analysis. In general, this means that the data were in a standard geographic digital format, or could easily be converted to such a format. In addition, the data needed to be reasonably complete. Data sources that did not include the necessary attributes or that were geographically restricted were not considered appropriate for use. VISUAL IMPACT ASSESSMENT - A Technical Report for the Northern Pass Transmission Line Project- July 10, 2015*

[28] e.g. DEIS Supplement, November 2015, Section 4.1 Table 2

0051-25 cont'd

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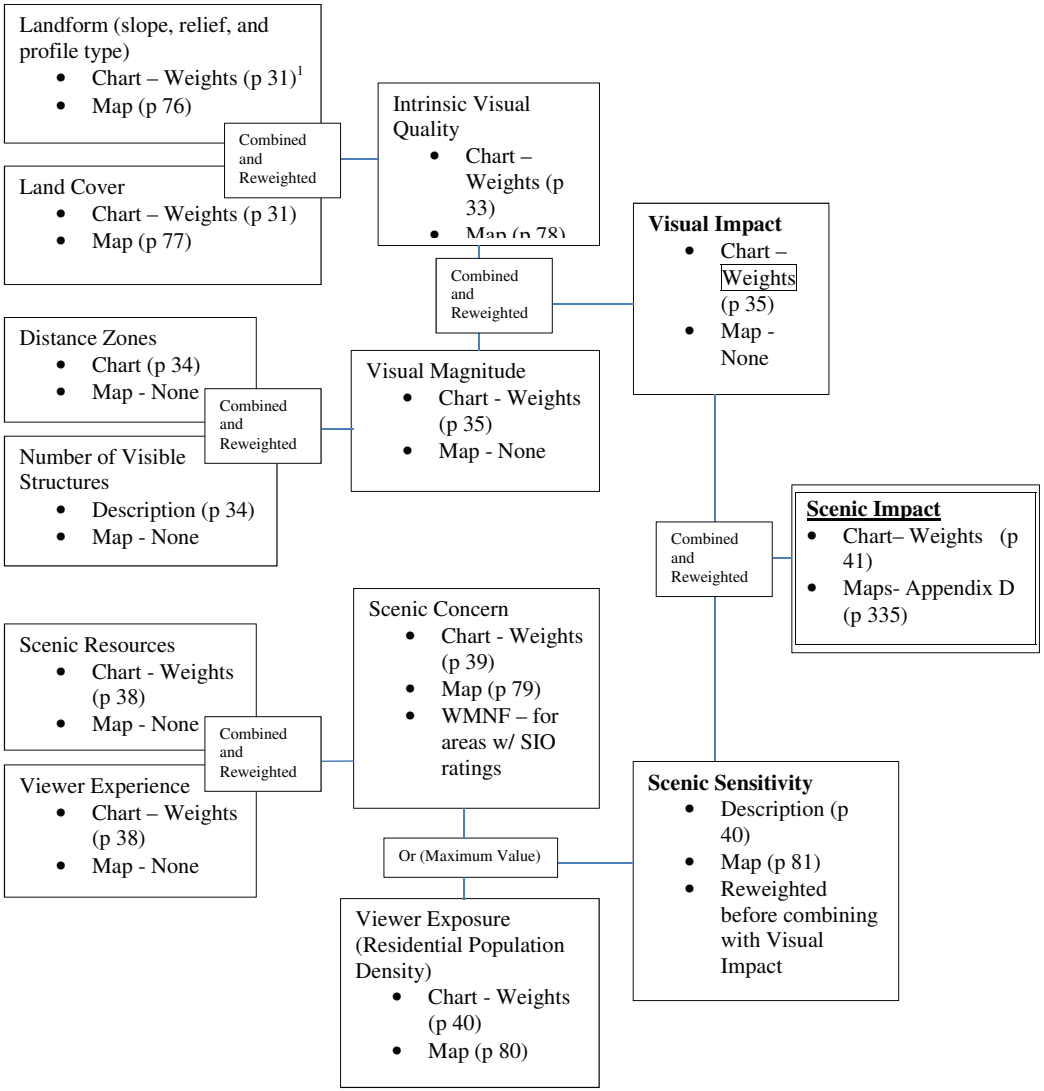
0051-26
Thank you for your comment. The EIS and Visual Impact Assessment Technical Report do not include a statistical description of the alternatives. The most recent project design information, including tower types and heights, was used for the analysis of all alternatives and is represented in the simulations and other analysis. Table 2-1 in the EIS has information on corridor length by alternative, and figures in Section 2.3 of the EIS depict the various towers proposed. Chapter 5 of the Visual Impact Assessment Technical Report contains a summarized table of visual impacts.

0051-26

Approach #1 Big Picture - Landscape Assessment "Scenic Impact Model": Landscape assessment is an approach to evaluate the suitability for or potential effects of a proposal. The landscape assessment model that was developed in the DEIS generally follows the approach used in the USFS' Scenery Management System described in Landscape Aesthetics: A Handbook for Scenery Management (USFS 1995). The ultimate model outcome, in this case "*Scenic Impact*", is very dependent on assignments of rank, coefficients applied, and how problems of non-available data are addressed. The numeric ranking approach used in this analysis[29] to permit quantitative comparisons of the various Alternatives has serious flaws as described in the following sections. These flaws need to be remedied in the FEIS to properly assess the overall visual impacts; otherwise, the magnitude of the Scenic Impact will remain underestimated.

[29] VISUAL IMPACT ASSESSMENT - A Technical Report for the Northern Pass Transmission Line Project- July 10, 2015

Following is the matrix used in the DEIS to derive the ultimate "Scenic Impact".
Modified Figure 3. Diagram of the landscape assessment procedure with types of data used.
(Note: Page numbers refer to the VISUAL IMPACT ASSESSMENT - A Technical Report for the Northern Pass Transmission Line Project- July 10, 2015.)



The division of the State into sub regions is reasonable. Specific problems with the model input follow:

Visual Impact Component of the Overall 'Scenic Impact'

i) Intrinsic Visual Quality—the intrinsic scenic potential of the landscape, independent of human perception. The general principle is that landscapes with greater relief and landscapes with more natural land cover have higher visual quality.

*a) Land Form***-** The approach and results are reasonable.

b) Land Cover – The *land cover* visual analysis is based on 2011 National Land Cover Data (NLCD 2011) and collapses 15 distinct classifications into 6 broad land cover classifications. This is very coarse and does not adequately account for important patch habitats, e.g. mid -sized cliff, stream, etc. that contribute to the visual quality of a landscape. The NH State Wildlife Action Plan (2010, updated in 2015) land cover (habitat data layer) classification is more nuanced and should be used for viewshed analysis instead of the NLCD.

c) Combining Landform and Land Cover Weights to Obtain Intrinsic Visual Quality –Apparently the consultant combined its overly simplistic land cover ranking and landform value rankings and then divided by 2 to generate its 'Intrinsic Visual Quality' ranking, e.g. Visual Impact Assessment Table 4. At a very broad landscape level this simplistic approach may suffice, but it compromises an understanding of the actual visual impact within a sub-region.

Table 4. Combining Landform and Land Cover Weights to Obtain Intrinsic Visual Quality

Land Cover	**Landform (Relative Relief)**				
	Mountains (5)	**High Hills** (4)	**Moderate Hills** (3)	**Low Hills** (2)	**Flat** (1)
Open Water (5)*	5	5	4	4	3
Forest (4)	5	4	4	3	3
Farm & Open Land (3)	4	4	3	3	2
Dev. Open Space (2)	4	3	3	2	2
Suburban Residential (1)	3	3	2	2	1
Urban Development (0)	3	2	2	1	1

ii) Visual Magnitude- a measure of the sense of visual prominence.

a) Distance Zones- The DEIS "Distance zones" used in the model are problematic (Visual Impact Assessment Table 5) .The separation of 'Immediate (0-53 feet)' and 'Foreground (53- 1,320 feet)' in the ranking system defies common sense because the new proposed tower sizes are up to 160 feet tall, with the majority in the 80- 110+ feet range. This separation biases the numeric ranking system used in the overall calculations to a lower visual impact. For example, a person could be standing less than one tower height away and be ranked in the 'Foreground' rather than 'Immediate' of the new structure. This biases the numeric ranking system used in the overall calculations to a lower visual impact. Therefore in the

0051-27

0051-27
Thank you for your comment. The commenter presents no evidence that the land cover classifications in the New Hampshire State Wildlife Action Plan would reflect human perception of scenic value. Research in landscape perception suggests that standard land cover classes, such as those in the National Land Cover Dataset, are very useful for this purpose. The photo-simulation and Key Observation Point (KOP) analysis in the Visual Impact Assessment and EIS provides another method to comprehend site-specific impact within a sub-region. The methods used in the landscape analysis are described in detail in Section 2.4 of the Visual Impact Assessment Technical Report.

0051-28
Thank you for your comment. The Immediate distance is defined as within 50-feet of the structure. Within this distance zone, structures would loom over the observer and one structure would have a large impact. This impact quickly diminishes to the type of impacts experienced in the Foreground distance zone. Both the Immediate and Foreground distance zones are weighted to be highly sensitive to visibility of structures. These distance zones and the differences between them are described in Section 2.4.1.5 of the Visual Impact Assessment Technical Report. DOE has considered this comment related to the number of visible structures and no change to the EIS was made. The viewpoint analysis considers the impact of particular structures in a site-specific manner, but for the purposes of the landscape assessment a generalization of structures was required and is appropriate. The visual magnitude rating system has not been revised in response to this comment.

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FEIS the differentiation between 'Immediate' and 'Foreground' should be condensed into just 'Foreground'.

Table 5. Distance zones

Distance Zone	Distance (miles
Immediate	0.0—0.01
Foreground	0.01—0.25
Near Middleground	0.25—1.5
Far Middleground	1.5—3.0
Near Background	3.0—5.0
Far Background	5.0—10.0
Distant	Greater than 10

b) Number of Visible Structures- This approach is used in many wind power visual studies as the structures are usually identical. However this is an oversimplified approach for this project where the tower structure type, height, and visual dominance vary considerably. This visual variability should be accounted for in the ranking, but is not. This results in an underestimation in the "Net change in Average Scenic Impact" that is relied on very heavily in the analysis (e.g. Supplement to the DEIS, Section 4.1, Table 2), since it treats the visual impact of an existing 55 foot wooden tower as equal to that of a new 160 foot tall steel lattice tower, which is nonsensical.

c) Visual Magnitude Ratings – Visual Impact Assessment at Table 6 (below) in the visual ranking system needs to be redone in the FEIS using more appropriate data as described above. For example in the DEIS Table 6 a person could be standing 75 feet away from a 100 foot tall lattice tower, be ranked in the 'Foreground' and given a "visual magnitude rating" of low. This defies common sense and perpetuates the under estimation of visual impact.

Table 6. Visual Magnitude Ratings Based on the Number of Structures Visible at Each Distance Zone or Closer

Distance Zone	Visual Magnitude Rating					
	Very High	High	Moderate	Low	Very Low	None
Immediate	1 or more	—	—	—	—	—
Foreground	6 or more	3 – 5	2	1	—	—
Near Middleground	32 or more	16 – 31	6 – 15	4 – 5	2 – 3	1
Far Middleground	64 or more	32 – 63	10 – 31	7 – 9	4 – 6	3 or less
Near Background	96 or more	48 – 95	14 – 47	10 – 13	6 – 9	5 or less
Far Background	—	—	—	60 or more	30 to 59	29 or less
Distant	—	—	—	—	—	—

iii) Visual Impact is calculated from the interaction of Visual Quality and Visual Magnitude (Visual Impact Assessment at Table 7). It is an indication of the intrinsic impact, irrespective of the sensitivity of

people or sites affected. The problems discussed above with this calculation result in an underestimation of visual impacts that needs to be remedied in the FEIS.

Table 7. Combining Intrinsic Scenic Value and Visual Magnitude Ratings to Obtain Visual Impact

Intrinsic Visual Quality	Visual Magnitude Rating					
	Very High (5)	High (4)	Moderate (3)	Low (2)	Very Low (1)	None (0)
Very High (5)*	5	5	4	3	2	0
High (4)	5	4	3	2	1	0
Medium (3)	4	3	2	1	1	0
Low (2)	3	2	1	1	1	0
Very Low (1)	2	1	1	1	1	0

*The numbers in gray are the ratings from Tables 4 and 6.

Scenic Sensitivity Component of the Overall 'Scenic Impact'

This component of the overall Scenic Impact analysis is very problematic, and suffers from lack of relevant data and misapplication of surrogate data. This results in an underestimation of actual visual impacts.

i) Scenic Resources- Many Section 106 scenic resources were inappropriately excluded from this analysis, yet they can be an important part of the overall visual landscape and should not be excluded when assessing the overall "Scenic Impact". The Scenic resources were also ranked based on a hierarchy of land ownership, e.g.

Level of Designation

1. Nationally designated recreation resources have a very high value (rated 5)
2. State scenic resources have a high vale (rated 4)
3. Recreation resources designated by local governments or non-governmental organizations have a medium value (rated 3) --
4. Other areas in the recreation resource database have a very low value for designation (rated 1)

This system underweights the scenic resource. For example, some of the most-climbed mountains in the whole northeastern region, and United States for that matter, for their views are Mount Monadnock and Cardigan Mountain in NH, which are State Parks. Yet they would be under- ranked in this scheme since they are not under federal ownership. Mount Moosilaukee (under the ownership of Dartmouth College), and the Ossipee Mountain Range and the Castle in the Clouds (owned by the Lakes Region Conservation Trust), are similarly highly sought out for their views, yet would be ranked even lower using this ranking scheme. This is nonsensical. Scenic resources should be ranked on their actual scenic value, not simply ownership, particularly when this is a study of the impacts within a state, not the whole country. A ranking approach such as that used in the NH State Wildlife Action Plan (2010, updated in 2015)[30] for habitat types –e.g. state wide significance, regional significance, etc. would be much more appropriate as it uses actual knowledge of the resource, and at the appropriate state level, not an overly-simplistic approach based on a hierarchy of ownership.

[30] http://www.wildlife.state.nh.us/wildlife/wap.html

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0051-28 Continued

0051-29

Thank you for your comment. The methods used in the landscape analysis are described in detail in Section 2.4 of the Visual Impact Assessment Technical Report. Properties listed on the National Register of Historic Places were considered in this analysis when scenery was included in the criteria for their listing. Impacts to historic properties are analyzed in Sections 4.1.8, 4.2.8, 4.3.8, 4.4.8, and 4.5.8 of the EIS and the Cultural Resources Technical Report. Additionally, DOE will continue to consider historic and cultural resources through the process of compliance with Section 106 of the National Historic Preservation Act. Land ownership was considered in the analysis as an indicator of public concern, and was not used to rate scenic value. When a location has been acquired by a public entity it demonstrates a level of interest and public value.

0051-29

ii) Viewer Experience- AMC concurs that scenery has some importance for activities identified with recreation resources. Table 9 needs to be refined as it excludes recreational activities like canoeing/boating on open waters or rivers visually impacted by the project, e.g. the very popular and scenic Ponotook Reservoir on the Androscoggin River in Dummer. These activities are identical to hiking, driving on scenic roads, etc. in the desires of their participants for high scenic quality. For most anglers, fishing is as much about the ambience of the environment as catching a fish, and this is underrated in the approach taken here. To lump all campground/picnic areas /natural areas/ ski areas etc. into a single category is a major oversimplification exhibiting minimal knowledge of the resource itself and what role the visual landscape plays in the experience of these places. Camping at an urban KOA Campground versus a remote State Park are quite simply not equal in the scenic ambience being sought by the user, nor should they be ranked as such.

Table 9. Importance of Scenery for a High Quality Experience

Activity	Importance	Comment
Very High		
Scenic Road	5	Scenic appreciation central to this activity, especially for passengers
Trail area or Hiking trail	5	Area often selected for its scenic attributes—scenic appreciation often mentioned as part of the hiking
Excursions	5	Assumed to be related to hiking or driving for pleasure.
High		
Campground	4	Area often selected because it is scenic—scenic appreciation often mentioned
Picnic Area	4	Area often selected because it is scenic—scenic appreciation often mentioned
Recreation resort	4	Area often selected because it is scenic—scenic appreciation often mentioned
Moderate		
Fishing	3	Often in scenic areas—but requires focused attention away from scenery
Hunting	3	Often in scenic areas—but requires focused attention away from scenery
Natural area	3	Catchall for a conservation area or activities that have non-scenic objectives
Activity	**Importance**	**Comment**
Park	3	Catchall for many activities—most have non-scenic
Snow Ski Area	3	Often in scenic areas—but requires focused attention away from scenery
Vacation Farm	3	Some activities may focus on countryside scenery

0051-30

0051-30
Thank you for your comment. The rationale for the viewer experience ratings is explained in Section 2.4.2.4 of the Visual Impact Assessment Technical Report. Table 8 of the Visual Impact Assessment Technical Report presents criteria for determining the role of scenery in various activities. These criteria were applied to the range of activities in the project area using professional knowledge of visual impact analysis and knowledge of the New England landscape. In this analysis, experiences, not places, are rated. In the examples of hiking or fishing, DOE assumes that it is the presence of rocks and fish that influence the user's selection of location rather than scenery, as suggested by the commenter. In most cases where the activity is most sensitive to visual impacts, those situations have been identified and considered accordingly. This has been clarified in the final EIS and the Technical Report. It is recognized that the landscape analysis provides a general overview of experiences and scenic values in the area.

Water Sports Area	3	Often in scenic areas—but requires focused attention away from scenery
Winter Sports Area	3	Often in scenic areas—but requires focused attention away from scenery
Low		
Field Sports	2	Outdoors—but the setting is non-contributing
Golf	2	Outdoors—but the focus is not on scenery
Historic	2	Typically indoors, or focused on architecture
Racetrack	2	May be outdoors—but the setting is non-contributing
Rock hounding	2	May be outdoors—but the setting is non-contributing
Shooting Preserve	2	May be outdoors—but the setting is non-contributing
Very Low		
Gymnasium	1	Indoors
Special Event Fac.	1	Indoors
Other	1	

iii) Scenic Concern - The ratings for scenic resource designation and the importance of scenery to experience quality are combined to obtain the scenic concern ratings, Visual Impact Assessment at Table 10.

Table 10. Combining Level of Designation and Viewer Experience Ratings to Obtain Scenic Concern

Level	Ratings	Importance of Scenery for a High Quality Experience				
		5	**4**	**3**	**2**	**1**
Federal	5	5	5	4	3	2
State	4	5	4	3	2	1
Local/NP	3	4	3	2	1	1
Other/Private	1	3	2	1	1	1
No designation	0	0	0	0	0	0

With this scheme, more nonsensical results occur, e.g. Figure 10 in the Visual Assessment Technical Report shows zero “Scenic Concern” for most of the Northern Region. Until the flawed data inputted into this matrix are corrected, the results of Table 7, Figure 10, etc. are without merit.

iv) Viewer Exposure – Alleging that any real data on how the public views this industrialization of the landscape is lacking (though the DEIS record has thousands of comments overwhelmingly objecting to these structures on the landscape), this analysis uses a very poor surrogate - 2010 resident US census data converted into residents per unit area. e.g. Visual Impact Assessment Table 11.

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Thank you for your comment. The rationale for the scenic concern ratings is explained in Section 2.4.2.4 of the Visual Impact Assessment Technical Report. This rating system considers the level of designation and viewer experience in order to determine scenic concern. Level of designation is considered because it indicates public commitment to particular resources. This approach is used by the USFS Scenery Management System. Scenic concern in the Northern Section is zero or very low because it is mostly privately owned and managed for timber.

0051-32

Thank you for your comment. The value of scenic sensitivity used in the analysis is the greater of scenic concern or viewer exposure, not the average. Therefore, low viewer exposure in the Northern Section and the WMNF, for example, does not lower the scenic sensitivity of these areas. The rationale for the viewer exposure ratings is explained in Section 2.4.2.5 of the Visual Impact Assessment Technical Report. As discussed, use data are generally not available for scenic or recreation resources in New Hampshire and estimates of transient and tourist populations would be excessively speculative. Therefore, census data were used as an indicator of how many potential viewers exist in an area. The scenic value of the undeveloped nature of the area is captured through the other elements of the landscape assessment, including intrinsic visual quality. The viewer exposure metric was included in this analysis to represent the sensitivity of areas with many viewers but less intrinsic scenic quality.

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Table 11. Potential for Viewer Exposure Ratings

Potential for Visual Exposure		Population per Square Kilometer	
Rating	Description	Lower limit	Upper limit
5	Very high	5,000	700,000
4	High	1,000	5,000
3	Moderate	500	1,000
2	Low	10	500
1	Very low	0	10
0	None	0	0

The results (i.e. Visual Impact Assessment Technical Report, Figure 10) show the Northern Region to have "very low" to "no" potential viewer exposure due to low US census data. This is counter intuitive for multiple reasons. Areas ranked as having a natural landscape in the "Visual Impact" component of this analysis invariably have a low US Census count, otherwise they would not be natural in appearance and would be less visually desirable. For example, this means the White Mountain National Forest, Yellowstone National Park, or the North Region of this study area, all of which have minimal to no US census tabulated residences, would be ranked as having 'low' to 'none' potential for visual exposure. Yet these same locations are advertised for this very attribute of low population density, and are sought out by millions of tourists and vacation home owners. The assumptions used in this scheme are illogical, without merit, and result in a gross underestimation of the overall "Scenic Impact" of the Project. The data used by the DEIS needs to be revised, and incorporate relevant resident and vacation home owners, and transient tourist visitation information.

v). Scenic Sensitivity– The "scenic sensitivity" value is developed from the highly problematic "scenic concern" and "viewer exposure" components of the model. Remedying the problems of these sub-components is essential to developing realistic and meaningful "scenic sensitivity" values.

Scenic Impact

The model combines the highly compromised **Visual Impact** (intrinsic measure) and **Scenic Sensitivity** (social concerns) into the very important summary '**Scenic Impact**" ranking value. Unless the previously enumerated flaws are remedied in the FEIS, both the "Net Change in Average Scenic Impact" and "Total Scenic Impact" analyses used to summarize the visual impacts will greatly underestimate the project's overall "Scenic Impact." The FEIS must remedy these flaws in order for this analysis to be valid.

Approach #2 - Specific Viewpoint Analysis - Photo simulations and KOP: The visual assessment for Alternative 7 (revised preferred Alternative) in the Supplement to the DEIS (November 2015) appears to be a proxy subtractive mathematical exercise based on the original analysis used in the DEIS issued in September 2015[31]. From the many photographs taken by the visual consultant, 65 scenes were selected for photo simulations in the DEIS[32] .

[31] "The Project design information used to create the simulations was provided by Northern Pass as a GIS shape file dated March 10, 2014", Section 2.4.5.3 Modeling the Project Structures at page 49. VISUAL IMPACT ASSESSMENT - A Technical Report for the Northern Pass Transmission Line Project- July 10, 2015

[32] 2.4.5.1 Selecting Photographs, page 48. Ibid.

0051-32 cont'd

0051-32 Continued

0051-33

Thank you for your comment. The commenter's opinion is noted regarding the analysis of scenic sensitivity. The rationale for scenic sensitivity ratings is described in Section 2.4.2.6 of the Visual Impact Assessment Technical Report.

0051-34

Thank you for your comment. The commenter's opinion is noted regarding the analysis of scenic impact. The rationale for scenic impact ratings is described in Section 2.4.2.6 of the Visual Impact Assessment Technical Report.

0051-35

Thank you for your comment. The final EIS and Visual Impact Assessment Technical Report have been updated to fully incorporate an analysis of Alternative 7 - Proposed Action. The visibility analysis for Alternative 7 used the new design information, including structure locations and heights. Seven new Key Observation Point (KOP) simulations have been added and evaluated to ensure that a range of representative conditions is presented along the corridor for all alternatives. Transition stations are visible in KOP CL-1 (for Alternative 2) and BT-1 (for Alternative 7). All 73 simulations have also been updated in the final EIS to reflect all the alternatives. The two primary methods are intended to be independent and to provide different approaches. The GIS landscape assessment presents an overall view, while the Key Observation Point (KOP) simulations represent a "worst-case" view for a range of landscape conditions. As such, these two approaches are not intended to be "integrated". The final EIS and the Visual Impact Assessment Technical Report have the same organization. The KOP analysis is presented in Appendix E to the EIS and Appendices A and B of the Visual Impact Assessment Technical Report.

The 65 original photo simulations were reduced to a subset of 15 Key Observation Points (KOP) photo simulations[33] intended to be representative of the impacts along the 180-190 mile corridor. Of these 15 KOP photo simulations, 9 are now moot due to the additional proposed burial, meaning only 6 are germane to Alternative 7 in the Supplement to the DEIS. This means that only 6 KOP photo simulations were used to assess 132 miles of overhead transmission line impacts. Furthermore, in many cases the tower type, height, and/or location of structures have changed since these photo simulations were done. In the DEIS and its Supplement there is only one KOP photo simulation or visual impact assessment of the above-to-below- ground transition stations. As proposed in Alternative 7, there will be 6 such structures, several which will be directly roadside and visually prominent. These transition stations are sizeable building and tower structures (80 feet in height, DEIS at 2.3.25).

In summary, the FEIS visual assessment needs to be overhauled. The FEIS must include a better visual impact analysis of the above-to-below ground transition stations, additional relevant photo simulations to be more representative of the 132 miles of the overhead corridor, use the greatly revised Project design information for both the ZVI and photo simulation analyses, and remedy the many flaws in the matrix used to derive the 'Scenic Impact' rankings. It also needs to coherently integrate the results from the two primary methods used – 'Big Picture GIS' and 'Specific Viewpoints'.

C. Historic and Cultural Resources and Section 106 Process

i) The draft Section 106 "Programmatic Agreement" timeline undermines the "avoid, minimize, mitigate" hierarchy that is central to the National Historic Preservation Act (NHPA), as well as NEPA. The evolving Section 106 "Programmatic Agreement" (PA) currently proposes a five-year timeframe for completing the Section 106 process. [redacted] Finalizing the PA would resolve the United States Department of Energy's (DOE) Section 106 process and allow for the completion of review of the project under the National Environmental Policy Act (NEPA). Similarly, as discussed below, the New Hampshire Site Evaluation Committee's (SEC) review of the project would be finished before the PA is fully implemented. Once DOE and the SEC complete their review and issue decisions on the project, the approved route for the proposed transmission line cannot be significantly changed without reopening the federal and state review processes.

Given that the single best method to avoid impacts on these resources is complete underground burial of the project in existing transportation corridors, application of this avoid, minimize, mitigate hierarchy would be moot if the project has already been approved by DOE and the SEC as proposed because 132 miles of above-ground transmission, and potentially some segments of the proposed buried route as well, cannot "avoid" having adverse impacts on historic and cultural resources. [redacted] In other words, you already know that adverse impacts on historic resources are likely if this project is constructed as proposed, and yet the draft timeline in the PA would take avoidance of those impacts off the table as a strategy.

ii). **There is a significant disjunction between the federal "Section 106" process for assessing impacts to historic and cultural resources, and the timeline for the NEPA and SEC processes.** With the April 4th, 2016 deadline for public comments on the DEIS, we assume that the DOE will shortly

[33] 2.4.6 Key Observation Points, page 51, Ibid.

0051-35 cont'd

0051-35 Continued

0051-36

Thank you for your comment. The redacted portion of the comments is related to a preliminary review draft document arising out of consultation with Section 106 Consulting Parties in accordance with 36 C.F.R. Section 800.2(c) and is not relevant to the EIS. The comment will be addressed through DOE's Section 106 process for the proposed Northern Pass project.

0051-37

The federal NEPA review, federal Section 106 of the National Historic Preservation Act of 1966 ("NHPA") process, and NH SEC process are separate, independent processes, each with its own schedule. DOE is coordinating its compliance with Section 106 and the applicable NEPA requirements in a manner consistent with 36 C.F.R. § 800.8 and, to the extent practicable, NEPA and NHPA: A Handbook for Integrating NEPA and Section 106. DOE's final EIS contains the appropriate level of information on cultural and historic resources, informed by DOE's Section 106 process to the extent possible, for the proposed Northern Pass project. Both the NEPA review and Section 106 process inform DOE's decision whether or not to issue a Presidential permit for the proposed Northern Pass project.

0051-36

0051-37

begin considering them, and presumably will issue a Final Environmental Impact Statement and decision within less than five years. But given the current draft Section 106 "PA" timeline, the DOE will be issuing the FEIS with incomplete information about impacts on historic resources. The NH Site Evaluation Committee, which must make a determination as to whether "*the site and facility will not have an unreasonable adverse effect on aesthetics, **historic sites**, air and water quality, the natural environment, and public health and safety*" (RSA 162-H:16, IV (c), emphasis added) before it can issue a certificate, is statutorily required to complete review of any application, and issue a decision, within 365 days of acceptance of an application (RSA 162-H:7,VI-d). The proposed extended timeline for the Section 106 process means that the DOE and SEC will not have the full benefit of considering information emerging from the Section 106 review and analysis, and leaves unanswered the question what information, other than that provided by the Applicants, the DOE and SEC will use to determine whether the Project's impacts on historic resources are or are not unreasonably adverse before issuing its decision.

This project was submitted to the DOE in 2010, more than 5 years ago. An extension of an additional 5 years for completion of the Section 106 process is unwarranted.

D. Socioeconomics – The socioeconomic analysis is one-dimensional relative to electric rates (e.g. at Section 2.5.2, Table 2.4; Socioeconomics Technical Report for the Draft Environmental Impact Statement) as it appears to only consider potential changes in wholesale electricity costs, not transmission costs. The FEIS should acknowledge the important fact that one factor contributing to the Northeast's well above-average energy rates is unfair transmission costs. The Federal Energy Regulatory Commission (FERC) has instituted a section 206 proceeding (Docket No. EL16-19-000), to determine why New England ratepayers are paying more for energy transmission than ratepayers in other parts of the country. In the FERC order issued on Dec. 28, 2015, FERC found that "ISO-New England's (ISO-NE) Transmission, Markets, and Services Tariff (ISO-NE Tariff) is unjust, unreasonable, and unduly discriminatory or preferential." They noted that the Regional Network Service (RNS) and Local Network Service (LNS) formula rates lack sufficient detail to determine how certain costs are derived and recovered, and, accordingly, FERC has established hearing and settlement procedures to develop just and reasonable rates – as well as to establish an effective date for ratepayer refunds. The cost of regional energy used to comprise sixty percent of our electric bill; now upwards of sixty percent of our electric bill is comprised of transmission and distribution costs. The massive build-out that the utilities have undertaken is driven in part by the high rate of return that transmission builders are guaranteed on a basically no-risk investment. With interest rates near zero, it's hard to justify guaranteed rates of return on transmission investments in the 9 to 12 percent range, paid for by ratepayers. This high rate of return makes this project very lucrative for Northern Pass, and it should be noted that Eversource/Public Service of New Hampshire is part of this FERC investigation. The FEIS must factor in transmission costs in any socioeconomic analysis as this Project is driven by profit rather than the public good, and these unfair regional transmission costs may be as or more important than recent natural gas price spikes impacts on overall electric rates as cited in the DEIS.

D. Wildlife Resources –This controversial Project has pursued an extremely convoluted process, with the original Application submitted in October 2010, major revisions in 2013, and most recently revised again in September 2015. As a result many of the data sources used in the DEIS are outdated. The DEIS Wildlife Resources analysis heavily relied directly and indirectly on the 2005 NH State Wildlife Action Plan[34] (NH SWAP). However, the NH SWAP was updated in 2015. The 2015 update includes a total of 169 species identified as Species of Greatest Conservation Need (SGCN), of which 27 species are listed as state endangered and 14 listed as state threatened. The 2005 Wildlife Action Plan listed 118 species as

[34] References cited in the Wildlife Technical Report for the Draft Environmental Impact Statement - July 20, 2015.

0051-37 cont'd

0051-37 Continued

0051-38

Thank you for your comment. The commenter is referred to The Socioeconomics Technical Report for the Final Environmental Impact Statement which relies, in part, upon detailed modeling conducted for the analysis by GE Energy Consulting. This modeling and analysis does include input parameters to evaluate the anticipated effects of transmission congestion, transmission losses and the specific costs associated with each. A summary of this analysis is provided as Section 4.1.2 of the EIS. These analyses do not attempt to determine impacts to individual rate payers or energy prices at the rate payer level. The potential impacts to individual rate payers or energy prices at the rate payer level by distribution utilities are decided by the New Hampshire PUC and beyond DOE's scope of analysis. Rather, data is provided for the anticipated changes in wholesale electricity expenditures across both New Hampshire and the ISO-NE region. The changes in wholesale electricity expenditures aggregate individual residential, and commercial consumers of electricity.

0051-38

0051-39

Thank you for your comment. DOE obtained and incorporated the NH SWAP (2015) into the wildlife analysis presented in the EIS. Both the final EIS and the Wildlife Technical Report have been updated to show the findings using the new data. Because the Karner blue butterfly is listed as an endangered species under the Endangered Species Act (ESA), the USFWS has jurisdictional responsibility for the species. As required under Section 7 of the ESA, the Department of Energy initiated formal consultation with the USFWS regarding the endangered Karner blue butterfly. (see: http://www.northernpasseis.us/consultations/section-7/) When the USFWS issues its Biological Opinion, it will provide the specific avoidance and mitigation measures for the Karner blue butterfly that the Applicant will be required to follow.

0051-39

SGCN, and though 13 of those species were deemed recovered enough or stable enough not to be included on the 2015 list, new additions caused the overall number of SGCN to increase. The 2015 Wildlife Action Plan also identifies 27 distinct habitats that support both common species and SGCN, based on habitat types developed by the Northeast Terrestrial Habitat Classification and the Northeast Aquatic Habitat Classification. And it encompasses land use changes. The DEIS Supplement to the DEIS (November 2015) should have acknowledged and incorporated the changes to the updated NH SWAP, but failed to do so (Supplement to DEIS, November 2015, Section 4.11). The FEIS needs to update the analysis and models (e.g. NH Connectivity Model) derived from the 2010 NH SWAP[35], using the updated 2015 NH SWAP.

Alternative 7 in the DEIS Supplement (as analyzed by Alternative 2 in the DEIS) could impact the Karner Blue Butterfly, particularly in the Concord, NH sand barrens (Southern section), e.g. "*Based on these measures, Alternative 2, "May Affect, and is Likely to Adversely Affect" the Karner blue butterfly, depending upon completion of consultations with the USFWS and NHFG*." The remedies proposed in the Wildlife Technical Report are vague, without substantive detail, and mostly based on proposed future consultation w/ resource agencies. Much greater detail and specificity on avoidance and mitigation are needed in the FEIS, considering this is a Federally–listed Endangered Wildlife Species.

E. Wetlands –In its Application to the NH SEC[36], Northern Pass states that they may need to amend the wetlands impact totals since they have not identified all of the potential impact sites, including off ROW laydown and staging areas, and off ROW access roads, both of which could add significantly to the wetlands impact totals. It appears the DEIS may have the same issue—an underrepresentation of wetland impacts from the Project. If such is the case, the FEIS must also remedy this shortcoming in its final analysis.

The Appalachian Mountain Club appreciates the consideration given to the above comments.

Respectfully submitted,

Dr. Kenneth D. Kimball, Director of Research
Appalachian Mountain Club
PO Box 298
Gorham, NH 03581
603-466-8149
kkimball@outdoors.org

Susan Arnold, Vice President for Conservation
Appalachian Mountain Club
5 Joy Street
Boston, MA 01208
603-664-2050
sarnold@outdooors.org

Dated: April 4, 2016

[35]Ibid, Section 1.3 Methods
[36] http://www.nhsec.nh.gov/projects/2015-06/application/Volume-XXIX/2015-06_2015-10-19_nptllc_psnh_app_31_wetlands_rivers_streams_vernal_pools_resource_rpt_impact_analysis.pdf

0051-39 cont'd

0051-39
Continued

0051-40
Thank you for your comment. Estimated wetland impacts have been reviewed and, where necessary, revised. These estimates include access roads and laydown areas. Changes are reflected in Table 4-66 and the accompanying text in the final EIS, and throughout Section 3 of the Water Resources Technical Report. These revisions are based on information provided in the application for Presidential permit (October 2010), as amended (August 2015). Final wetland and waterbody impacts would be based on final project design and developed through the New Hampshire State Evaluation Committee review process as well as related federal and state wetland permitting processes.

0051-40

United States Department of the Interior
OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
15 State Street – Suite 400
Boston, Massachusetts 02109-3572

April 5, 2016

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ER 15/0426

Brian Mills
Office of Electricity Delivery and Energy Reliability
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

RE: COMMENTS
Supplement to and the Draft Environmental Impact Statement (SDEIS and DEIS)
Northern Pass Transmission Line Project, DOE/EIS-0463, Docket No. PP-371
Coos, Grafton, Belknap, Merrimack and Rockingham Counties, NH

Dear Mr. Mills:

The U.S. Department of the Interior (Department) has reviewed the Supplement to the Draft Environmental Impact Statement (SDEIS) for the proposed Northern Pass Transmission Line Project in Coos, Grafton, Belknap, Merrimack and Rockingham Counties, New Hampshire (NH). Northern Pass Transmission, LLC (Northern Pass) has applied to the Department of Energy (DOE) for a Presidential permit to construct, operate, maintain, and connect a 192-mile (309-km) electric transmission line across the United States (U.S.)/Canada border in northern NH. Northern Pass has also applied to the USDA Forest Service (FS) for a special use permit (SUP) authorizing Northern Pass to construct, operate, and maintain an electric power transmission line crossing portions of the White Mountain National Forest (WMNF). The Department's National Park Service (NPS) offers the following comments for your consideration.

The Appalachian National Scenic Trail (Trail), a 2,189-mile-long continuous footpath that traverses scenic, wooded, pastoral, wild, and culturally resonant lands of the Appalachian Mountains between Katahdin in Maine and Springer Mountain in Georgia, was conceived in 1921 and originally built and maintained by a consortium of agencies and private citizens. Congress officially recognized the national significance of the Trail and designated it a National

Scenic Trail in 1968, as one of two initial components of the National Trails System Act (16 U.S.C. 12 41, 1244(a).

In addition to the recognition of the Trail as a nationally significant recreational resource, the NPS is in the process of evaluating the Trail for listing in the National Register of Historic Places (NRHP). The NPS began this evaluation process in 2011 and has completed a Multiple Property Documentation Form (MPDF). The NPS has found the Trail to be eligible as outlined in the MPDF, which will guide nominations for Trail segment listings by state. Contributing resources include the Trail itself, viewpoints and vistas, and Trail facilities. Cultural landscapes the Trail passes through and the Trail setting are vital elements of its national significance as a recreational resource and to its NRHP eligibility.

The NPS is charged under the National Trails System Act with administration of the Trail in consultation, where applicable, with the FS. The Trail is currently protected along more than 99 percent of its course by federal or state ownership of the land or by rights-of-way. The Trail is a unit of the NPS. The NPS transferred some administrative responsibilities for certain segments of the Trail near FS boundaries to the FS, including federally-owned lands acquired for the Trail within the Project area in New Hampshire. Certain responsibilities were retained by NPS. Recognizing the Trail's unique history and traditions, management of the Trail is carried out through a Cooperative Management System as defined in the 1981 Appalachian Trail Comprehensive Plan. The Appalachian Trail Conservancy (ATC), Trail Clubs, government and non-profit partners, and countless volunteers work together to protect and maintain the Trail.

The Northern Pass Transmission Line Project SDEIS proposes seven main alternatives, including the no action alternative, with a number of sub-alternatives, for a total of twelve distinct alternatives. All proposed routes would cross the Trail within the Central Section of the Project. Each alternative would cross the Trail once at one of three potential locations: where the Trail crosses NH 112; I-93; or the existing Public Service of New Hampshire (PSNH) transmission line. Every alternative would involve some degree of impact to the Trail and its users. A description of each Trail crossing location and associated alternatives follows, together with NPS concerns.

Trail Crossing at NH 112: Alternatives 4b, 4c, 5b, 5c, 6b, and 7 - Proposed Action

Under each of the alternatives listed above, the proposed transmission line would cross the Trail along NH 112 at Kinsman Notch in the WMNF. The transmission line would be built underground in the roadway corridor in this area. The Trail crossing is perpendicular to NH 112 and the proposed transmission line. Impacts to the Trail would occur from underground construction at this location. All these alternatives would result in short term impacts to the Trail and hiker experience during construction, maintenance, or emergency repair of the line. Blasting may be required for the installation of cable at this location.

0052-1

0052-1
Thank you for your comment. The commenter's concern regarding the National Register of Historic Places ("NRHP") listing status of the Appalachian National System Trail ("ANST") is noted. DOE is addressing potential adverse effects to historic properties, including cultural landscapes listed in the National Register of Historic Places (NRHP) or eligible for listing in the NRHP, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations. The ANST is NRHP-eligible, and is analyzed as a historic property in the EIS (Sections 4.3.8 and 4.5.8 of the final EIS have been updated to clarify the eligibility status of this resource). The status of the ANST is addressed through the Section 106 programmatic agreement (see Section 1.6 and Appendix K of the final EIS). The National Park Service ("NPS") is participating in DOE's Section 106 process and will keep DOE apprised of the status of the NRHP eligibility review for the NH portion of the ANST.

0052-2

0052-2
Thank you for your comment. Impacts to recreation trails and trail crossings are discussed in Section 4.1.3 of the EIS, and more specifically with respect to the ANST in Sections 4.3.3 and 4.5.3.

- **Alt 5b:** Table 2-9 Land Use Summary Impact Table on page 2-46 and 4-50 of the DEIS discloses that Alternative 5b is inconsistent with the WMNF Forest Plan Management Area (MA) 8.3 direction for the Trail. Scenery Management Standard S-1, which requires management for scenery in accordance with specific Scenery Integrity Objectives (SIO), would not be met. A Forest Plan amendment would be needed to make the Northern Pass transmission line compliant with the Forest Plan which would result in degradation of the scenery management standard which was put in place to protect the scenic resources of the Trail. As there are other viable alternatives, NPS does not support adoption of this alternative.

There would also be long-term visual impacts to the Trail from the sections of aboveground transmission line which would be seen from the Trail.

- **Alt 5b:** 4.5.1.8, beginning on page DEIS 4-374, acknowledges that overhead portions of this alternative in the WMNF would result in long-term visual impacts and would require a Forest Plan Amendment for Management Area 8.3 –Appalachian National Scenic Trail, Scenery Management S-2. S-2 states: "All management activities will meet a SIO of 'High' or 'Very High'" (White Mountain National Forest Land and Resource Management Plan, USDA Forest Service, September, 2005, pg. 3-52). As there are other viable alternatives, NPS does not support adoption of this alternative..

- **Alts 5b, and 5c** It is disclosed in the DEIS that the Trail would experience long-term visual impacts under these Alternatives. The types of impacts would be similar to those under Alternative 2 but, because the transmission cable would be buried for a portion of the Central Section, visual impacts would be less than those that occur under Alternative 2.

Trail Crossing at I-93: Alternatives 4a, 5a, 6a

Under each of the alternatives listed above, the proposed transmission line would cross the Trail at I-93 in Franconia Notch State Park. The transmission line would be built underground in the roadway corridor in this area, but not in the median. The Trail crossing is perpendicular to I-93 and the proposed transmission line. Impacts to the Trail would occur from underground construction. It appears that blasting would likely be required for cable burial at this location. Under all these alternatives, there would be short term impacts to the Trail and visitor experience from construction and long-term impacts from limited aboveground structures and vegetation management.

- **Alt 5a:** Aboveground portions of 5a outside the WMNF would be visible from the Trail, adversely impacting visitor experience. The types of impacts would be similar to those under Alternative 2 but, because the transmission cable would be buried for a portion of the Central Section, visual impacts would be less than those that occur under Alternative 2.

0052-3

0052-3 Thank you for your comment. Commenter's opinion regarding Alternative 5b is noted. As discussed in Section 4.5.1.8 and Appendix C of the EIS, Alternative 5b would be inconsistent with MA 8.3 Scenery Management Standard S-1. Forest Plan amendments would be required should Alternative 2 or 5b be selected. These potential amendments are described in Section 2.3 and Appendix C of the EIS. Section 2.3.8.4 discusses the Forest Plan amendments required under Alternative 5b. Scenic Integrity Objectives are discussed in Section 3.5.1.4 of the EIS.

0052-4

0052-4 Thank you for your comment. Commenter's opinion regarding Alternative 5b is noted. As discussed in Section 4.5.1.8 and Appendix C of the EIS, Alternative 5b would be consistent with MA 8.3 Scenery Management Standard S-2. Forest Plan amendments would be required should Alternative 2 or 5b be selected. These potential amendments are described in Section 2.3 and Appendix C of the EIS. Section 2.3.8.4 discusses the Forest Plan amendments required under Alternative 5b. Scenic Integrity Objectives are discussed in Section 3.5.1.4 of the EIS.

0052-5

0052-5 Thank you for your comment. Potential short- and long-term impacts to the recreation experience on the ANST from all alternatives are analyzed in Sections 4.1.3, 4.3.3, and 4.5.3 of the EIS. Overhead portions of Alternatives 5b and 5c could be visible from the ANST, resulting in visual impacts (see Sections 4.3.1 and 4.5.1 of the EIS). Alternatives 4a, 5a, and 6a would cross the ANST as underground transmission cables in the I-93 corridor. The Project would be buried off the side of the shoulder, not the median. All impacts would occur at the existing road crossing, where the recreational experience is currently impacted by the presence of traffic and road infrastructure. It is not known whether blasting would be required at this particular location, this level of site-specific review is more appropriately addressed in the New Hampshire Site Evaluation Committee review process. Measures outlined in Appendix H of the EIS would avoid and minimize impacts to the extent possible. For overhead

0052-6

0052-6 transmission line construction, blasting activity would be limited to the small volume of material needed to be removed to fit and plumb the pole structures. Only small charges would be required for the installation of transmission structures. The Applicant has committed to preparing a blasting plan to identify appropriate procedures and best management practices (BMPs). The blasting plan would reflect this limited use of charges. Specific impacts (short- and long-term) from blasting would be addressed

during subsequent siting processes (e.g., New Hampshire Site Evaluation Committee review process).

0052-6
Thank you for your comment. The potential visual impacts of Alternative 5a in the WMNF are analyzed in Section 4.5.1.7 of the EIS. Impacts to the recreation experience from overhead transmission lines are described in Section 4.1.3.2 of the EIS. A comparison of impacts among all alternatives is presented in Section 2.5 of the EIS.

Trail Crossing at PSNH Transmission Line: Alternatives 2 and 3

Under each of the alternatives listed above, the proposed transmission line would cross the Trail at the PSNH transmission line in the WMNF within Forest Plan Management Area (MA) 8.3 in the Kinsman Range. The existing PSNH transmission line is maintained in an open vegetative condition, while the surrounding area is forested.

- Under **Alternative 2**, the proposed Northern Pass line would be built above ground in the existing 110-foot-wide PSNH transmission route corridor in the Central Section. However, it is not entirely clear whether or not this would require some widening of the existing transmission line corridor in certain areas within the Central Section of the Project to accommodate the larger Northern Pass line. Page 4-278 under Geology and Soils for Alt 2 in the Central Section states, "Expansion of the transmission route would require the removal of overhead vegetation and soil disturbance, which could expose soils to additional environmental considerations such as exposure to erosion from additional precipitation or wind." The degree of expansion of the route corridor should be clarified.

- **Alternative 2:** Potential short-term closures of the Trail are mentioned at Section 4.3.3.2. on page 4-184 of the DEIS. Alternatives to closing the Trail, such as temporary re-routes should be considered, depending on the length of any necessary closures. Additional comments regarding minimization and mitigation of impacts to hikers during construction are outlined further below.

- **Alternative 2:** The DEIS discloses that views from South Kinsman Mountain on the Trail looking down into the Bog Pond area (KOP LI-5) would be adversely impacted by the addition of another transmission line next to the existing PSNH transmission route. Trail visitors are likely to have high sensitivity to the adverse change is this view. In addition, the simulated view of the proposed line at the existing PSNH transmission route crossing of the Trail indicates a large visual change that is likely to be considered unreasonably adverse by even a casual observer.

- **Alternative 2:** Table 2-9 Land Use Summary Impact Table on page 2-46 and 4-50 of the DEIS discloses that Alternative 2 is inconsistent with the WMNF Forest Plan Management Area (MA) 8.3 direction for the Trail. Scenery Management Standard S-1, which requires management for scenery in accordance with specific Scenery Integrity Objectives (SIO), would not be met. A Forest Plan amendment would be needed to make the Northern Pass transmission line compliant with the Forest Plan which would result in degradation of the scenery management standard which was put in place to protect the scenic resources of the Trail. As there are other viable alternatives, NPS does not support adoption of this alternative.

0052-7

0052-7
Thank you for your comment. Alternative 2 does include vegetation removal to widen the existing PSNH corridor in order to accommodate the Project, and this was analyzed in the EIS. At the ANST crossing it is anticipated that the existing corridor would be widened by approximately 40 feet on either side. Alternative 3 would not require any widening of the existing cleared corridor. Impacts to the ANST under Alternatives 2 and 3 are analyzed in Section 4.5.3 of the EIS, including direct impacts resulting from vegetation removal.

0052-8
Thank you for your comment. Commenter's opinion regarding Alternative 2 is noted. As discussed in Section 4.5.1.2 and Appendix C of the EIS, Alternative 2 would be inconsistent with MA 8.3 Scenery Management Standards S-1 and S-2. Forest Plan amendments would be required should Alternative 2 or 5b be selected. These potential amendments are described in Section 2.3 and Appendix C of the EIS. Section 2.3.2.4 of the EIS discusses the Forest Plan amendments required under Alternative 2. Scenic Integrity Objectives are discussed in Section 3.5.1.4 of the EIS.

0052-8

- **Alternatives 2 and 3:** Table 3-36 on page 3-86 indicates these two alternatives would impact the highest number of acres in conservation or National Forest System land in the Central Section of the Project.

- **Alternative 3:** Under Alternative 3, the proposed Northern Pass line would be built underground in the existing PSNH transmission route in the Central Section. However, the DEIS points out that this alternative may be challenging to implement due to the need to amend numerous easements with individual land owners. As there are other viable alternatives, NPS does not support adoption of this alternative.

Recommendation for Alternative 7

Under all alternatives, there would be short term impacts to the Trail and visitor experience during construction. There would also be longer term impacts to the visitor experience as portions of the line constructed aboveground would be seen from the Trail in numerous locations.

The NPS is not a proponent of the Northern Pass transmission line. However, of the action alternatives analyzed in the DEIS and SDEIS, i.e. not including the No-Action Alterative, it appears that the Proposed Action - Alternative 7, would result in the least adverse impact to the Trail resources and visitor experience. Alternative 7 route north of its Trail crossing remains further from the Trail than Alternatives 4b, 4c and 6c, construction impacts are likely to be of a shorter duration on NH 112 than when crossing I-93, and there are better options for temporary re-routing of the Trail at NH 112.

All of the action alternatives appear better than Alternative 2, the previous proposed action, in protecting the values for which the Trail was designated. Constructing Northern Pass underground in the area of the Trail will go a long way to protect the Trail and the experience Trail users expect.

However, additional information regarding short term construction impacts and proposed minimization and mitigation methods at the proposed Trail crossings is needed to better inform the comparison of alternative impacts to the Trail. These specific measures for the Trail should be disclosed in the Final EIS (FEIS) and Record of Decision. NPS is interested in helping to address safe passage throughout construction that minimizes impacts to hikers as much as possible.

Recommended Corrections and Additional Analysis Prior to the Final EIS

- **Section 3.3.3 RECREATION** (page 3-81 of the DEIS): The Trail should be listed as a recreational resource in the Central Section.

0052-9

0052-10

0052-11

0052-9
Thank you for your comment. The commenter's opinion regarding Alternative 3 is noted. Section 4.3.6.3 of the EIS discusses the easement negotiations with each individual land owner that may be required to implement Alternative 3.

0052-10
Thank you for your comment. Potential short- and long-term impacts to the recreation experience on the ANST from Alternative 7 - Proposed Action are analyzed in Section 4.5.3.12 of the final EIS. A summary comparison of impacts to all resources resulting from all alternatives is presented in Section 2.5 of the EIS. Appendix H of the final EIS has been updated to include additional measures intended to minimize impacts at the ANST crossing. Further, specific methods to minimize or mitigate effects to the ANST and hikers during construction would be part of any special use permit issued by the Forest Service if the decision is to issue such a permit. The USFS would work with the NPS to ensure safe passage of hikers.

0052-11
Thank you for your comment. The ANST is listed as a recreational resource for the Central Section under several of its trail segments: Beaver Brook Trail, Cascade Brook Trail, Franconia Ridge Trail, Garfield Ridge Trail, Kinsman Ridge Trail, and the Liberty Spring Trail (see Section 3.3.3 of the EIS).

Section 4.3.8 HISTORIC AND CULTURAL RESOURCES (in the Central Section of Northern Pass, beginning on page 4-224 of the DEIS): All the action alternatives entail crossing of the Trail. However, discussion of the Trail's evaluation for NRHP eligibility, location within the Area of Potential Effect, and potential impacts currently only occurs under Alternatives 2, 3, 4a, 4b, and 6a. Since the Trail is specifically mentioned in these alternatives as a potentially affected cultural resource, we recommend doing the same for the other alternatives within this section to avoid any potential confusion.

- **Visual Impacts:** It is difficult to discern potential visual impacts to the iconic and expansive views on the Trail at Mount Lafayette based solely on the simulation provided in the DEIS from KOP FR-2, which depicts a 37° view toward the Southwest. We recommend preparing an additional simulation looking toward the northwest and Alternatives 5a, 5b, and 5c which are proposed to be built above ground along the PSNH transmission route at varying lengths from south of Project Milepost 90 (5b) north to near Milepost 10.

The NPS found it quite difficult to review the two-volume DEIS and SDEIS to assess impacts to the Trail. As was done for the WMNF, it would have been helpful to readers to present a separate section on the Trail within the Central Section of the DEIS. This would also serve to clear up confusion about the specific measures proposed to be implemented to protect the Trail and its users from adverse impacts as noted above.

The NPS appreciates the consideration of alternatives that utilize existing rights-of-way and underground cables. Given the tremendous significance of the Trail, the NPS encourages careful consideration of all comments received on the DEIS/SDEIS regarding potential impacts to the Trail and ways to avoid, minimize, and mitigate impacts prior to making a decision on Northern Pass's application.

Thank you for the opportunity to review and comment on this project. For questions or additional information regarding these comments, please contact Mary Krueger, Energy Specialist at 617-223-5066 or mary_c_krueger@nps.gov. Please contact me at (617) 223-8565 if I can be of further assistance.

Sincerely,

Andrew L. Raddant
Regional Environmental Officer

CC: Mr. Ron Tipton, Executive Director/CEO ATC
Hawk Metheny, New England Regional Director ATC
Susan Arnold, Vice President for Conservation AMC

0052-12

0052-12
Thank you for your comment. Section 4.3.8 in the EIS has been updated to reflect that the range of reasonable alternatives analyzed in the EIS all cross the Appalachian National Scenic Trail ("ANST"). Additionally, the relevant portions of Sections 2 and 3 of the Cultural Resources Technical Report have been revised to reflect the clarifying changes.

0052-13

0052-13
Thank you for your comment. Views from the Appalachian National Scenic Trail (ANST) and other high peaks are represented among the photo-simulations and Key Observation Points (KOPs). While no additional simulations have been prepared for views in the WMNF in response to this comment, current simulations are representative of views from the trail. Visual impacts to the Appalachian National Scenic Trail (ANST) are analyzed in Section 4.5.1 of the EIS. Appendix H of the final EIS has been updated to include additional measures intended to minimize impacts at the ANST crossing.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9222

Date Entered: Apr 4, 2016

Source: Website

Topics: Purpose and Need, Alternatives, Health and Safety, Vegetation, Viewshed/Scenery, Private Property/Land Use, Taxes, Historic/Cultural, Economic, Tourism, Quality of Life, Noise, Forest Service Lands

Name: Kathryn Ting

Organization: Franconia Farms

Email: kpalmer2005@gmail.com

Mailing Address: 1900 Easton Road

City: Franconia

State: NH

Zip: 03580

Country: US

Comment:

Comments on the Draft Northern Pass Transmission Line Project Environmental Impact Statement (EIS) and Supplement

Key Recommendation 1: Alternatives which involve siting the Northern Pass transmission line onto Route 116 (4B, 4C, 5B, 5C, 6B and 7) should be dropped. The underground route around the White Mountain National Forest along I-93 should be maintained.

Alternatives 4B, 4C, 5B, 5C, 6B and 7 include burial of the line on Route 116 from Franconia to Route 112. This section of Route 116 is a narrow, two-lane road running through the Easton Valley. It is the only section of Route 116 that has been designated a Scenic Byway under New Hampshire statute (RSA 238:19), the intent of which is to "promote retention of rural and urban scenic byways, support the cultural, recreational and historic attributes along these byways, and expose the unique elements of the state's beauty, culture and history." The road derives this designation in large part from its passage down Franconia's historic residential street and from the valley's forest and pastoral scenery, which includes many historic homes, farms and inns. These characteristics would be severely damaged by the proposed burial of Northern Pass on Route 116.

Putting aside the legal and regulatory question of whether New Hampshire's existing highway rights of way can be used for installation of the Northern Pass transmission line, physical constraints prohibit the burial of the line on Route 116. The draft EIS[i] describes direct burial of the line as follows:

Portions of the Proposed Action that are proposed to be buried along roadways in a trench (direct burial) are assumed to be buried beneath the road surface or shoulder. 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. …
The depth of the direct buried cable would be approximately 4 feet (1 m) below grade; the depth of the duct bank would vary based upon its configuration and a minimum of 3 feet (1 m) of cover would exist over the duct bank; the depth of the HDD sections would be approximately 65 feet (20 m) below grade at its maximum depth; and the depth of the jack & bore would be approximately 10 to 15 feet (3 to 5 m) below grade. Burial depths would be determined based on site-specific factors.

The draft EIS also described the cable splicing process as follows:

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.

Because this section of Route 116 is essentially a river valley, draining a huge watershed, the shoulder area of the roadway is narrow and has many abrupt drop offs. This means that the shoulder area is less than 10 feet wide for a significant length of the road. In addition, the entire roadway is only a maximum of 49.5 feet wide, and as narrow as 33 feet (2 rods) in some areas. Information on the burial of transmission lines presented in other EIS's prepared by DOE indicate the need for a staging area for construction of a minimum of 20 feet, and in some cases, there is mention of the need for 'deviation areas' where the existing ROW is insufficient to build. Route 116 cannot accommodate such a large construction project. Previous EIS's also state the need to clear the ROW of trees over 20 foot tall within 12 feet of the underground wires. Any requirement to clear trees would have a negative and irreversible impact on the scenic, cultural and aesthetic character of Route 116.

With respect to splicing, information presented in the draft EIS (above) is contradictory to information presented by the applicant's representatives. In an October 19, 2015, meeting with the Franconia Board

0053-1

0053-1
Thank you for your comment. The EIS analyzes in detail several alternatives that involve underground cable in roadway and interstate corridors, including Alternatives 4a, 4b, 4c, 5a, 5c, 6a, 6b, and 7. The regulatory framework governing utilities in roadway corridors is discussed in the land use section of the EIS, see Section 3.1.6.4. The impact analysis in the final EIS has been updated with new information about Project construction under all alternatives; it is assumed that the underground cable and splice vaults would be generally be installed beneath the shoulder or at the edge of the road surface (see Section 2.3.12.5 of the EIS). 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 (see Section 2.3.12.5 of the EIS). The impact analysis throughout the EIS reflects these revised construction details. Impacts potentially resulting from construction of the Project underground in NH Route 116 are discussed for all resources under Alternatives 4b, 4c, 5b, 5c, 6b, and 7 (see Section 4.3 of the EIS). In particular, potential impacts to vegetation are discussed in Section 4.3.12 and visual resources in Section 4.3.1. Section 2.3 of the final EIS has been updated to reflect the most recent Project design information available from the Applicant. This includes a new discussion of splice vaults that would be required rather than splice pads. Alternative underground routes utilizing railroad corridors were considered and eliminated from further detailed analysis for several reasons that do not apply to underground routes in roadways, such as setback requirements from tracks (see Section 2.4.2 of the EIS).

of Selectman, Northern Pass representatives stated that the company would build 10 ft by 30 ft concrete splicing vaults which would remain in place for the life of the project (and beyond.)

Furthermore, the draft EIS notes that alternatives which utilize Route 116 and Route 112 would put the transmission line within 50 feet of the front doorsteps of over 800 New Hampshire households. Proximity to houses and people would not be an issue on I-93.

Finally, the constraints described above are very similar and in the majority of cases identical to those described with the respect to the use of railroad rights of way, which the DOE rejected as a viable alternative. This gives additional argument to drop the use of Route 116.

DOE's argument for not considering railway rights of way as an alternative route are as follows:

DOE determined that this alternative was not reasonable due to space constraints within the narrow rail easements (portions which are 66 feet [20 m] wide). With the minimum required 25-foot (8 m) offset from the centerline of the tracks, there would be approximately 8 feet (2 m) of width potentially available for the Project. The trench necessary for the lines would require 8 to 10 feet (2 to 3 m) of width plus sufficient room for construction equipment and materials (approximately 30 feet [9 m]). Therefore, the width of the railroad ROW would be insufficient to accommodate the Project in many instances. As a result, Northern Pass would need to acquire additional width to meet NHDOT regulations for separation of utilities from railroad tracks and to accommodate actual construction. A physical review of these corridors indicated that many property owners adjacent to the railroad corridor have constructed structures (e.g., fences/walls) along one or both edges of easement such that additional width may not be available. Based on discussions with NHDOT, these corridors also contain stone box culverts which are historic/cultural resources that would create challenges for siting. Furthermore, in many cases the railroads themselves constitute historic resources. Finally, according to NHDOT, for segments owned in fee by the State, there may be limitations on how the land may be used (for example the only allowed use may be for rail transportation).

Given these factors, alternatives to route the Northern Pass onto Route 116 should be dropped in favor of those using the I-93 corridor.

Key Recommendation 2: Discussion should be included within the main text of the EIS of the findings and recommendations of the New Hampshire Commission to Study the Feasibility of Establishing Energy Infrastructure Corridors Within the Existing Transportation Rights-of-ways.

The New Hampshire Commission to Study the Feasibility of Establishing Energy Infrastructure Corridors Within the Existing Transportation Rights-of-ways (the Commission), formed by the New Hampshire legislature in 2012 under New Hampshire statute (RSA 362:G), was charged with studying and reporting on the "feasibility of using state-owned transportation corridors for energy infrastructure and, if the commission finds the use of transportation corridors feasible for such use …(identifying) which corridors are most appropriate for specific utility infrastructures."

The Commission included *inter alia* members of the New Hampshire Senate and House of Representatives, as well as the Commissioner of the Department of Transportation, Chairman of the Public Utilities Commission, Commissioner of the Department of Resources and Economic Development, Commissioner of the Department of Environmental Services, and the Director of the Office of Energy and Planning or their designees.

Among the findings of the Commission were:

0053-1 cont'd

0053-1
Continued

0053-2
Thank you for your comment. The findings of the Commission established by SB 361 relating to the feasibility of establishing energy infrastructure corridors within existing transportation rights-of-way were considered in the preparation of the EIS. Consistent with the findings of the Commission, constraints related to use of existing road corridors for burial of the transmission line are discussed in the EIS, as all action alternatives include at least a portion of underground cable in roadway corridors. The text notes that permit and permissions for such use would be required from federal, state, and local agencies (e.g., Section 3.1.6.4). The Applicant is responsible for securing all necessary rights and land use approvals to utilize any route permitted by SEC.

0053-2

"The vast majority of state-maintained highways are constructed on easement rights-of-way. In such cases the State does not own the underlying land in fee. In fact, prior to 1992 land acquired via eminent domain (except for Limited Access Right of Way [i.e. interstate and divided highways]) were required to be taken as an easement for transportation purposes only. The use of these easement rights-of-way by the NH Department of Transportation (DOT) is restricted to construction, maintenance and operation of the roadway, which may impair their ability to identify these as potential locations of energy infrastructure corridors without further legislation." And that "Limited access rights-of-way (interstate, turnpike and divided highways) are the only roadways where the state owns the underlying land in fee" and "These limited access rights-of way could be available for use as energy infrastructure corridors."

The Commission's final report goes on to state that:

"For the purposes of this report, the DOT has identified four highway corridors as possible energy infrastructure corridors. The DOT considered several factors in identifying these corridors, including but not limited to:

- a continuous corridor of significant length that is owned in fee by the state
- a corridor that provides connectivity with adjoining states
- corridors that are wide and well-defined
- corridors which are relatively free of existing energy infrastructure.

The corridors identified include I-89 (between the intersection of I-93 and the Vermont border); I-93 (between the Massachusetts border and the Vermont border); I-95 (between the Massachusetts border and the Maine border); and NH Route 101 (between the intersection of I-93 and the intersection of I-95). These State-owned transportation rights-of-way, and potentially others, could be used to locate underground energy transmission corridors. "

<u>The report of the Commission should constitute a critical input to the EIS process.</u>

Key Recommendation 3: All visual impact values should be reported for all alternatives. Given the extremely long length of the project, reporting of only mean values is meaningless and significantly understates the visual impact of the project and is limited in utility for comparing various alternatives.

Key Recommendation 4: Any changes to the technical specifications for the project construction from those presented in the draft EIS should be made available to the public for comment.

Additional Comments:

Additional Comment 1: The connection between the import of Canadian hydropower and reduction in total greenhouse gas emissions needs clarification.
In the section entitled "Low Carbon Electricity Supply", the connection between Canadian hydropower for electrical needs and reduction in total green house gas emissions is fuzzy and vague. In contrast, the EIS for Vermont's NE Clean Power Initiative contains more specific information, stating that electricity generation accounts for 5 percent of the green house gas generation in the state of Vermont. More effort should be made to roughly quantify the expected impact of Canadian hydropower and of this project specifically on green house gas emissions. In addition, the following statement is made

0053-2 Continued 0053-2 cont'd

0053-3
Thank you for your comment. A summary index is one method of disclosing impacts of a project of this scale. The Visual Impact Assessment Technical Report uses three summary indices for the various indicators: the area of visibility in square miles, the average rating for those areas with potential visibility, and the rating aggregate (i.e., area multiplied by average rating), which is comparable to a sum of values for cells with potential visibility. See Section 5 of the Visual Impact Assessment Technical Report. The photo-simulations and viewpoint analyses contained in the EIS and Visual Impact Assessment Technical Report contribute site-specific analysis to complement the "big picture" landscape assessment.

0053-4
Thank you for your comment. The final EIS has been updated to include technical specifications and construction details for Alternative 7, the revised Proposed Action (see Section 2.3.12 of the final EIS). A description of this alternative was also presented in Section 3 of the supplement to the draft EIS which was available for public comment.

0053-5
0053-3 Thank you for your comment. Section 3.1.10.1 of the EIS describes existing sources of GHG emissions in the ISO-NE region. Section 4.1.10 of the EIS includes an analysis of greenhouse gas emissions potentially resulting from the Project.
0053-4 This analysis discusses how the electricity provided to the region from the Project could result in a decrease in the utilization of existing fossil fuel-driven electricity generation across ISO-NE, which could result in a decrease in GHG emissions. No updates have been made to the final EIS in response to this
0053-5 comment. Potential impacts in Canada from the construction and operation of electricity infrastructure, including hydropower generation and transmission in Canada, are beyond the scope of this NEPA analysis. NEPA does not require an analysis of potential environmental impacts that occur within another sovereign nation that result from actions approved by that
0053-6 sovereign nation. Additionally, the construction and operation of Hydro-Quebec power generation projects and electricity transmission line projects in the bulk Hydro-Quebec system will occur regardless of and independent to whether DOE issues a Presidential permit for the proposed Northern Pass Project

international border crossing. For these reasons, potential environmental impacts in Canada are not addressed in this EIS. Section 1.5.4.1 of the EIS has been updated in response to this comment

0053-6
Thank you for your comment. The following language has been added to Section 1.5.7 of the Air Quality and Greenhouse Gas Technical Report: "The NH Climate Action Plan established the goal to "achieve a long-term reduction in greenhouse gas emissions of 80 percent below 1990 levels by 2050, and included the Task Force Recommendation to "Enable Importation of Canadian Hydro and Wind Generation (EGU 2.6)"."

regarding the role of Canadian hydropower in New Hampshire's Climate Action Plan, i.e., "The New Hampshire Climate Action Plan includes a number of recommendations designed to "'achieve a long-term reduction in greenhouse gas emissions of 80 percent below 1990 levels by 2050,' including the importation of Canadian hydropower (NHDES 2009)." This statement should be replaced with the actual relevant verbage from the State's Climate Action Plan.

Additional Comment 2*:* Northern Pass' original proposal to construct helipads in the White Mountain National Forest should be rejected. The draft EIS states that "Construction of the Proposed Action in the WMNF would require the construction of a helicopter landing area (helipad). Two sites have been proposed for this facility near MP 97, each less than 1 acre (0.4 ha) in size. It is anticipated that the helipad would be established for construction and maintained through the duration of the operation of the Project to facilitate maintenance activities. Construction of the helipad would require vegetation removal and ground disturbance."

The operation of helipads in the White Mountain National Forest would have an extreme negative impact on those living in and around the WMNF, as well as visitors to the WMNF. This proposal should be dropped, and the applicant required to use commercial aviation facilities.

Additional Comment 3: The EIS should include at least one underground alternative utilizing Interstate 91.

Additional Comment 4: The EIS should include the expected impact of projects which have already received Presidential Permits or on which the DOE has already made recommendations on the expected importation of hydropower as well as on the diversification of energy sources for the Northeast United States.

Additional Comment 5: The EIS should include at least one alternative using a lower voltage line or additional towers to lower the tower height below tree level. One common concern with the proposed project is the height of the towers – which according to the Applicant is mandated by the high voltage and number of towers.

Additional Comment 6: The section on the impact on tourism is weak and irrelevant to the concerns voiced by North Country residents. Some effort should be made to quantify the impact that the proposed project would have on tourism to the northern part of the state. In assessing the impact on tourism, it is important to note that the impact of the project is represented by the difference between what tourism levels would have been absent the power line versus tourism levels with the power line. Observations that tourism levels increased even though transmission facilities were built do not assess the impact of the project on tourism. Lacking specific studies, reference could be made to public comments from owners of and/or workers in tourist-related businesses is this area. Particular attention should be paid to the fact that North Country residents have fewer economic options than do residents in other parts of the state. Demand for second homes in areas with power lines versus without (all other things being equal) might also be a good indicator of the impact of energy projects on tourism.

Additional Comment 7: More quantified data of the expected impact of noise from the power line in the aboveground areas should be included. This is a serious impact, especially in environments like northern New Hampshire, which silence, especially at night, is a natural asset.

0053-6 cont'd

0053-6 Continued

0053-7

Thank you for your comment. The design of Alternative 2 has been modified since the publication of the draft EIS and a helipad would no longer be required for construction.

0053-7

0053-8

Thank you for your comment. In response to comments received on the draft EIS, DOE considered an alternative border crossing in Vermont, specifically identified as a border crossing at Derby Line, VT that would utilize I-91. DOE determined that this alternative is not reasonable. Section 2.4.17 of the final EIS has been added to reflect consideration of this alternative and DOE's determination.

0053-8

0053-9

Thank you for your comment. Appendix D of the EIS lists past, present, and reasonably foreseeable future projects considered in the analysis of cumulative impacts in Chapter 5 of the EIS. This includes other regional energy projects that may or may not require (or have received) Presidential permits. Chapter 5 of the EIS includes analysis of potential cumulative impacts to the ISO-NE grid (see Section 5.1.2 of the EIS).

0053-9

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0053-10

Thank you for your comment. In response to concerns about the visual impact of the proposed towers, several fully underground alternatives are analyzed in the EIS (Alternatives 3, 4a, 4b, and 4c). Additionally, the height, location, and voltage of proposed lines and towers is driven by technical constraints that preclude an alternative with lower towers while still meeting the purpose of the Project to deliver 1,200 MW of power.

0053-11

0053-11

Thank you for your comment. All resources analyzed in the EIS documents strive to rely upon available published data and/or data which was specifically collected for this analysis. An extensive literature review did not reveal any published studies evaluating the effects of developed transmission infrastructure on local or regional tourism. Section 4.1.2.2 of the EIS details the reasons DOE did not attempt to develop or commission a tourism study specific to this analysis.

0053-12

0053-12

0053

Thank you for your comment. Additional discussion regarding ambient noise levels and noise impacts from the Project, including at night, has been added to Section 4.1.7 of the final EIS, and to Section 3.2.2.5 of the Noise Technical Report.

Additional Comment 8: Some assessment should be made of the potential social Impact of the proposed project on U.S.-Canadian relations, especially in light of the large number of New Hampshire municipalities and residents who have voiced opposition to the project.

Additional Comment 9: The negative impact of proximity to the power line on property values should be included for underground portions. The current impact analysis assumes the underground portions of the transmission line will have no impact on property values.

Additional Comment 10: Quantification of the impacts of the transmission corridor on exposure of New Hampshire residents to electro magnetic radiation should be clearly presented. The EIS endorses the submission of the applicant with respect to the expected increases in human exposure to electro magnetic radiation. However, values presented in that analysis are not easily comparable and are not always specific to New Hampshire. The EIS should include a table showing measurement of ambient exposure to EMR for New Hampshire residents in each section of the project area, as well as EMR levels that would be expected under or over the transmission line, and at intervals from the line.

Additional Comment 11: In the socio economic analysis, estimated tax revenues from project assets should assume depreciation. The applicants have already made clear to municipal authorities their intent to seek to depreciate the project assets according to established industry practice.

[i] Volume 1 Impact Analysis p. 2-10

0053-13

0053-14

0053-15

0053-16

0053-13
Thank you for your comment. As explained in Appendix B, Section B.2.1 of the EIS, DOE's responsibilities under the Presidential permit regulations (10 CFR Part 250) are limited to responding to an application for an international border crossing for a transmission project. The scope of DOE's decision is whether or not to grant the requested Presidential permit for the Project at the international border crossing proposed in the amended Presidential permit application (August 2015). The EIS offers a range of alternatives and evaluates the potential environmental impacts of those alternatives. Consideration of U.S.-Canada relations is beyond the scope of the EIS.

0053-14
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. The research conducted found no evidence of impacts to proximate property values related to the installation or location of underground transmission lines. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

0053-15
Thank you for your comment. Maximum electric fields and magnetic fields would decrease to levels below ICNIRP and IEEE limits within 300 feet from the center of the Project corridor. Tables 4 and 5 of the Electric and Magnetic Fields Technical Report (Appendix B of the Public Health and Safety Technical Report) identify electric and magnetic field levels for individual cross sections of the Project Corridor. Appendix A of the Electric and Magnetic Fields Technical Report include figures that show the location of cross sections referenced in Tables 4 and 5.

0053-16
Thank you for your comment. The EIS addresses potential impacts on property taxes and employment anticipated as a result of the Project (see Section 4.1.2 of the EIS). Future tax

abatement, or related proceedings, are beyond the scope of this analysis.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 11, 2015

ID: 8278

Date Entered: Aug 11, 2015

Source: Website

Topics:

Name: Wendy Doran

Organization:

Email: whdflipper@yahoo.com

Mailing Address: 2 battery wharf

City: Boston

State: MA

Zip: 02109

Country: US

Comment: Corruption Stop the northern pass from entering NH.your responsibility to protect NH people!

0054-1

0054-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 11, 2015

ID: 8279

Date Entered: Aug 11, 2015

Source: Website

Topics:

Organization:

Comment: Let's not be part of another environmental disaster by allowing a source of energy from LARGE hydro dams!
http://www.nunatsiaqonline.ca/stories/article/65674quebec_power_corp_our_dams_have_no_impact_on_huc
up/ Think about the everlasting consequences in Canada and New Hampshire!
Do not allow the permit.

0055-1

0055-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 31, 2015

ID: 8362

Date Entered: Aug 31, 2015

Source: Website

Topics: Purpose and Need, Alternatives, Economic, Environmental Justice

Organization: Orzeck

Country: US

Comment: I read this recent post on the Northern Pass website, and felt I had to respond to these so called “benefits” of their antiquated overhead proposal. I’ve added comparative information, in italics, taken from the same Summary for each “benefit” cited by Northern Pass as they try to push the current overhead proposal.
The “Underground in existing roadway “alternatives I refer to below are alternatives 4a-4c, and 6a-6b, which can be viewed in the map found here.
http://www.northernpasseis.us/library/draft-eis
According to the official Northern Pass website:
“The DEIS found that Northern Pass as currently proposed (overhead) will:”
NP:“Have a “Total Average Scenic Impact” of 1.79, on a scale of 0 to 5, which is considered “low” to “very low.”
Response:This also happens to be the highest impact of all alternatives, with 185 miles of roadway within the viewshed.Underground in existing roadway alternatives will have a “Total Average Scenic Impact” of 1.62 to 1.66, with only 0 to 43 miles of roadway within the viewshed.

NP:“Generate more than $564 million of additional economic output within New Hampshire during construction”
Response:Underground in existing roadway alternatives will generate between $974.9 and $1,122.9 million of additional economic output within New Hampshire during construction That’s $410.9 to $558.9 million additional dollars to NH.

NP:“Increase annual statewide property tax collections by approximately $29 million”
Response: This is the LOWEST benefit to NH of all the alternatives! Underground in existing roadway alternatives will increase the annual statewide property tax collections by approximately $50.4 to $57.8 million.
That’s almost double the “benefits” of the proposed action alternative.

NP:“Save New Hampshire customers between $18.3 million and $21.6 million in electric energy costs annually”
Response: Underground in existing roadways will also save customers between $18.3 million and

0056-1

0056-2

0056-3

0056-4

0056-1
Thank you for your comment. The commenter accurately cites the potential visual impacts of Alternatives 2, 4a, 4b, 4c, 6a, and 6b in the draft EIS (Section 2.5.1). However, it is inappropriate to interpret the average scenic impact of the Project using the descriptive values of the rating scale, since this value is the difference between the existing condition and proposed condition. The average includes areas of very high and very low scenic impact and its value should be interpreted as a relative index. A new calculation, the "aggregate scenic impact," was added to the final EIS and additional aggregate indices were added to the Visual Impact Assessment Technical Report to account for an increase in the size of the affected area. The Visual Impact Assessment Technical Report and final EIS have also been updated to include revisions to the data and analysis of other visual impact indicators. This revised method is described in Section 2.4 of the Visual Impact Assessment Technical Report.

0056-2
Thank you for your comment. Socioeconomic impacts were analyzed by an independent contractor under the direction of DOE, and are addressed in Section 4.1.2 of the EIS.

0056-3
Thank you for your comment. Economics impacts for all alternatives, including alternatives with buried segments, are addressed in the EIS. This analysis includes anticipated impacts on property taxes (see Section 4.1.2 of the EIS).

0056-4
Thank you for your comment. Economics impacts for all alternatives, including alternatives with buried segments, are addressed in the EIS. This analysis includes anticipated impacts on property taxes (see Section 4.1.2 of the EIS). Potential impacts to energy costs are discussed in Section 4.1.2 of the EIS.

$21.6 million in electric energy costs annually.

NP:“Create 5,369 jobs in New Hampshire during construction, as well as hundreds of permanent jobs”
Response: Underground in existing roadway alternatives will create between 9,000 and 10,000 jobs during construction, as well as THOUSANDS (1,300 to 1,500) of permanent jobs. That’s TWICE the number of jobs promised than in the proposed action.

NP:“Reduce regional carbon emissions by 8 percent or 3.5 million tons”
Response:This comes with a loss of a CO2 uptake of 932 metric tons per year, due to the large clear-cut’s required. Underground in existing roadway alternatives will only result in a loss of CO2 uptake between 115 and 162 metric tons per year, approximately 7-8 times better than the proposed action.

“Other notable conclusions include:”
NP: “Northern Pass poses no health risks associated with EMFs”
Response: Yet there appears to be a link between EMF’s and childhood leukemia, depending on who you ask of course. Underground in existing roadway alternatives will avoid even the slightest possibility of a public health impact.

NP:“Northern Pass will not have “population-level effects to any protected species”
Response: But as proposed it will impact 1,217 acres of Wildlife Habitat. Underground in existing roadway alternatives will impact between 253 to 279 acres. While the ideal situation would be 0 acres, the underground alternatives will have approximately ¼ of the impact that the current proposal would have.

NP:“Northern Pass will have noise levels well below EPA guidance levels”
Response:Underground in existing roadway alternatives will generate NO noise during operation, as opposed to the 28-44 dBA generated by the proposed action. The summary does not take into account wind noise in the wires, which can be quite substantial.

Remember when NP continuously stated construction costs of “10 times the overhead cost”? Seems the fully underground route will cost approximately $2 billion, not the approximately $10 billion cost they were throwing around without evidence to back it up.
Is this the “balanced” proposal they speak of that takes into account the people of NH, or is it the same tired story with them selling the “benefits” of the project as proposed, to maximize their returns at the state’s expense?

Please consider ONLY TWO proposals as acceptable. NO BUILD in favor of a more responsible project, or Option 4a.

0056-4 Continued

0056-4 cont'd

0056-5

0056-5
Thank you for your comment. Economic impacts for all the alternatives, including burial, are addressed in the EIS, including impacts on employment and income in New Hampshire (see Section 4.1.2 of the EIS).

0056-6

0056-6
Thank you for your comment. The EIS quantifies and discusses the potential loss of sequestration capacity as a result of the removal of forested vegetation. Please see section 4.2.10 . 4.3.10, 4.4.10, 4.4.10, and 4.5.10 of the EIS. The EIS additionally documents the range of differences associated with vegetative clearing which would be required for burial of the Project and alternatives where the Project would be overhead.

0056-7

0056-8

0056-7
Thank you for your comment. Section 4.1.4.2 in the EIS addresses the potential for magnetic fields to cause cancer. Additional discussion is provided in Appendix B of the Electric and Magnetic Fields Technical Report (included as Appendix B of the Public Health and Safety Technical Report), including a discussion of studies and reports related to childhood leukemia.

0056-9

0056-10

0056-8
Thank you for your comment. This comment is regarding claims made by Northern Pass in a blog on their website. With respect to the acreage and impacts associated with wildlife resources, Chapter 4 of the EIS and Section 3 of the Wildlife Technical Report summarizes impacts to wildlife from construction of the Project under a variety of alternatives that have varying lengths of aboveground and burial sections including population-level effects to protected species. The EIS found that the project would potentially have any population level impacts to the Karner Blue Butterfly.

0056-9
Thank you for your comment. Commenter’s opinion regarding overhead vs. underground transmission lines is noted. Noise impacts under all alternatives are discussed in Section 4.1.7 of the final EIS.

0056-10
Thank you for your comment. Additional discussion regarding

noise generated by wind and the overhead transmission lines has been added to final EIS Section 4.1.7.2, and Section 3.2.2.5 in the Noise Technical Report.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 9, 2015

ID: 8246

Date Entered: Aug 9, 2015

Source: Website

Topics: Economic

Name: Jan Marvel

Organization: Indian Stream Productions

Email: agrecords@roadrunner.com

Mailing Address: 2524 NH RT 175

City: Thornton

State: NH

Zip: 03285

Country: US

Comment: Eversource CEO gets $1.3M RAISE, consumers get 29 percent rate hike. The NPT is whining about burial cost because??? Hmmm, this is a tough one. So it's okay to destroy our property value, so that Eversource and H-Q can make $$$? Clearly line burial is feasible, destroying what we have is NOT! Can we please come into the modern world and stop using ridiculous technology that was invented before line burial technology was in the incubator?

0057-1

0057-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 9, 2015

ID: 8248

Date Entered: Aug 9, 2015

Source: Website

Topics: Viewshed/Scenery

Name: Deborah Corey

Organization: Resident

Mailing Address: 1288 Easton Rd

City: Sugar Hill

State: NH

Country: US

Comment: Visual impact is 5.0 for those of us who reside, work or recreate along proposed HIGH tower ROW. Stop minimizing impact to us! Bury the entire line. If cost is prohibitive, charge those who receive the electricity for the cost of burying the line instead of financially and visually impacting those of us along the ROW.

0058-1

0058-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 9, 2015

ID: 8250

Date Entered: Aug 9, 2015

Source: Website

Topics: Viewshed/Scenery

Name: Joseph Keenan

Organization:

Email: jtkphd@gmail.com

Mailing Address: PO Box 270

City: Lancaster

State: NH

Country: US

Comment: First, NP engineers sneak onto my land (280 acres in Northumberland) to take photos, then their PR people tell me at their "info(mercial) meeting" that -- with all their $$$ -- they "can't tell" me whether I would see the towers from my unobstructed 180 degree view of the western horizon. Then, when I apply for mortgage refinancing, my property's appraisal is lowered substantially simply because NP is on the drawing board. I am a registered intervener in this process, and will continue -- as long as necessary -- to support the legal fund established to fight this stupid project.

0059-1

0059-1
Thank you for your comment.

City of Concord, New Hampshire

ADMINISTRATION
City Hall – 41 Green Street – 03301
(603) 225-8570
taspell@onconcord.com

Thomas J. Aspell, Jr.
City Manager

December 4, 2015

Brian Mills, Senior Planning Advisor
Office of Electricity Delivery and Energy Reliability (OE-20)
U.S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585

Re: City of Concord's Public Comment for December 16, 2015 Hearing regarding the Draft EIS (DOE/EIS–0463) and the Supplement to the Draft EIS (DOE/EIS–0463-S1); OE Docket No. PP-371.

Dear Mr. Mills,

In accordance with its September 13, 2013 Petition to Intervene, the City of Concord New Hampshire is an intervener in this matter. In its Petition, Concord expressed its concerns relative to the impact that the proposed Northern Pass project will have on the City of Concord's character and property values. The City of Concord also expressed that residential areas may be severely impacted, where an increased number of towers would be visible and dominate the landscape. After review of the Draft EIS and the Supplement to the Draft EIS, Concord remains concerned about the projected path of the Northern Pass project which crosses through 8.1 miles of the City of Concord. *See* attached Petition to Intervene and Consent Report to the Mayor and City Council, approved by the City Council on October 13, 2015.

As you may know, on October 19, 2015, Northern Pass Transmission, LLC and Public Service Company of New Hampshire d/b/a Eversource Energy (the "Applicants") filed an application for a Certificate of Site and Facility with New Hampshire's Site Evaluation Committee. A portion of the proposed facility will be located in the City of Concord.

On November 17, 2015, Concord filed a Petition to Intervene in the Applicants' Joint Application for a Certificate of Site and Facility for the Construction of a New High Voltage Transmission Line in New Hampshire. In its motion, and consistent with its Motion to Intervene in in this pending matter, the City of Concord explained that has an interest in the proposed facility because it is projected to cross through significant portions of the City of Concord, and unlike much of the rest of the proposed Northern Pass route in New Hampshire, in Concord, it will be abutting dense residential neighborhoods. There are 8.1 miles of the proposed project that passes through the City of Concord. In addition to new overhead lines throughout that 8.1 mile area, there are estimated to be 77 new structures and the majority of those new structures are proposed to be between 85' to 100' in height. The City is concerned about the impact that the

0061-1

0061-1
Thank you for your comment. Visual impacts in Concord are discussed in the EIS (Section 4.4.1). Potential visual impacts in urban areas were overstated in the draft EIS. Because the Concord area is urban, there was no estimation of screening from land cover which leads to an overstatement of visibility in the developed areas of Concord. The analysis has been updated for the final EIS to include additional data reflecting the height of land cover in Concord which better represents the visibility of the Project.

0061-1 cont'd

project will have on the City's character and property values as a result of the overhead lines and supporting structures. The visual and audio impacts of transmission lines and large structures are also of particular worry. In order to reduce the project's impacts, the burial of the lines within the City of Concord needs to be thoroughly explored. 0061-1 Continued

Sincerely,

Thomas J. Aspell,
City Manager

TJA/jf

CITY OF CONCORD

REPORT TO THE MAYOR AND CITY COUNCIL

FROM: Northern Pass Committee

DATE: October 6, 2015

SUBJECT: Interim Report on the Northern Pass

Recommendation:

Accept this report recommending the following three actions:

1) That the Council direct the City Solicitor to file for intervener status with the State of New Hampshire's Site Evaluation Committee relative to the Northern Pass application; and
2) That City staff continue to follow the evolution of the Forward NH Fund; and
3) That the Council recommend—based on the information to date—that the Northern Pass bury its proposed line along the entire 8 mile route through Concord.

Background

At its March 9, 2015 meeting, the City Council appointed a committee to examine the Northern Pass project specific to its impact on Concord.

The committee, comprised of Councilor Matson (chairwoman); Councilor Bouchard; Councilor Coen and Mayor Pro Tem St. Hilaire met 6 times to review this matter between March 23, 2015 and October 5, 2015. Approximately 50 individual instances of testimony were taken from representatives of Northern Pass, the Society for the Protection of New Hampshire Forests, the Appalachian Mountain Club, and the general public. Over 20 email messages were submitted from the public for the committee's consideration as well as a petition comprised of (to date) 664 signatures all requesting burial of the Northern Pass project through Concord.

Officials with the Northern Pass project attended every meeting and provided answers to the committee's questions and promptly fulfilled requests for information solicited by committee members. Northern Pass representatives also submitted a PowerPoint presentation and a set of

visual simulations depicting the Loudon Road and D'Amante Drive intersection as well as perspectives from McKenna's Purchase. All of the public's correspondence, Northern Pass submittals, historical documents, and meeting minutes were posted on the committee's webpage and are included as attachments to this report.

Discussion

In its examination of the project, the Committee focused on the following key areas:

1) Tax implications: One of the central points put forth by the Northern Pass project has been the significant tax payments that would be generated by the value of the new infrastructure. The Concord portion of the project is estimated, by Northern Pass, to be valued at $30,856,902 which Northern Pass calculates will generate $548,636 in total tax payments to the City of Concord and the applicable school district.[i] Taxes paid to the County would be separate from this number based on its tax rate. In an April 22, 2015 letter to the committee, Northern Pass officials estimated that the County tax payment would be approximately $90,000.[ii]

   What the Committee found is that the "net book" methodology that Northern Pass prefers to utilize in determining its infrastructure's value would present the City with a continuously declining value over a twenty year horizon. According to testimony and documentation provided by Northern Pass' economist, Lisa Shapiro, Northern Pass contends that the value of its project would drop from $30,856,902 in 2019 (year 1) to $18,756,379 in 2038.[iii]

   Concord's Director of Real Estate Assessments, Kathy Temchack, testified that she would not employ a "net book" value methodology and instead would utilize a "replacement costs new less depreciation" methodology. The latter would allow for the depreciation but mitigate for some of the loss in value through the application of an inflation factor based on a potential replacement value.

   It was noted by the Northern Pass economist that the tax payments generated by Northern Pass could actually increase, despite the declining project value, based on the assumption that the local tax rates would outpace the percentage of depreciation. While this could occur, it is also important to note that in a period of significant overall community tax base growth, the tax rate might not outpace the depreciation and Northern Pass would garner a benefit that other property owners in Concord would not enjoy.

   Although the City—at present—is not legally compelled to utilize Northern Pass' methodology, Eversource—Northern Pass' parent company—is in active litigation in New Hampshire courts seeking to have this "net book" approach be the accepted methodology applied by municipalities in valuing its infrastructure.

0061-2

0061-2
Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS, including impacts on property taxes, by geographic section. The analysis in the EIS was prepared by an independent contractor under the direction of DOE and may not follow the same methodology used by the Northern Pass team.

2) Impact on Residents: The most frequent and visceral concern raised by the public in testimony and correspondence related to the overhead lines and supporting structures. Residents that testified or submitted correspondence expressed significant worry about the possible line noise and visual impact of this project and the fear of its potential negative effect on City property values.

To demonstrate what the project would look like along the densest neighborhoods it would abut, Northern Pass officials provided visual simulations taken at the Loudon Road/D'Amante Drive intersection as well as from McKenna's Purchase. The visualizations (which are enclosed) showed different support structure options such as a lattice, H-frame and monopole. The Committee and Northern Pass mutually agreed that the lattice structure was unacceptable and would not be considered in Concord.

Northern Pass officials explained that Concord would have H-Frame structures with two monopoles near Loudon Road and McKenna's Purchase. In total, there would be 77 new structures in addition to the 230 existing Eversource structures in the same proposed right of way. The majority of the Northern Pass structures would be between 85'-100' in height.

3) Burial Alternative: During the course of the Committee's meetings, the Northern Pass released the *Forward NH Plan* which proposed to bury 52 miles within the White Mountain National Forest in addition to the 8 miles that had already been determined would be buried in the North Country. According to information provided by Northern Pass, the line would be buried in "public roadways" and would eliminate more than 400 structures.[iv]

The Committee asked Northern Pass officials whether a similar burial could be accomplished in Concord. Northern Pass representatives explained that the costs for an aerial installation are approximately $3 million per mile. However, burial would equate to $8-$13 million per mile depending on the soils, topography, etc. In addition, Northern Pass officials posited that the existing easements within their right of way in Concord did not allow for an underground installation and successful renegotiation of all of those easements would be extremely challenging, if not impossible.

The Committee, therefore, inquired about the feasibility of Northern Pass burying the line along a roadway as was proposed in the White Mountain National Forest. Northern Pass officials explained that they would likely be precluded by federal and state regulations from using I-93 right of way unless the state and federal government would agree that

0061-3

0061-3
Thank you for your comment. The EIS analyzes potential impacts of the Project to visual resources (see Sections 4.1.1, 4.2.1, 4.3.1, 4.4.1, and 4.5.1), property values (see Section 4.1.2, 4.2.2, 4.3.2, and 4.4.2), and potential noise (see Sections 4.1.7, 4.2.7, 4.3.7, 4.4.7, and 4.5.7).

0061-4

0061-4
Thank you for your comment. The EIS analyzes several full-burial alternatives in detail (Alternatives 3, 4a, 4b, and 4c) which include burial through Concord. The potential environmental impacts of all twelve alternatives, as well as technical constraints and costs, are discussed throughout the EIS.

0061-4 cont'd

there was a significant hardship that made an I-93 route the only viable alternative. However, Northern Pass Project Director Jerry Fortier did testify that it is a long-standing practice for lines to be buried along non-interstate roadways.[v] The Committee felt that this option should be explored.

0061-4
Continued

4) *Forward NH Fund:* Northern Pass' *Forward NH Plan* included a $200 million fund dedicated to "support important initiatives in tourism, economic development, community investment, and clean energy innovation."[vi] In testimony before the Committee, Northern Pass officials explained that the Fund is for the entire state, not simply communities that are along the Northern Pass route. Investments from the Fund would be made over 20 years. Northern Pass officials indicated that an advisory committee is planned to oversee the Fund but it has not yet been convened.

   The Committee felt that the Fund was worth monitoring and recommends that City Staff stay informed of how the fund evolves.

5) Site Evaluation Committee: As the Council is aware, the City is an intervener in the U.S. Department of Energy's review of the Northern Pass' federal permit. The Committee felt it was imperative for the City to also intervene in the State's Site Evaluation Committee and recommends that Council direct the City Solicitor to do so.

Conclusion

The Committee acknowledges, as did many of the residents that participated in this process, that it finds no issue with the merits of the Northern Pass project in light of the need for greater energy diversity in the region. However, in its opinion, burial of the Northern Pass project in Concord has not yet been thoroughly explored by Northern Pass. Therefore, the Committee stresses that this report, while important, is an interim step. The Committee hopes that if Council supports the recommendation seeking Northern Pass' burial of the line, Northern Pass officials will endeavor to fully vet that alternative and will return to the City with a new plan that takes into account what was discussed during the Committee's review. The Committee is prepared and willing to reconvene to further analyze any new development relative to the project.

The Committee's work, to date, would not have been possible without the assistance of the Community Development Department and the cooperation of Northern Pass officials who dedicated their time to attending every meeting and answering questions. The Committee especially wishes to thank the public for its continued engagement in this important matter.

w/att.

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[i] Based on a spreadsheet entitled "Concord: Illustration of Northern Pass Transmission Local Property Tax Payments," submitted to the Committee on September 15, 2015 by Lisa Shapiro, economist for the Northern Pass project.
[ii] Letter dated April 22, 2015 to Deputy City Manager Carlos P. Baía from Bonnie Kurylo with Northern Pass.
[iii] Shapiro, September 15, 2015.
[iv] *Forward NH Plan* News Release, August 18, 2015, "Northern Pass Will Now Go Under Roadways in Treasured Areas, Including White Mountain National Forest," p. 2.
[v] Comments by Jerry Fortier as cited in minutes of the 9/15/15 Northern Pass Committee meeting, p.6.
[vi] *Forward NH Plan* News Release, August 18, 2015, p. 2.

THE STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE

Joint Application of Northern Pass Transmission, LLC and Public Service Company of New Hampshire d/b/a Eversource Energy for a Certificate of Site and Facility for the Construction of a New High Voltage Transmission Line in New Hampshire

Docket No. 2015-06

CITY OF CONCORD'S PETITION TO INTERVENE

The City of Concord, by and through its attorneys, the Office of the City Solicitor, petitions the Site Evaluation Committee to allow it to intervene in the above-captioned matter in accordance with RSA 541-A:32 and NH Admin. Rule Site 202.11, stating as follows:

1. On October 19, 2015, Northern Pass Transmission, LLC and Public Service Company of New Hampshire d/b/a Eversource Energy (the "Applicants") filed an application for a Certificate of Site and Facility with the Site Evaluation Committee. A portion of the proposed facility will be located in the City of Concord.

2. The City of Concord has an interest in the proposed facility because it is projected to cross through significant portions of the City of Concord, and unlike much of the rest of the proposed Northern Pass route in New Hampshire, in Concord it will be abutting dense residential neighborhoods. There are 8.1 miles of the proposed project that passes through the City of Concord. In addition to new overhead lines throughout that 8.1 mile area, there are estimated to be 77 new structures and the majority of those new structures are proposed to be between 85' to 100' in height. The City is concerned about the impact that the project will have on the City's character and property values as a result of the overhead lines and supporting structures. The visual and audio impacts of transmission lines and large structures are also of particular worry. In order to reduce the project's impacts, the burial of the lines within the City of Concord needs to be thoroughly explored.

3. On October 13, 2015, the City Council directed the Office of the City Solicitor to file for intervenor status with the Site Evaluation Committee. *See* attached Consent Report to the Mayor and City Council, approved by the City Council on October 13, 2015.

4. RSA 541-A:32 and NH Admin. Rule Site 202.11 provide that the Site Evaluation Committee, or its presiding officer, shall grant a petition for intervention if:

> (1) The petition is submitted in writing to the presiding officer, with copies mailed to all parties named in the presiding officer's order of notice of the hearing, at least 3 days before the hearing;
> (2) The petition states facts demonstrating that the petitioner's rights, duties, privileges, immunities or other substantial interests might be affected by the proceeding or that the petitioner qualifies as an intervenor under any provision of law; and
> (3) The presiding officer determines that the interests of justice and the orderly and prompt conduct of the proceedings would not be impaired by allowing the intervention.

5. As discussed herein, the proposed facility will impact the rights, duties, privileges, immunities and other substantial interests of the City of Concord. The interests of justice and orderly and prompt conduct of the proceedings will not be impaired by allowing the intervention.

WHEREFORE, the City of Concord respectfully requests that the Site Evaluation Committee:

A. Grant the City of Concord's Petition to Intervene; and

B. Grant such other and further relief as may be just.

Respectfully submitted,

CITY OF CONCORD

November 17, 2015 By: _____

Danielle L. Pacik, Deputy City Solicitor
41 Green Street
Concord, New Hampshire 03301
Telephone: (603) 225-8505
Facsimile: (603) 225-8558
dpacik@concordnh.gov

CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of November, 2015, a copy of the foregoing was sent by electronic mail to persons named on the Service List of this docket.

November 17, 2015 By: _____

Danielle L. Pacik, Deputy City Solicitor

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 11, 2015

ID: 8280

Date Entered: Aug 11, 2015

Source: Website

Topics: Alternatives

Organization:

Comment: During my initial perusal of the DEIS, it is crystal clear that Northern Pass's only objective is to ignore the viable alternatives set forth by the DOE, specifically, complete burial, and construct the Northern Pass project as cheaply as possible. Eversource/NorthernPass executives continue to demonstrate their unconscionable disregard for the needs of New Hampshire residents. It is evident that any symbolic "chump change" thrown in the direction of New Hampshire not-for-profits is only meant to give the superficial appearance of a charitable corporation; meanwhile, these handouts are nothing more than a corporate ploy to spend as little as possible to curry favor in its attempt build an ill-conceived destructive project. BURY THE NORTHERN PASS!

0063-1

0063-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 12, 2015

ID: 8281

Date Entered: Aug 12, 2015

Source: Website

Topics: Purpose and Need

Organization:

Comment: NO WAY SHOULD THE NORTHERN PASS GO FORARD!

0064-1

0064-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 12, 2015

ID: 8282

Date Entered: Aug 12, 2015

Source: Website

Topics: Purpose and Need

Organization:

Comment: NO WAY SHOULD THE NORTHERN PASS GO FORARD!

0065-1

0065-1
Thank you for your comment.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Mar 31, 2016

ID: 9148

Date Entered: Mar 31, 2016

Source: Website

Topics: Viewshed/Scenery, Recreation, Tourism, Quality of Life

Name: Robert McLaughlin

Organization:

Email: rsm566@roadrunner.com

Mailing Address: PO Box 1348

City: Lincoln

State: NH

Zip: 03251

Country: US

Comment: As a resident of the Town of Lincoln and Grafton County, and an avid outdoorsman and nature photographer, my primary concern with the proposed Northern Pass project is its visual impact on beauty and value of our New Hampshire landscape. This adverse impact of the project is not limited to residents, but also extends to the many visitors who come to our area to enjoy the outdoors. For example, most of the residences in my town, Lincoln, are owned by families who maintain a permanent residence in other areas. In addition, even more short term visitors come to New Hampshire each year because of its natural beauty. I recognize that the Northern Pass project will not by itself completely destroy the beauty of the New Hampshire landscape, but it will certainly diminish it. This beauty is an invaluable and irreplaceable resource, and protecting it clearly justifies measures that may increase the cost of the proposed project.

The Applicant's response to the visual impact is completely inadequate. For example, the Applicant indicates that locating the project in an existing right of way (ROW) is an ample remedy to reduce the visual impact. Specifically, in Section 3.4 on page 48 of the Amended Application (July 2013), the Applicant states: "Locating 147 miles of the Project within existing transmission ROW minimizes visual impacts." While this response might have some merit if the proposed towers were equivalent to the towers currently in the right of way, they are not. In fact, Northern Pass' proposed towers would be about twice the height of the existing towers. While the existing towers are about the same height as surrounding forest, the proposed Northern Pass structures will tower over the forest. The situation is equivalent to a professional basketball team in a fourth grade gym class; the basketball players

0066-1

Thank you for your comment. The EIS evaluates several alternatives that include burial of the Project and/or specific segments of the Project. Each of these alternatives is evaluated and compared within the Socioeconomic section of the EIS (see Section 4.1.2). The EIS additionally analyzes the importance of tourism to New Hampshire, businesses, and the local and regional economy. The EIS (Section 3.1.2) and the Socioeconomic Technical Report describe the methods used to analyze potential impact to tourism for this EIS. As discussed in Section 4.1.2 of the EIS, no authoritative peer-reviewed studies were identified that address impacts to tourism as a result of the construction of transmission lines, and DOE did not attempt to develop such a study. No other resources were identified to allow for quantification of potential impacts. The EIS concludes that "while it is reasonable to conclude that the Project may have some level of impact on tourism within New Hampshire and on individual locations near the Project route, these are not quantifiable." Additionally, Section 4.1.1 addressed potential impacts to Visual Resources which may result.

0066-2

Thank you for your comment. The EIS and Visual Impact Assessment Technical Report analyze potential impacts to visual resources resulting from the Project. The EIS analyzes a variety of alternatives across a range of alignments and including both overhead and underground transmission lines. Visual impacts of all alternatives are summarized in Section 2.5.1 of the final EIS, and are further evaluated under each geographic section and alternative (see Sections 4.1.1, 4.2.1, 4.3.1, 4.4.1, and 4.5.1 of the final EIS).

stand out because they will tower above the fourth graders. So too, Northern Pass' towers will stand out, and diminish the landscape.

While this is a problem in the White Mountain region, it is also a problem all along Northern Pass' proposed route. The sponsors of the Northern Pass should be required to either bury the transmission line or reduce the height of the towers so that they will no longer intrude on the visual landscape.

I agree that renewable energy sources are important. However, I also believe that renewable energy does not justify the wholesale despoliation of an existing beautiful landscape.

If Northern Pass cannot be built without blighting the New Hampshire landscape, it should not be built at all.

0066-2
Continued 0066-2 cont'd

TOWN OF CANAAN

TOWN OF CANAAN
P.O. BOX 159
318 CHRISTIAN HILL
CANAAN, VT 05903

March 15, 2016

Via email (Brian.Mills@hq.doe.gov)

Brian Mills, Senior Planning Advisor
Office of Electricity Delivery and Energy Reliability (OE-20)
U.S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585

Via email (Pamela.Monroe@sec.nh.gov)

Pamela Monroe, Administrator
New Hampshire Site Evaluation Committee
21 S. Fruit St., Suite 10
Concord NH 03301

Re: Northern Pass Transmission LLC
Application for Presidential Permit
Subjects: Section 106: Cultural and Historic Resources
Draft EIS: Viewshed/Scenery, Alternatives, Property Values, Water Courses, Wetlands, Soil Erosion, Traffic, Vermont Permitting

New Hampshire Site Evaluation Committee Project No. 2015-06

Dear Mr. Mills and Ms. Monroe:

The undersigned Selectmen of the Town of Canaan, Vermont have not been consulted by Northern Pass Transmission LLC or informed by any federal or state agency about the Northern Pass Transmission project and its anticipated impacts on our town or our rights and remedies if we should object to the project.

Based on information that we have been able to gather on line and from our neighbors across the river in New Hampshire, it is apparent to us that Northern Pass anticipates using our town roads to transport laborers, materials, heavy machinery and heavy equipment to multiple transmission tower construction sites for this project just a few hundred yards north of our border with the Town of Pittsburg, NH. Town roads involved would be Old Canaan Road and Halls Stream Road in the Beecher Falls section of Canaan. They are the only public roads that the developer can use to get access to its proposed project entry point from Canada into Pittsburg across Halls Stream. Traffic congestion, road blockages, road damage and road safety are just some of our concerns in this regard.

Phone: 802-266-3370
Fax: 802-266-8253

0068-1

0068-1
Thank you for your comment. Discussions of potential impacts to roadways in and around Canaan, VT have been added to the final EIS (Sections 3.1.5, 4.1.5, and 4.2.5), and to the Traffic and Transportation Technical Report. Impacts to roadways would be minimized with the implementation of applicant proposed measures (See Appendix H), including the implementation of a transportation management plan for traffic control.

In addition, it appears that much of the construction proposed by the developers will impact major watercourses, wetlands and intermittent streams that drain downhill from the transmission line tower construction sites into our town and into the waters of the Connecticut River and Halls Stream. This causes us numerous concerns about potential damage to our wetlands and watercourses, potential erosion and flooding, and mitigation issues—especially since the developer has not sought any permits from the relevant State of Vermont permitting authorities copied on this letter.

Of greatest concern is that the proposed transmission line and 20 Northern Pass steel lattice transmission towers are proposed to be built in an entirely new corridor that will be cleared and constructed through southwestern Pittsburg running west to east just a few hundred yards north of the state line border with the Beecher Falls section of Canaan. This segment of the Northern Pass transmission project would be highly visible in much of Canaan and all along the Connecticut River and its federally designated Connecticut River Scenic and Cultural Byway. The segment that is proposed to be built in Canada would also adversely impact many Canaan properties that have superlative views of Mount Hereford to the north. We understand that Hydro Quebec proposes to build its above ground transmission line link to Northern Pass across the southern slope of Mount Hereford in Quebec in a clear cut right of way that will be starkly visible from our town but conveniently hidden from Eastern Township population centers on the Quebec side of the border. We have never been shown any visual simulations of these Northern Pass and Hydro Quebec transmission line impacts; so we can only note the potential loss in property value and viewshed scenic beauty that this project would have on our town, its property owners and our real property tax base.

We think we should have been included in information briefings and consultations so that we and our residents might know more about this project and its undoubted impacts on our town. We also believe that we have been either intentionally or negligently left out of any consideration or examination in the Draft EIS. This needs to be corrected by amending the Draft EIS and holding at least one DOE meeting in our town so that our citizens can be informed of the impacts of this proposed project and given an opportunity to comment.

As far as we can tell, much of our Beecher Falls village will be within the one mile Area of Potential Effect ("APE") of the proposed transmission line, yet no Federal or Vermont State Section 106 work has been initiated that we are aware of; and we and our local Historical Society have not been given any notice of our rights to participate in that process. Taking a look at the consultations page on the DOE Northern Pass website, we actually see what appears to be an intentional blocking out of any Section 106 detail for our entire town area with the PAE of the project. See Section 106 public information maps on numbered pages 6 and 7 at this url:

http://media.northernpasseis.us/media/Part_2_of_7_Great_North_Woods_Draft_PAF_REDACTED_reduced.pdf.

Any effort to go forward without including our town and the State of Vermont in the Section 106 process would be flawed and invalid.

Lastly, we have not been asked by Northern Pass whether or not Canaan would be interested in hosting an underground portion of the proposed transmission line. We would like to know much more about the project and its undergrounding impacts before committing support to such an alternative, but it is obvious that many of our viewshed/scenery concerns could be resolved if the transmission line was placed underground in a roadbed. Undergrounding in our

0068-2

0068-3

0068-4

0068-5

0068-6

0068-2
Thank you for your comment. Impacts to wetlands and water resources in Vermont have been considered and analyzed. An updated discussion can be found in Sections 3.2.13 and 4.2.13 in the final EIS, as well as in those Sections of the Water Resources Technical Report that deal with the Northern Section of the Project. The only location with potential impacts to water resources in Vermont is where the project crosses Halls Stream. However, this re-evaluation determined that there would be no impacts to wetlands in Vermont. The Applicant would be responsible for acquiring all required permits, including with the state of Vermont if appropriate, prior to construction.

0068-3
Thank you for your comment. The Visual Impact Assessment Technical Report and final EIS have been updated to include an analysis of potential visual impacts in the area around Canaan, VT (see Section 4.2.1 of the final EIS). Comparable data to that used in the landscape assessment in New Hampshire is not available in Vermont, but impacts are analyzed through visibility and visual magnitude (see Section 2.4 of the Visual Impact Assessment Technical Report). Additionally, photographs were captured in this area of Vermont to inform the analysis. Potential visibility from the Connecticut River is considered in the landscape assessment. Potential impacts to the Connecticut River Scenic and Cultural Byway are analyzed in the Visual Impact Assessment Technical Report and EIS (see Section 4.2.1 of the final EIS). A discussion of potential transboundary visual impacts in Canada resulting from the Project in the U.S. and impacts in the U.S. from the Project in Canada, has been added to the final EIS (see Section 4.2.1). Potential impacts to property values are discussed in Sections 4.1.2 and 4.2.2 of the EIS.

0068-4
Thank you for your comment. An analysis of impacts potentially occurring in Vermont has been added to the final EIS (see Section 4.2 of the EIS) and relevant Resource Technical Reports (including the Visual Impact Assessment, Traffic and Transportation Technical Report, and Water Resources Technical Report). Section 1.5 of the EIS describes public participation in the NEPA process. Sections 1.5.2 and 1.5.3 list the dates and locations of the public scoping meetings and hearings conducted for the draft EIS. Public scoping meetings were held across New Hampshire, including one in Colebrook,

during March 2011 and September 2013. Public hearings on the draft EIS were held across New Hampshire, including one in Colebrook (less than 5 miles from Canaan, VT), during March 2016. A variety of methods were employed to publicize project information and public meetings, including the Federal Register, local newspapers, postal mailing addresses, email addresses, and the project EIS website. Extensive information about the EIS process has been made available through the project EIS website (http://www.northernpasseis.us/). Project documents were available in several formats, including digitally via the project EIS website, and hard copy by request and at public libraries.

0068-5

Thank you for your comment. Although NPT has not proposed any construction within the state of Vermont, the proposed U.S. international border crossing in Pittsburg, NH that is being currently being considered by DOE is in close proximity to the New Hampshire-Vermont border in the vicinity of Beecher Falls, NH. As a result, a portion of the indirect area of potential effects ("APE") [36 C.F.R. part 800.16(d)] for the proposed Northern Pass Project that has been defined for the project (see EIS Section 3.1.8.2) extends into the Town of Canaan in Essex County, VT. The portion of the indirect APE for potential visual effects to historic resources in Vermont is approximately 1.25 square miles. DOE initiated its Section 106 consultation with the Vermont Division of Historic Properties (VT DHP) on June 22, 2016, and the VT DHP agreed to consult with DOE on the proposed Northern Pass Project in its role as the VT state historic preservation officer (SHPO) and in accordance with Section 106. VT DHP has provided input to DOE's on-going Section 106 consultation process, for example on June 29, 2016 in person and on September 9, 2016 through concurrence with DOE's proposed scope of work for identification efforts in Vermont, and also including the development of the Section 106 programmatic agreement for the proposed Northern Pass project, to ensure that DOE's Section 106 process appropriately addresses historic properties that are located within the 1.25 square miles of the indirect APE that extends into the state of Vermont near the town of Canaan. Section 3.1.8.2 of the EIS has been updated to incorporate the area of the indirect APE in VT. Several sections of the final EIS and the Cultural Resources Technical Report have been added or revised to include Section 106-related information in the vicinity of Canaan, Vermont. See Section 4.2.8 of the final EIS. In the Cultural Resources Technical Report, see Sections 1.4.5 and 1.5.2.2 for information specific to Canaan, VT,

as well as Section 2 for various alternatives in the Northern Section.

0068-6
Thank you for your comment. An analysis of impacts potentially occurring in Vermont has been added to the final EIS (see Section 4.2 of the EIS) and relevant Resource Technical Reports (including the Visual Impact Assessment, Traffic and Transportation Technical Report, and Water Resources Technical Report). Northern Pass has applied to the Department of Energy for a Presidential permit for an HVDC transmission line that would run from Quebec, Canada to Deerfield, NH. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE, however, does not have siting authority for the Project. In this case, the New Hampshire Site Evaluation Committee has siting authority for the Project in the state of New Hampshire. Additionally, the USFS has siting authority for portions of the Project located in the White Mountain National Forest. (For further discussion, see Sections 1.1-1.3 of the final EIS.) While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered

but eliminated from detailed analysis. Section 2.4 of the final EIS has been updated with additional information on alternatives considered but eliminated from detailed analysis. The comment suggested an underground route in roadways through Beecher Falls stating that it would shorten the route and minimize viewshed concerns. The final EIS analyzed several full burial alignments (Alternatives 3, 4a, 4b and 4c) that were designed to address concerns, particularly viewshed concerns, in the Northern Section of the route. Additionally, to the extent the route contemplated by the commenter would cros the border and run through Vermont before interconnecting in New Hampshire, DOE determined that this is not a reasonable alternative. See applicable discussion in Section 2.4.17 of the final EIS.

0068-6 cont'd

0068-6
Continued

roads through Beecher Falls would make it totally unnecessary to traverse the southern border of Pittsburg and would actually shorten the route proposed for each of the draft EIS Alternatives 4a, 4b, 4c, 6a and 6b by more than four (4) miles. We fail to understand why this substantially shorter alternative has not been explored by Northern Pass or the Department of Energy EIS consultants.

Please register this letter as a Comment on: (1) the Draft EIS; (2) the Section 106 process; and (3) the New Hampshire Site Evaluation Committee Project No. 2015-06.

Copies of this letter are also being sent to Northern Pass and to State officials and agencies that may have an interest in helping us or in coordinating or reviewing needed permit applications given the project's undoubted impacts on our town and its Vermont residents and landowners—which impacts have been ignored thus far. Thank you for your attention and anticipated action.

Sincerely,

TOWN OF CANAAN

By _____
Selectman

By _____
Selectman

By _____
Selectman

cc: Governor Peter Shumlin
109 State Street Pavillion
Montpelier, VT 05609

Senator Patrick Leahy
87 State Street, Room 338
Montpelier VT 05602

Senator Bernie Sanders
357 Western Ave., Suite 1B
St. Johnsbury VT 05819

Congressman Peter Welch
128 Lakeside Ave., Suite 235
Burlington VT 05401

info@northernpass.us
Northern Pass Transmission, LLC
c/o William Quinlan
President of Eversource NH Operations
780 North Commercial Street
Manchester NH 03101

Pete.LaFlamme@vermont.gov
Laura.Woods@vermont.gov
Vermont Department of Environmental Conservation
Watershed Management Division1
National Life Drive, Main 2
Montpelier VT 05620-3522

Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Craig.Keller@Vermont.gov
Vermont Agency of Transportation
One National Life Drive
Montpelier VT 05633-5001

James.Duggan@Vermont.gov
Historic Preservation Review Coordinator
Vermont Agency of Commerce & Community Development
Vermont Division for Historic Preservation
1 National Life Drive, Davis Bldg, 6th Floor
Montpelier VT 05620-0501

Dennis Fuller canvthistsoc@gmail.com
Canaan Historical Society
PO Box 214, Canaan VT 05903

Elizabeth Muzzey, Director
New Hampshire Division of Historical Resources
19 Pillsbury Street
Concord NH 03301

Jennifer Goodman, Executive Director
N.H. Preservation Alliance
7 Eagle Square
PO Box 268
Concord, NH 03302-0268

March 7, 2016

Office of Electricity Delivery & Energy Reliability (OE-20)

U.S. Dept. of Energy

1000 Independence Ave., SW

Washington, D.C. 20585

Mr. Brian Mills:

My name is Jonathan Lane, owner of JML Trucking & Excavating, LLC and I am a resident of Errol, NH. I have been a resident of northern New Hampshire my whole life, and starting a construction and logging business in my home town is one of the my proudest accomplishments.

I support the Northern Pass project for many good reasons. This project will support local businesses, it will provide jobs during the construction phase and it will provide a much needed upgrade to the Coos Loop grid system.

My company employs over 30 people in northern New Hampshire, most of which are young, enthusiastic hard-working individuals. A project like Northern Pass will help keep these young people working here in this area. Northern Pass will also contract specialized labor, such as members of the IBEW, which will help local businesses like hotels and stores, while these workers are here.

The Northern Pass project will provide the economic stimulus our state and this region is so desperately seeking. Please consider my support for this important cause.

Sincerely,

Jonathan Lane

President – JML Trucking & Excavating, LLC

Errol, NH Resident

0070-1

0070-1
Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS, including impacts on employment and income in New Hampshire.

COMMENT CARD

NH Site Evaluation Committee, Docket No. 2015-06
Public Hearing, RSA 162-H:10, I-c

RE: Joint Application of Northern Pass Transmission LLC
& Public Service Company of New Hampshire d/b/a Eversource Energy
for a Certificate of Site and Facility

LOCATION (circle one): Meredith (March 1); Colebrook (March 7); Concord (March 10); Holderness (March 14); Deerfield (March 16)

FIRST NAME: MARY LAST NAME JOLLES

STREET ADDRESS: 2060 ROARING BROOK RD.

TOWN: COLEBROOK STATE NH ZIP 03576

EMAIL ADDRESS: mjolles@myfairpoint.net

If you wish to provide written comments for the record, please provide your comments below:

As a resident of NH for 35 years and a resident of the North Country for 18 years, I have two concerns about the Northern Pass Plan.

New Hampshire needs to develop its own sources of energy that are "green." It cannot do this by simply buying energy from someone else. The Northern Pass project does not help New Hampshire do this.

The second concern I have is about the degradation of New Hampshire's natural beauty and natural resources, with no real gain to NH. I have heard a lot about how this project will "benefit" NH and disagree. Coos County would

0071-1

0071-1
Thank you for your comment.

0071-1 cont'd

New England
be spoiled, and New Hampshire will still be dependent upon Hydro Quebec for a large amount of energy.
Temporary jobs to local people ~~to help~~ for their help in building the project is a relatively small benefit, and will not in the long term Truly help New Hampshire.

Northern New Hampshire should not have to pay for New England's insatiable thirst for energy by allowing Northern Pass to ruin its natural beauty, which is priceless.
Coos County is going to have to depend upon tourism and recreation for its economy in the future.
Northern Pass would ~~make~~ have a negative impact on our economy in the North Country.

This project is opposed by many environmental groups and should be scrapped.

0071-1
Continued

Northern Pass

Let me introduce myself, I am Harley Mason of Milan NH and I own and operate Mason Enterprises, which is an excavating and trucking company. We build roads and subdivisions, complete site work for homes and business. WE also process and sell gravel.

We support the Northern Pass as this project is much needed in Coos County creating around 300 jobs and bringing in millions of dollars for the workers, all the small businesses and giving the economy a big boost.

We were involved with the Portland Natural Gas pipe line which came through Coos County in 2000-2001, as we supplied gravel, sand and trucks. This project put many people to work and brought thousands of dollars in to all the small towns which, was great!

IN Coos County mills

Next came, the Wind ~~Towers~~ on Dixville Peaks, Kelsey, Owls Head and Blue Mt. a total of 33 towers were installed. Our construction crew doubled in size as we worked 12 to 14 hours a day -7 days a week with several dump trucks delivering gravel – stone- and burial sand. We processed and delivered a total of 54,000 yards of material to the top of these Mts. This project had couple hundred people working again bringing millions of dollars into the area for local ~~stores, bed and breakfast and restaurant~~ Business's. This was a great project for Coos County, the workers ,And Our economy.

The Northern Pass is a much larger project which will take 2 to3 years to complete, with around 300 workers . We are very lucky to have this great project , and should be over whelmed to have the work and the large amounts of monies that will be put into our community.

We are ready to challenge this project. We the workers and contractors of Coos County have the knowledge and ability to start and complete the Northern Pass. We have the ability and knowledge to do it in a professional and safe manner.

SEC

Thank ~~You, Harley~~ We will work Together As A Team! THANK YOU HARLEY To complete This GREAT PROJECT.

0072-1

0072-1
Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS, including impacts on employment and income in New Hampshire.

March 11, 2016

Office of Electricity Delivery & Energy Reliability (OE-20)

U.S. Dept. of Energy

1000 Independence Ave., SW

Washington, D.C. 20585

Mr. Brian Mills:

My name is Raymond Berthiaume and I work and reside in the Twin Mountain area of northern New Hampshire. I have spent most of my life residing, working, and recreating, in northern New Hampshire; from hiking the back woods and trails as a youngster with my Dad, to working in the Forest Products Industry on lands from the lakes region to the Canadian border, to managing campgrounds in and around the White Mountain National Forest. Both of these occupations, recreation and the timber industry, are very vital to this region, and the entire state of New Hampshire.

As I have followed this project, and attended many of the public hearings, I have learned that many oppose this project based on the appearance of 'unsightly towers' or the use of utility rights-of-way. There are also some folks who oppose the thought of power, coming from another country, passing through our state and being distributed to southern New England. This has sparked some good discussion and debate, and everyone is entitled to their own opinion and how/when to express it. These hearings have provided the mechanism to do just that.

With the new 'Forward New Hampshire' plan, some of the opposition to this project has been directed at burying the entire length of the proposed transmission line. Although Northern Pass has altered the proposed route and plan to include burying the line in especially aesthetically sensitive areas, such as through the White Mountain National Forest, I am opposed to burying the entire length of the lines for a couple of reasons.

One, the environmental impacts to the land, wetlands and sensitive areas specifically, are less when the lines are constructed overhead rather than disturbing the area to bury them. And

Second, overhead lines present fewer limitations to private landowners when they wish to continue utilizing their property, as well as providing increased recreational opportunities for the private landowner and the general public. We have all seen, and most have used, overhead powerline corridors as ATV and snowmobile trails, as well as access routes to other recreational activities.

0073-1

0073-1
Thank you for your comment. The commenter's concerns regarding overhead versus buried transmission lines are noted. The EIS process is intended to acknowledge and analyze potential project environmental impacts to a variety of resources. This EIS analyzes a wide range of alternatives with varying lengths of above-ground and buried transmission lines (see Section 2). Although overhead transmission lines often have lower impacts to terrestrial resources, impacts to other resources, such as visual, are also considered.

I support the Northern Pass project, and for a few good reasons.

First, I believe that any proposed project that involves bringing **renewable** energy to the region, and lessening the dependence on fossil fuels, either foreign or domestic, must be strongly considered. Northern Pass does this.

Second, and at least initially perhaps the most important reason, the folks from Northern Pass not only have a plan to spend large sums of money in the region, they are and have been doing so for months now. This project will support our local businesses, all of them, especially during the construction phase. Many good, local jobs will be provided during the construction phase as well. All of these workers will utilize the services provided, and purchase the goods available, in the region.

Third, this project will provide a much needed upgrade to the Coos Loop electric grid system. The age and condition of this system currently does not allow our existing generation facilities to operate at or near full capacity. This upgrade will allow that, as well as to allow a more secure and consistent delivery of electricity to our customers in this region. This upgrade will allow for up to 100MW of additional power to be delivered to the grid. This increase will allow the Burgess Biopower plant in Berlin, NH, as well as the wind energy facilities in Berlin, Millsfield, and Dixville, to operate to full capacity. This reduction in limitations to the biomass facility specifically, will provide a much needed boost to the region's timber industry which has been hard hit by reductions in markets for low grade wood. This market is crucial to keeping our loggers, sawmills, truckers, and supporting businesses healthy and prosperous.

The Northern Pass project, and specifically the 'Forward NH Plan', will provide an economic stimulus to the state, and to this region, that has been so desperately needed. They have been doing this, and will continue to do this, by supporting our local businesses and organizations, and helping our local industries, such as timber production and tourism, to grow and prosper into the future.

Sincerely,

Raymond C. Berthiaume

373 Route 302 W

Twin Mt., NH 03595

0073-2

0073-3

0073-4

0073-2
Thank you for your comment. As discussed in Section 1.4 of the EIS, Northern Pass set forth a range of project objectives and benefits in its permit application. DOE and the cooperating agencies reviewed this documentation and determined that the project objectives include addressing three primary needs concerning New England's electricity supply: diverse, low-carbon, non-intermittent electricity.

0073-3
Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS, including impacts on employment and income in New Hampshire.

0073-4
Thank you for your comment. The socioeconomic consequences of the Project are analyzed in detail in Section 4.1.2 of the EIS. The analysis presented in the final EIS was updated to reflect current market conditions and inputs.

Neil Irvine again from New Hampton. Felt compelled to raise my hand to respond to Joe Casey's comments and hopefully he stayed in the room long enough to hear what I have to say. Had he taken the time to read the EIS, or even the Draft EIS, he would have seen clearly that the full burial option creates more jobs, more jobs for the people of New Hampshire. Because we don't have high tower high voltage electrical workers in this state of the type of line that they're proposing to build. You choose to bury this line, I'll be the first guy standing in line with a shovel because every guy in New Hampshire knows how to run a shovel. Most of us know how to run an excavator. So there will be real jobs for the people of New Hampshire, and yes, they're temporary jobs as all construction jobs are. They are temporary in nature. And they'll move on somewhere else. But for that short brief moment in time, the people of New Hampshire will get some work. Not imported labor. Thank you very much.

0074-1

0074-1
Thank you for your comment. Socioeconomic impacts for all the alternatives, including alternatives evaluating project burial, are addressed in the EIS within Section 4.1.2, including potential impacts on employment and income within New Hampshire.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Jul 27, 2015

ID: 8226

Date Entered: Jul 27, 2015

Source: Website

Topics: Purpose and Need, Alternatives, Vegetation

Organization:

Comment: The current proposal to build giant electric towers across some of New Hampshire's most treasured conservation land is atrocious. The Northern Pass project should be completely stopped, and if that is not possible, at least the electric lines must be buried. We are told the project will provide jobs in New Hampshire at the same time the company is making plans to import workers from Canada. Any jobs created in order to build this electric line would be temporary, whereas jobs created by tourism are more permanent, or at least will be if the trails and beautiful views which attract visitors are preserved.

0075-1

0075-1
Thank you for your comment. Economics impacts are addressed in the EIS in Section 4.1.2 and include an evaluation of both construction related, and long-term employment and income within New Hampshire. The analysis does not attempt to specify the origin of Project related employment.

From: Rick & Chris Weissbrod <rwcw1946@myfairpoint.net>
Sent: Saturday, August 08, 2015 11:06 AM
To: draftEIScomments@northernpasseis.us
Subject: Northern Pass transmission

To Whom it may concern,

The developers of the northern pass transmission route through NH should be required to bury the lines for the following reasons:

1. The property owners would be affected by loss of property value and unsightly transmission towers with the undisclosed risks associated with overhead high tension transmission.
2. With NH counting on its tourist businesses to produce revenue, the transmission towers and lines would adversely affect that source, as unsightly views will cause a drop in tourism as well as forcing some out of business as just the suggestion already has.
3. The impact on the environment over all would be enough to warrant thought into other alternatives.

There are also reasons that support burying the transmission lines:

1.Burying the lines beneath existing road ROWs would eliminate opposition to the project from the businesses as well as property owners and environmentalists. There would be no disruption of scenic views or the environment.

2. Burying the lines would create many more jobs therefore stimulating the economy of the area.

We in NH are the only New England state that has not passed laws to prohibit the overhead transmission of power from Canada into this country. This has happened because of a poor setup where the governor appoints the SEC and its members are part of the developer. This situation should not exist for obvious reasons. Until such time as this can be rectified we need to remember this is the New Hampshire we will pass on to future generations.

Regards,
Rick Weissbrod

0076-1

0076-2

0076-3

0076-1
Thank you for your comment. Section 4.1.2 of the EIS addresses the potential for impact to property values as a function of proximity of the Project to private property. Adjustments to the original analysis presented in the draft EIS have been updated in the final EIS to reflect comments on the methodology and assumptions.

0076-2
Thank you for your comment. The EIS discusses the importance of tourism to New Hampshire, businesses, and the local and regional economy. The EIS (Section 3.1.2) and the Socioeconomic Technical Report describe the methods used to analyze potential impact to tourism for this EIS. As discussed in Section 4.1.2 of the EIS, no authoritative peer-reviewed studies were identified that address impacts to tourism as a result of the construction of transmission lines, and DOE did not attempt to develop such a study. No other resources were identified to allow for quantification of potential impacts. The EIS concludes that "while it is reasonable to conclude that the Project may have some level of impact on tourism within New Hampshire and on individual locations near the Project route, these are not quantifiable."

0076-3
Thank you for your comment. Economic impacts for all the alternatives, including burial, are addressed in the EIS, including impacts on employment and income in New Hampshire (see Section 4.1.2 of the EIS).

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Mar 28, 2016

ID: 8874

Date Entered: Mar 28, 2016

Source: Website

Topics: Viewshed/Scenery, Recreation, Taxes, Economic, Tourism, Quality of Life, Other

Name: Christopher Rice

Organization:

Email: racetelemark@hotmail.com

Mailing Address: 563 sixth ave

City: Berlin

Zip: 03570

Country: US

Comment: There exists a jobs creation argument for Norther Pass. While jobs in the North Country are needed and the Northern Pass project offers the promise of some permanent and temporary jobs creation, it is my understanding that burying the the power lines would create perhaps twice the amount of jobs as towers would.

0079-1

On the topics of tourism, recreation, view-sheds, and quality of life, the North Country scenery is unique in that it offers a combination of large undisturbed forested areas with some of the largest ridges and peaks in the North East. The proposed towers will be a detracting and ugly imposition upon what is now a fairly undisturbed view of the regions natural beauty. Hundreds of thousands of residents and tourists are accustomed to and expect to benefit from the view of such natural beauty. It is part of our inner appreciation for nature and for life that these views help promote. From hikers to leaf peepers to skiers, to people just looking out their home or car windows, the sight of towers marching across the landscape will detract value from our lives. Once those towers are up, they will be a stain on the landscape for perhaps hundreds of years.

0079-2

Please bury the Norther Pass lines all the way through the North Country view shed area.
It will better benefit the jobs interests, the tourist and receation interests, and the economic income and tax revenue associated. With the level of natural beauty that our present North Country views bring, those towers will hurt the broad scope of interests of the the residents and visitors.

Do the right thing by burying the entire Northern Pass lines through all of the North Country.

0079-1
Thank you for your comment. Economic impacts for all the alternatives, including burial, are addressed in the EIS, including impacts on employment and income in New Hampshire. Construction related and long-term employment estimates are included, by alternative, in Section 4.1.2.

0079-2
Thank you for your comment. The EIS evaluates several alternatives that include burial of the Project and/or specific segments of the Project. Each of these alternatives is evaluated and compared within the Socioeconomic section of the EIS (see Section 4.1.2). The EIS additionally analyzes the importance of tourism to New Hampshire, businesses, and the local and regional economy. The EIS (Section 3.1.2) and the Socioeconomic Technical Report describe the methods used to analyze potential impact to tourism for this EIS. As discussed in Section 4.1.2 of the EIS, no authoritative peer-reviewed studies were identified that address impacts to tourism as a result of the construction of transmission lines, and DOE did not attempt to develop such a study. No other resources were identified to allow for quantification of potential impacts. The EIS concludes that "while it is reasonable to conclude that the Project may have some level of impact on tourism within New Hampshire and on individual locations near the Project route, these are not quantifiable." Additionally, Section 4.1.1 addressed potential impacts to Visual Resources which may result, and Section 4.1.3 addressed potential impacts to Recreation.

To: NH Site Evaluation Committee

From: Jason and Tricia Balint

RE: Northern Pass Transmission Project

Date: March 6, 2016

Spelling of Name as going on record: Jason and Tricia Balint of Diamond Pond Road, Colebrook NH

My wife and I bought property which is located on Diamond Pond Road in Colebrook, about one half mile from where the proposed transmission line would be going aerial and about one mile from the entrance of Coleman State Park. We had dreams of building a camp in this area that as of now has some of the most beautiful views in the North Country. Someday we hoped to hand the keys over to our daughter Ayla so she too could have the chance to enjoy what we have come to love. But as of now the tools have been put down and the building has stopped and our dreams and aspirations are being replaced with anger and disgust. The view from where the deck would go would be exposed to approximately 2 miles of transmission towers and lines if the project were approved and it ripped thru the valley near Heath Road and up the side of Sugar Hill. Who would have ever thought that 6 years since the original proposal the Northern Pass would still be insisting to install aerial transmission towers over 100 feet tall and so close to a NH State Park and tourist attraction. My immediate neighbors along with everyone on Diamond Pond Road share the same level of disgust, frustration and anger.

The Facts:

1. There were roughly 143 petitions for intervention recently submitted to the Site Evaluation Committee. The Northern Pass was quick to submit a "Response and Objection" to many of these petitions. In the document titled 2015-06 that was submitted to the SEC the Northern Pass states that any property owners not within 100 feet of the affected area do not qualify for any sort of intervention. The 100 foot rule would be shorter than that of height of the proposed towers?

2. My wife and I attended the first SEC meeting in Meredith last week. While there a real estate "expert" who was apparently on the Northern Passes payroll stated that transmission lines such as those proposed by the Northern Pass " will have no adverse effects" on property values. The reactions by 2 realtors in the room and many others would lead one to believe that this is a fictitious statement. My question would be: Will the Northern Pass be prepared to sign off on and accept all monetary damages that will occur from the loss of our property values if the project were to go thru as its currently proposed?

3. The Northern Pass speaks of job creation for New Hampshire which is false and misleading. This is nothing more than a short term high for the benefit of the Northern Pass and its associated Unions which most likely have millions of dollars invested in lobbying. Wouldn't a total burial of the transmission line create more jobs?

4. I question why we are all here in the first place. To intelligently and thoroughly evaluate a proposed route for the transmission line there must be one. To my knowledge the project is blocked in two locations north of where the project is proposed to go aerial in the area of Bear Rock Road and the Washburn Family Trust? Do we have a "Maybe" Route"?

I leave you with these thoughts and ask, in fact beg that the Site Evaluation Committee come to our homes and properties and see the impacts that this project would have on our homes, towns and on our state in general from our point of view and not that of the Northern Pass. We cannot allow our beautiful landscapes to be subject to this kind of project that has been proposed by an organization that has little to no regard for the state of New Hampshire or its residents, in particular those of us in the North Country. If the Northern Pass truly valued what we as residents and many state officials have voiced over and over, the last proposal 6 years later would have mentioned it being entirely underground which it does not. It's not that they can't, it's that they don't want to.

This project is clearly more about profit and less about power. Please consider what is ours and do not allow a for profit organization to capitalize on what we have worked so hard to preserve for generations to come. From what I can see the only supporters for the Northern Pass are those who will profit from it.

Respectfully submitted,

J. Balint

Jason and Tricia Balint

Diamond Pond Road

Colebrook NH

0080-1

Thank you for your comment. Economic impacts for all the alternatives, including burial, are addressed in the EIS, including impacts on employment and income in New Hampshire (see Section 4.1.2 of the EIS).

0080-2

Thank you for your comment. Proposed and alternative routes are described in Sections 2.3 and 2.4 of the EIS. The proposed and alternative routes considered in detail are analyzed throughout the final EIS. The Applicant is responsible for securing all necessary rights and land use approvals to utilize any route permitted by the SEC. Sections 3.1.6.3 and 3.1.6.4 of the EIS discuss rights-of-way and the law, regulation and policy surrounding the use of public rights-of-way for a potential transmission route. Greater detail regarding the pertinent laws, regulations and policies is provided in Section 1.5 of the Land Use Technical Report.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Apr 4, 2016

ID: 9202

Date Entered: Apr 4, 2016

Source: Website

Topics: Other

Name: Dan Dolan

Organization: New England Power Generators Association

Title: President

Email: Ddolan@nepga.org

Mailing Address: 141 Tremont Street

City: Boston

State: MA

Zip: 02111

Country: US

Comment:

UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY

OFFICE OF ELECTRICITY DELIVERY AND ENERGY RELIABILITY

Northern Pass Transmission LLC **Docket No. PP-371**

COMMENTS OF
THE NEW ENGLAND POWER GENERATORS ASSOCIATION, INC.

Pursuant to the Notice published in *The Federal Register* on February 4, 2016, the New England Power Generators Association, Inc., ("NEPGA") hereby files comments in the above-captioned proceeding regarding the Draft Environmental Impact Statement prepared in response to an application for a Presidential Permit ("Permit") filed by Northern Pass Transmission, LLC ("Northern Pass"). NEPGA[1] filed for and was granted intervention status on January 15, 2011, thus is already a party in this proceeding and previously filed comments in September of 2013.[2]

Northern Pass seeks a Permit authorizing the construction, connection, operation and maintenance of facilities for the transmission of electric energy at the international border in the State of New Hampshire in the United States and Canada ("NPT" or "Project"). NEPGA maintains that the DEIS failed to take into account the comments filed by NEPGA in September of 2013. In addition, much of the background and project objectives included in the DEIS have changed

[1] The New England Power Generators Association ("NEPGA") is the trade association representing competitive electric generating companies in New England. NEPGA's members represent 85 percent, or nearly 27,000 megawatts, of all the available generating capacity in New England. The views in these comments reflect those of NEPGA and not necessarily the positions of each individual member

[2] See NEPGA Comments filed September 2013 file:///C:/Users/khorgan/Downloads/NEPGA_Comments_DOE_PP-3711.pdf.

0081-1

0081-1
Thank you for your comment. All comments and documents received during the scoping and public participation process have been reviewed and considered. The final scoping report can be found in the project library under scoping information on DOE's EIS website for the project at https://www.northernpasseis.us/library Additional information about the scoping process and how comments were handled can be found in Appendix B – Scoping Issues Statement and section 1.5 of the EIS where the scoping process is explained. The project objectives have been updated in the final EIS to reference updated information regarding market conditions and regional energy infrastructure and policy (see Section 1.4).

dramatically over the course of the almost 10 years it has taken the Applicants to develop the project thus far due to a myriad of factors, including changes in market conditions that have driven the cost of energy down and advances in regional energy infrastructure and policy.

Separate and apart from these changes, the DEIS also fails to address the fact that the Amended Application misrepresents the impacts of the proposed project, relies upon outdated and inaccurate data and analysis, and fails to provide certain information necessary for the Department of Energy ("DOE") to make a determination if an issuance of the Permit is consistent with the public interest. Moreover, NEPGA continues to maintain that the Amended Application filing is premature, as Northern Pass does not have site control over the proposed transmission line route, which is the subject of this docket, and that disputes over property rights along the proposed route plague the Applicants and will continue to do so into the future. For these reasons, NEPGA asserts that DOE should determine: (1) that the July 2015 DEIS is not complete; and (2) that significant elements for the project objectives section need to be corrected and or eliminated in the final EIS. In the alternative, the numerous inaccuracies noted below should be struck from the Amended Application and NPT should be directed by DOE to provide updated and accurate information.

In support of this filing, NEPGA offers the following:

I. The September 2013 comments offered by the New England Power Generators Association continue to offer a strong rebuttal to the applicant's case for the Northern Pass Project.

0081-1 cont'd

0081-1 Continued

0081-2

Thank you for your comment. The Further Amendment to Presidential Permit Application was submitted by Northern Pass to DOE on August 31, 2015. DOE reviewed the amended application under 10 CFR 205, found it complete, and determined that it contained adequate information in order for DOE to analyze the impacts of the Project under NEPA. DOE has performed its own analysis of the environmental impacts of all alternatives through this EIS, and does not rely on analyses completed by the Applicant. Technical reports supporting the analyses in this EIS were prepared by independent experts at the direction of DOE. With respect to property rights, Sections 3.1.6.3 and 3.1.6.4 of the EIS discuss rights-of-way, as well as the laws, regulations, and policies surrounding the use of public rights-of-way for a potential transmission route. Greater detail regarding the pertinent laws, regulations and policies is provided in Section 1.5 of the Land Use Technical Report. The project objectives section of the final EIS has been updated to reflect current market trends and regional energy policy (Section 1.4 of the EIS).

In September of 2013, NEPGA filed initial comments for the Department's consideration, which outlined concerns with the Applicant's views regarding regional energy, environmental and market conditions. The passage of time has validated much of the NEPGA analysis. Unfortunately, the Applicant has yet to address these issues.

The Comments offered by NEPGA address several subject areas pertinent to the application that should be considered by the DOE in the final EIS including that Northern Pass misrepresents changes in wholesale power prices and overall market dynamics, which are explained in more detail herein, and that Northern Pass misrepresents the reduction in CO2 emissions that the Project will achieve. The NEPGA comments correctly observed that the application fails to offer any evidence for its CO2 reduction claims. However, it is likely that these claims are based on displacement of higher emitting sources. Most if not all of the major CO2 source reductions have already occurred and the Northern Pass application should not use these reductions in its effort to show that the project offers benefits that have already been impacted by these source reductions.

A. Northern Pass misrepresents the reduced dependence on natural gas.

NEPGA's comments offer clear evidence that the power flowing into New England from Northern Pass will only serve to increase gas dependence in other regions. Further, as is detailed in section II of these comments, significant pipeline infrastructure is presently being developed in New England. These projects significantly alter the financial and economic calculus used in the project objectives, and therefore need to be updated in the final EIS.

0081-3

0081-3
Thank you for your comment. Section 4.1.2 of the final EIS has been updated to reflect an analysis of impacts on the electricity system based on more recent data, including updated forecasts for natural gas pricing and supply.

B. Northern Pass misrepresents the project's role in addressing New England reliability concerns.

In 2010, when Northern Pass was proposed it was not a reliability project. In 2013, when the DOE received comments on the DEIS the Northern Pass project was not a reliability project; in July of 2015 when the DEIS was published the Northern Pass project was not a reliability project and in April of 2016, as these comments are offered, the Northern Pass project is still not a reliability project. Despite these facts, the applicant, and to some degree the DEIS, seem to suggest that the Northern Pass is an ISO-NE reliability project. The final EIS must make it clear that the project is and remains a merchant project, and is not a project developed as part the regional reliability system.

C. Northern Pass fails to discuss shortage incidents caused by similar import facilities to the New England system.

The supply that will flow over the Northern Pass Transmission system is not dispatched by ISO-NE. The 2013 comments by NEPGA demonstrated a history of power interruptions that have occurred over similar import facilities. Since July 2013, four of the last six electricity shortage events or severe operational issues in New England were related to curtailments of imports from HQ.[3] The Final EIS should not only reference these reliability events, but should also analyze the effect of additional reliance on imported large-scale hydro will have on grid reliability.

D. Northern Pass misrepresents its ability to gain site control over its proposed route.

[3] See ISO Operations Reports for September 9, 2015; December 4, 2014; December 14, 2013; and July 13, 2013.

0081-4

0081-4
Thank you for your comment. As stated in Section 1.4 of the EIS, the purpose of the Project is to build and operate a participant-funded electric transmission line. Section 4.1.2.2 of the EIS further states: "Future system reliability and impact studies would be conducted according to ISO-NE parameters in order to determine the effect of interconnecting the Project into the ISO-NE grid. The Project has not been identified as a reliability project, although the Applicant addressed reliability issues in their Amended Application (Northern Pass 2013a)."

0081-5

0081-5
Thank you for your comment. This EIS process is intended to respond to a specific application from the proponent to evaluate the Project. Region-wide, or system-wide evaluation of supply, demand and/or reliability is the responsibility of ISO-NE and is beyond the scope of this EIS analysis.

The DEIS fails to consider questions about the Northern Pass' ability to gain site control. Disputes over property rights, easements and leases have and will define the controversy over the Northern Pass.[4] The application does not address these risks and the DEIS does not weigh these impacts within its consideration of the balance of the harms and benefits of the project. The final EIS should address these ongoing concerns and at the very least indicate that the potential issuance of a Presidential Permit will have no impact on these disputes.

Recently, two significant disputes have emerged that are challenging Northern Pass' control over the rights of way envisioned for the project. These include a superior court challenge being pursued by the Society for the Protection of NH Forests,[5] and a dispute at the NH Public Utilities Commission concerning the validity of leases entered into between Public Service Company of NH and Northern Pass.[6]

E. The Northern Pass misrepresents the likely employment impacts of the project.

NEPGA's 2013 comments presented the results of an employment study undertaken by NEPGA related to Northern Pass and its effect on jobs. That study

[4] See, e.g., Society for the Protection Forests v. Northern Pass Transmission LLC, Docket No. 214-2015-CV-114, currently pending before the Coos County (NH) Superior Court (challenge to right of Northern Pass to install transmission line on plaintiff's property).

[5] *See* id.

[6] NH PUC Docket DE 15-464: Public Service Company of New Hampshire d/b/a Eversource Energy Petition for Approval of Lease Agreement between PSNH dba Eversource Energy and Northern Pass Transmission LLC. http://www.puc.state.nh.us/Regulatory/Docketbk/2015/15-464.html

0081-6

0081-6
Thank you for your comment. The Applicant is responsible for securing all necessary rights and land use approvals to utilize any route permitted by the SEC. Sections 3.1.6.3 and 3.1.6.4 of the EIS discuss rights-of-ways and the laws, regulations, and policies surrounding the use of public rights-of-way for a potential transmission route. Greater detail regarding the pertinent laws, regulations and policies is provided in Section 1.5 of the Land Use Technical Report. If the Project route were to change due to inability of the Applicant to obtain property rights/easement access, DOE would revisit the prior NEPA analysis (i.e., Northern Pass EIS) and determine if additional NEPA analysis (e.g., supplemental EIS) would be warranted.

0081-7

0081-7
Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS. The analysis conducted did not find evidence that the Project would reduce the construction of new renewable power plants in the U.S. or accelerate plant retirements, other than through by potentially affecting total expenditures for electricity within the market.

challenged the approach used by the applicant in developing its projections for jobs associated with the project. The NEPGA report offered a more substantial analysis than that submitted by the applicant and NPEGA's report should be used as a basis for the final EIS with respect to any assessment on employment associated with the project.

Moreover, the DEIS should consider the adverse employment impacts of the Project as an offset to any increased employment. Specifically, the impact of subsidized power from Canada displacing the manufacturing of electricity in New England and the potential closing or reduced operations of U.S. based power plants and the resulting associated job losses.

II. The DEIS relies on outdated data and analyses as the basis for its conclusion regarding regional energy needs.

New England offers its energy consumers a dynamic and vibrant electricity market that is driven by a well-established competitive market that over the last several years has repeatedly shown itself to be responsive to changing conditions. While much of the work the Department undertook in its consideration of the DEIS addresses environmental issues, the DEIS failed to examine the project objectives relating to other important issues. For example, due to dramatic changes in the cost of energy over the course of the last few years, much of the analyses of the financial and energy markets used in the Department's determinations relating to the Project objectives is outdated and no longer accurately reflects the state of the New England energy market.

0081-7 cont'd

0081-7 Continued

0081-8

Thank you for your comment. Section 4.1.2 of the final EIS has been updated to reflect an analysis of impacts on the electricity system based on more recent data, including updated forecasts for natural gas pricing and supply.

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Of significant note, the DEIS at section S.3 Project Objectives, addresses studies published in 2014 by the Independent System Operator of New England (ISO-NE) which indicated "New England is increasingly dependent on natural gas as a primary fuel for generating electric energy." There are, however, a number of important updates with respect to fuel security, reliability and supply that NEPGA would like to bring to the Department's attention:

A. Fuel Diversity

In 2015, 41% of New England's electricity demand was met by natural gas in 2015 with 16% coming from net imports.[7] A sizable portion of those imports already comes from Quebec. While natural gas represents a growing portion of the power generation capacity, the actual gas-based energy delivered remains well below half. With renewable portfolio standards, continued net imports over existing transmission lines and continued operation of nuclear units that have not announced retirements, it is difficult to envision a scenario in which natural gas is used for more than 45-50% of demand in years 2020 and beyond. Fuel diversity is likely to be preserved for years to come.

B. Natural Gas

Natural gas is a growing part of New England's energy mix because it is extremely cost competitive while meeting some of the most stringent environmental requirements in the country. The ISO-NE dispatch system is designed to ensure that the least expensive resources are dispatched first. This process ensures the ratepayers see the lowest prices practicable. Thus the clear

[7] ISO New England Resource Mix – http://www.iso-ne.com/about/what-we-do/key-stats/resource-mix

reason for an increase in natural gas for electricity production is because it is low cost.

C. Pay for Performance

In response to many of the concerns addressed in the 2014 ISO-NE study, about a new forward capacity market design, often called Pay for Performance, was implemented that requires all electricity capacity resources to be on the system delivering during the most stressed periods of time or face punitive penalties. This was specifically designed to provide for fuel security within the region and address concerns about resource performance. Notably, in the two forward capacity auction held since this new design was approved by FERC, no more than 225 MW of imports from Quebec have cleared in the auction despite capability to import nearly 10 times that amount. The remaining transmission capability will therefore participate as “energy-only” resources avoiding the performance obligations that resources within New England are subject to.

D. LNG and New Gas Infrastructure

Since the 2013-2014 winter in which much of the Northeast United States experienced the “polar vortex,” imports of liquefied natural gas (LNG) have increased exponentially into New England. This has helped contribute to a more robust natural gas supply situation in the region decreasing price volatility and increasing availability of the natural gas generation fleet. At the same time, firm pipeline contracts have been signed for 842,000 dekatherms/day of new capacity into New England from the West over two pipelines – Spectra’s AIM project and

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Kinder Morgan's Northeast Energy Direct. AIM is under construction today, and should Northeast Energy Direct receive approvals, the combined new capacity would increase West-to-East pipeline capability into New England by roughly 25%.

E. The Market is Signaling New Generation

New England's power generation fleet is clearly in a time of transition. And yet the promise of competition through the development of the wholesale markets and restructuring is answering the call through new investments at record prices. Already, 4,200 MW of announced retirements have been absorbed into the marketplace with replacement capacity under construction and development. In the last forward capacity auction (FCA 10) held this past February, 1,492 MW of new plants cleared with nearly 7,000 MW of new plants bidding in. Even with the potential identified by ISO-NE for 6,000 MW of "at risk" plants for retirements there is a tremendous amount of waiting investment ready to be deployed in New England when needed, at competitive prices. The new plants that were selected in FCA 10 will be built at capacity prices 26% lower than what will be paid to new facilities that cleared just one year before and 53% lower than FCA 7, which was the first auction to attract a major new plant to New England. In total, more 3,200 MW of new plants are scheduled to come online by June 1, 2019 with thousands of megawatts of additional new plants competing to come in and replace whatever will be the next plant retirement.

As a result of several market and gas project developments over the past three years, the DEIS concerns about overdependence on natural gas in a gas

constrained market have diminished almost entirely. As a result, the DEIS observations on the regional electric energy market are dated and no longer applicable to the Northern Pass Project. Thus, much of the DEIS work in this area should be updated in the final EIS.

III. The Northern Pass project has meaningfully altered its economic foundations and is no longer proposed as a participant funded merchant project. The Northern Pass Project now seeks to be subsidized and will increase regional energy prices.

As was addressed above, the DEIS relied on data that is now dated and any concerns regarding market development and investments in new infrastructure have been addressed with ISO-NE. Recognizing the changing market, the Northern Pass developers have abandoned the project's original goal of making this a participant funded project and instead are now working to find ways to create subsidies for the project. These developments are an important element of the changing financial stature of the Project that were not present when the DEIS was developed. The DOE should update its analysis of the project objectives.

Among the efforts to offer a subsidy to the NPT is proposed legislation in the State of Massachusetts (Senate Bill 1965) that would allow for utilities to contract for 18,900,000 MWh per year for 15-25 years with provincially-owned large-scale hydropower. That represents 1/3rd of all the electricity consumed in Massachusetts every year and 1/6th of the electricity demand in all of New England. Eversource, a co-owner of Northern Pass, is the largest utility in

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0081-9

0081-9
Thank you for your comment. DOE has no information to suggest that the Project is no longer a "participant funded merchant project" as stated by the commenter. The Socioeconomic impacts addressed in Section 4.1.2 of the EIS include an assessment of changes on electricity expenditures and the anticipated mix of current and future generation types. The analysis provided concludes that the Project may result in a net reduction to annual wholesale electricity expenditures in New Hampshire and within the ISO-NE region. The analysis does not attempt to quantify changes in specific electricity prices or affects to individual residential or commercial rate payers. The analysis conducted did not find evidence that the Project would reduce or alter the construction of new, or reliance upon existing, renewable power sources in the U.S., other than by potentially affecting the total expenditures for electricity within the market. Any analysis of proposed legislation is beyond the scope of analysis of this EIS.

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Massachusetts and along with Hydro Quebec is one of the bill's strongest proponents.

In addition, a controversial ratepayer subsidized "Clean Power RFP" is under consideration in Massachusetts, Connecticut and Rhode Island. As is the case with the Massachusetts Legislation, the NPT proposal to the RFP seeks to have captive electric ratepayers' subsidies the transmission facilities in order to allow out of market prices to be bid into the regional market.

In order to examine the impacts of subsidization scheme such as those being proposed by Northern Pass, NEPGA engaged Dr. Susan F. Tierney of the Analysis Group to conduct an analysis and review of proposed Massachusetts Senate Bill 1965. Dr. Tierney's report finds grave concerns with the legislation and offers the Department a sober analysis of the economic effects of the Northern Pass projected as the applicant today envisions its development. A copy of Dr. Tierney's study is attached to these comments.[8]

Specifically, the study finds that long-term contracts with provincially owned hydro will be expensive. Comments by Dr. Tierney addressing these issues include:

- "This amount of power is not needed for reliability. Nor can it be low cost in light of the full investments (including transmission and new generating assets) needed to supply firm power into New England for so many years." (Page 6)
- "Second, long-term contracts for large-scale hydropower from Canada will not be cheap and will not have the hoped for result of lowering consumers' electric rates....When considered in total, the costs of the power and the transmission delivery facilities are likely to be well

[8] *See* Tierney Report on Cost Implications of Senate Bill 1965, September 2015, http://nepga.org/2015/09/tierney-report-on-ma-emissions-cost-of-hydro-contracting/

above market prices if procured in the manner anticipated by Senate Bill 1965." (Executive Summary, page 2).

- "Looked at from another angle, if the Canadian suppliers were to offer a price that was equal to the anticipated forward price curve in New England without a premium to cover their costs for the transmission line, then it is unlikely that the suppliers would have sufficient contract revenues to cover the cost to construct both the transmission and generation facilities needed to supply a contract for 9.45 million MWh to 18.9 million MWh per year on a base load basis for 15- 25 years. In such a case, the project would not be economical for the Canadians to pursue. If the Canadians did pursue such a project, the Canadian government would effectively be subsidizing electricity producers at the cost of Canadian citizens, and it is unclear why a government-owned utility would ever agree to such a contract." (Page 5)

- "The only reasonable assumption then is that, like the example of the Vermont/Hydro-Quebec contract, the electric energy will be priced at or above New England market prices when transmission costs are included. Using the transmission-cost figure highlighted above would bring the cost of the Hydro Quebec/Nalcor power to ~$97/MWh, compared to average New England prices for delivered power of ~$55/MWh. This represents $777 million in above-market costs that Massachusetts consumers would be paying every year. Such an exorbitant cost does not appear to be justified even with the other policy considerations weighed." (Pages 5-6)

IV. Conclusion

The issues and concerns noted by NEPGA in its previously-filed comments not only remain true today, but the passage of time and changes in the region's energy market have led to greater discrepancies and greater gaps between the purported benefits the Applicants claim the Project will bring and what the data actually supports. The economic and financial elements of the Project Objectives section of the DEIS have been overtaken by time, as well as regional market and public policy developments. As a result of these changes, the DEIS Project Objectives must be substantially

0081-9 cont'd

0081-9 Continued

0081-10

Thank you for your comment. As discussed in Section 1.4 of the EIS, Northern Pass set forth a range of project objectives and benefits in its permit application, which have remained consistent in all subsequent amendments (July 2013 and August 2015). DOE and the cooperating agencies reviewed this documentation and determined that the project objectives include addressing three primary needs concerning New England's electricity supply: diverse, low-carbon, non-intermittent electricity. Section 1.4 of the final EIS has been updated to include new information on market trends and energy use since the draft EIS was published in 2015. The socioeconomic analysis of potential energy costs has been updated in the final EIS (see Section 4.1.2), but an analysis of ratepayer subsidies and Project viability is outside the scope of this EIS.

0081-10

changed. The Northern Pass Project finds itself in 2016 in a much different situation than it was in 2010 and 2011 when the application for the Presidential Permit and EIS was begun. When examined in the context of cost, emissions and reliability, the Project fails on all three fronts. What was then purported as a low cost, participant funded merchant project has become a high cost (relative to regional prices and price forecasts) that will now require ratepayer subsidies in order to be viable. The final EIS must acknowledge that the perceived financial benefits of the project have evaporated, over time.

With respect to emissions, the purported benefits related to CO2 emission reductions are overstated and misleading because they include less efficient facilities that have already retired. Similarly, to the extent any claims are made that the importation of large-scale hydro via the Northern Pass project will enable the region to meet 2020 emissions goals, the Project, which has already taken almost 10 years to file its siting Application, will not, even if it successfully obtains its Permit, be operational in time to affect 2020 emissions targets. The DEIS should reflect these facts.

With respect to reliability, first and foremost, the Project is not a reliability project and any suggestion by either the Applicants or the DOE in the DEIS should be amended to reflect that this is Project is and always has been a merchant project. Second, and perhaps more importantly, ISO-NE data clearly demonstrates that the importation of large-scale hydro has ben the source of the greatest challenges to securing the regional grid at critical

0081-10 cont'd

0081-10 Continued

0081-11

Thank you for your comment. Section 4.1.10.2 of the EIS discusses greenhouse gas emission impacts. Analysis of greenhouse gas (GHG) emissions was conducted with GE Energy Modeling to consider future projected scenarios of fossil fuel use and generation in ISO-NE. That analysis included projected retirement of existing power generation facilities, as well as new facilities and transmission. For additional discussion, please see Section 3.5 of the Air Quality and Greenhouse Gas Technical Report, and the GE Consulting analysis of the Northern Pass Transmission Project Report (Appendix 8 of the Socioeconomics Technical Report). Additionally, the GE Energy Modeling was conducted again in January 2017 to capture the most recent announced retirements and/or additional sources of supply which are anticipated within the modeled time frame.

0081-12

Thank you for your comment. Section 4.1.10 of the EIS discusses air quality and greenhouse gas (GHG) emissions. The analyses prepared for the EIS include 2020, 2025, and 2030 projected impacts. Benefits resulting from the Project would address future air quality and GHG goals beyond 2020. For the purposes of analysis and modeling, an in-service date of 2020 was used.

0081-13

Thank you for your comment. As stated in Section 1.4 of the EIS, the purpose of the Project is to build and operate a participant-funded electric transmission line. Section 4.1.2.2 of the EIS further states: "Future system reliability and impact studies would be conducted according to ISO-NE parameters in order to determine the effect of interconnecting the Project into the ISO-NE grid. The Project has not been identified as a reliability project, although the Applicant addressed reliability issues in their Amended Application (Northern Pass 2013a)." In deciding whether the issuance of a Presidential permit would be consistent with the public interest, DOE assesses the environmental impacts of the proposed project and reasonable alternatives, the impact of the proposed action on electric reliability, and any other factors that DOE may also consider relevant to the public interest. The EIS analyzes potential environmental impacts to the electricity system in the socioeconomics section (see Section 4.1.2 of the EIS). The

reliability study, completed in cooperation with ISO-NE, provides a separate analysis of impacts of the proposed federal action on the electricity system.

times. The final EIS should reference these reliability events to provide an accurate picture of the dangerous effect that increasing the role this type of resource may play in maintaining grid reliability.

Finally, with respect to the purported economic benefits that will flow from this project in terms of jobs, the final EIS should include a reliable analysis of projected job creation, and should also include an analysis of jobs that will assuredly be lost as existing generating facilities close prematurely a result of the subsidized power that will flow into the region.

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0081-14

Thank you for your comment. Socioeconomic impacts are addressed in Section 4.1.2 of the EIS and include an assessment of impacts on electricity rates and the anticipated mix of current and future generation types. The analysis conducted did not find evidence that the Project would reduce or alter the construction of new, or reliance upon existing, renewable power sources in the U.S., other than by potentially affecting total expenditures for electricity within the market. Potential impacts to employment are discussed in Section 4.1.2 of the EIS.

0081-14

clf
conservation law foundation

For a thriving New England

CLF New Hampshire
27 North Main Street
Concord, NH 03301
P: 603.225.3060
F: 603.225.3059
www.clf.org

April 4, 2016

BY ELECTRONIC DELIVERY

Mr. Brian Mills
Office of Electric Delivery and Energy Reliability (OE-20)
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Re: Comments of CLF on DEIS and SDEIS, Northern Pass Transmission LLC, Presidential Permit Application, OE Docket No. PP-371

Dear Mr. Mills:

Conservation Law Foundation ("CLF") appreciates the opportunity to comment on the Draft Environmental Impact Statement ("DEIS") and Supplemental Draft Environmental Impact Statement ("Supplemental DEIS" or "SDEIS") regarding the Northern Pass Transmission Project ("Project") application for a Presidential Permit in Docket No. PP-371. In light of the substantial public interest in the proposed Project, and the significant impacts the proposed project would have in the context of New England's energy future and on the landscape, environment and communities of New Hampshire, we are troubled by numerous significant deficiencies in DOE's review, including but not limited to:

- A failure to adequately analyze the proposed project, including its purported need, within the context of significant energy-related considerations in New England;
- A grossly deficient purpose and need statement, leading to an overly constrained, flawed alternatives analysis;
- A failure to analyze the No-Action Alternative, other forms of generation, including renewables and energy efficiency, and alternative transmission options, including different routes;
- A failure to identify and evaluate impacts to landscape-level historical and cultural resources; and
- A failure to analyze the Project's impacts in Canada.

In light of these and other significant deficiencies discussed in our comments below, CLF urges DOE not to proceed to the preparation of a Final EIS. Rather, the DEIS and SDEIS

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contain deficiencies that, to enable informed decision-making and meaningful public participation, warrant further supplementation of the DEIS to rectify errors.[1]

I. Introduction

Northern Pass LLC filed an application on October 14, 2010 requesting that DOE grant a Presidential Permit for a high-voltage transmission line to import hydroelectric power from Quebec, Canada into New England. This was followed by an amended application on July 1, 2013, with a further amended application submitted on August 21, 2015. The current proposal is to construct a 192-mile line to transmit 1000 megawatts ("MW") of power, with a transfer capability of up to 1090 MW, entering the United States from Canada in Pittsburg, New Hampshire and extending to an interconnection point with ISO-New England ("ISO-NE") in Deerfield, New Hampshire. As currently proposed, the Project would entail 132 miles of overhead transmission lines, with 60.5 miles of the line to be buried including 52 miles through the White Mountain National Forest.

The Presidential Permit process requires DOE to decide whether the Project is "consistent with the public interest" of the United States and may impose on the Project "such conditions as the public interest may in its judgment require." *See* Executive Order 10,485, as amended by Executive Order 12,038. Before determining that a Presidential Permit is in the public interest, DOE must comply with the National Environmental Policy Act ("NEPA") and Section 106 of the National Historic Preservation Act of 1966 ("NHPA"). DOE coordinates with a number of other state and federal agencies throughout this process.

DOE issued a DEIS on the Northern Pass project in July 2015, followed by a Supplemental DEIS in November 2015 to reflect proposed changes contained in the August 21, 2015 amended application.

CLF is a non-profit, member-supported environmental advocacy organization that works to solve the environmental problems threatening the people, natural resources and communities of New England. CLF's advocates use law, economics, and science to design and implement strategies that conserve natural resources, protect public health, and promote vital communities in our region. Founded in 1966, CLF has a long history of participation in proceedings before state utility commissions, ISO-NE, and federal agencies in a wide range of energy matters. CLF has extensive experience in the operation of New England's wholesale electricity markets: CLF has long been a Market Participant in the New England Power Pool ("NEPOOL"), the stakeholder entity legally sanctioned by the Federal Energy Regulatory Commission to monitor

[1] Together with these comments, CLF submits twenty-three exhibits that are provided as weblinks or as attachments. In addition, per instructions received from your staff, a cd-rom containing digital copies of all exhibits has been mailed as a courtesy to your office.

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ISO-NE, and CLF attorneys sit on both the NEPOOL Reliability Committee and the ISO-NE's Participants Advisory Committee that are responsible for making recommendations and determinations concerning ISO-NE's Forward Capacity Market and its load zones. CLF attorneys also sit on NEPOOL's Markets Committee that advises ISO-NE on potential changes in market rules. CLF has authored and influenced energy legislation throughout the region, and has played a key role in the development of state renewable energy laws, the Regional Greenhouse Gas Initiative ("RGGI"), and energy efficiency laws and regulations.

CLF has played an active role in DOE's Presidential Permit process to date. In connection with DOE's Presidential Permit process and related NEPA review, we have previously filed the following scoping comments and other submittals:

- Protest, Comments and Motion to Intervene of Conservation Law Foundation (12/16/10)
- Objection to Selection of EIS Contractor (filed by Conservation Law Foundation, Appalachian Mountain Club and Coos Community Benefits Alliance) (2/9/11)
- Requests for Additional Post-Scoping, Pre-Draft-EIS Report and for Written Decisions on Pending Protests, Objections, Motions, and Comments (filed by Conservation Law Foundation, Appalachian Mountain Club, The Nature Conservancy in New Hampshire, Ammonoosuc Conservation Trust, Conservation New Hampshire and the Society for the Protection of New Hampshire Forests) (3/31/11)
- Scoping Comments of the Conservation Law Foundation (4/12/11)
- Motion to Stay Proceedings and for Preparation of Comprehensive Assessment of Need for Imports of Canadian Energy into Northeastern United States (filed by Conservation Law Foundation, Ammonoosuc Conservation Trust, Appalachian Mountain Club, Gail S. Beaulieu and Joint Interveners, North Country Council, Owl's Nest Resort & Golf Club, Society for the Protection of New Hampshire Forests and Kelly M. Weiser) (4/28/11)
- Reply to Northern Pass Transmission, LLC Correspondence dated May 5, 2011 (filed by Conservation Law Foundation, Ammonoosuc Conservation Trust, Appalachian Mountain Club, Appalachian Trail Conservancy, Gail S. Beaulieu and Joint Interveners, North Country Council, Owl's Nest Resort & Golf Club, Society for the Protection of New Hampshire Forests and Kelly M. Weiser) (5/17/11)
- Supplemental Scoping Submission (6/13/11)
- Second Supplemental Scoping Submission (10/14/11)
- Third Supplemental Scoping Submission (2/14/12)
- Fourth Supplemental Scoping Submission – Objections to DOE Review and Request for Termination of NEPA Contractor Team (10/9/12)

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- Comments of Conservation Law Foundation, Appalachian Mountain Club, and Society for the Protection of New Hampshire Forests on Amended Application (9/17/13)
- Scope of Environmental Impact Statement (filed by Conservation Law Foundation, Ammonoosuc Conservation Trust, Appalachian Mountain Club, Audubon Society of New Hampshire, Conservation New Hampshire, Environment New Hampshire and Society for the Protection of New Hampshire Forests) (10/30/13)
- Fifth Supplemental Scoping Submission (11/5/13)
- Response to Scoping Report Alternatives Addendum, dated May 1, 2014 (filed by Conservation Law Foundation, Appalachian Mountain Club, The Nature Conservancy – New Hampshire Chapter and the Society for the Protection of New Hampshire Forests) (6/17/14)

In addition to the above, CLF is also a consulting party in the Department of Energy's consultations with stakeholders under Section 106 of the NHPA.

II. DOE Should State its Preferred Alternative for Public Airing

Neither the DEIS issued in July 2015 nor the SDEIS issued in November 2015 states a preferred alternative. DOE should set forth its preferred alternative as soon as possible, together with its reasoning for selecting that alternative. Public interest in the Northern Pass Project is exceptionally high. During the scoping period alone, DOE received 7,560 comments from over 6,400 individuals, businesses, municipalities, government agencies, and other organizations, including organizations with expertise in environmental and energy issues, as well as historical and cultural resources. In light of the intense public opinion surrounding the Project, it is incumbent upon DOE to conduct as transparent a process as possible. Absent an opportunity to comment upon the agency's conclusions and reasoning prior to the FEIS, the public will lose a meaningful opportunity to provide input. CLF urges DOE to state its initial conclusion regarding a preferred alternative, together with the basis for that conclusion, in a further supplementation of the DEIS addressing the many deficiencies in the DEIS and SDEIS discussed herein.

III. It is Essential that DOE Carefully Consider the Need for the Project in Light of Current Competitive Projects as well as Overall Energy Resources in the Region, Including Energy Efficiency and Distributed Generation

In the Project Objectives section of the DEIS, DOE states that the Project "would address three primary needs concerning New England's electricity supply." DEIS at 1-4 to 1-6. These regional needs are identified as electricity diversity, low carbon electricity supply, and non-

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Thank you for your comment. The CEQ NEPA regulations (40 CFR Section 1502.14(e)) require the section of the EIS on alternatives to "identify the agency's preferred alternative if one or more exists, in the draft statement, and identify such alternative in the final statement." CEQ guidance clarifies that "[t]his means that if the agency has a preferred alternative at the Draft EIS stage, that alternative must be labeled or identified as such in the Draft EIS. If the responsible federal official in fact has no preferred alternative at the Draft EIS stage, a preferred alternative need not be identified there." (Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations March 23, 1981, Question 4b). DOE did not have a preferred alternative at the time it issued the draft EIS and supplement to the draft EIS. DOE's preferred alternative, as stated in Sections 1.1.3 and 2.3 of this final EIS, is to grant a Presidential permit to the Applicant for the international border crossing proposed by the Applicant in its Further Amendment to Presidential Permit Application, submitted by Northern Pass to DOE on August 31, 2015. The USFS will identify a preferred alternative in a draft Record of Decision which will be subject to a USFS pre-decisional objection review process (36 CFR Part 218).

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Thank you for your comment. The purpose of, and need for, DOE's action is to determine whether or not to grant the requested Presidential permit for the Project, which is a proposed transmission line crossing the international border. As discussed in Section 1.4 of the EIS, Northern Pass set forth a range of project objectives and benefits in its permit application. DOE and the cooperating agencies reviewed this documentation and determined that the project objectives include addressing three primary needs concerning New England's electricity supply: diverse, low-carbon, non-intermittent electricity. Section 2.4 of the EIS discusses alternatives considered but eliminated from further analysis. DOE determined that other transmission projects, power generation alternatives, and energy conservation do not meet the purpose and need for DOE's action. The EIS analyzes in detail the potential environmental impacts of a No Action Alternative and eleven action alternatives. Under the No Action Alternative, it is assumed that existing energy sources, including distributed generation and alternative energy generation, would continue to supply the ISO-NE region and that energy efficiency measures would continue. Section 3.1.2.5 of the EIS discusses

the existing condition of Electricity System Infrastructure which would be anticipated to persist under the No Action Alternative.

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intermittent power supply.[2] But the existence of such regional needs does not establish that there is a specific need for the Project, as there are myriad solutions available to meet each such need, individually or in combination. Based on a review of the DEIS, CLF concludes that in attempting to identify the need for the Project, DOE has failed to rigorously and comprehensively assess the current regional energy outlook, including: current competitors to Northern Pass; proposed projects that serve similar needs; and the ability of demand-side resources, such as energy efficiency, to reduce or eliminate any specific need for the Project that DOE has identified. DOE should conduct such a thorough assessment prior to drawing any final conclusions as to need for the Project.

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As DOE is well aware, transmission lines are not like roads. Unlike transportation projects where two dots need to be connected with a line, regional energy needs are far more complex, and there are typically multiple (or many) means to achieve the same goal. In this case, the potential solution sets can be defined as follows: (a) projects that are like-competitors to Northern Pass, (b) projects that serve similar needs but are less directly comparable in scope or nature, and (c) energy resources that address the same underlying purposes as Northern Pass through a substantially different means.

Among the projects that are the "like-competitors" to Northern Pass are:

- New England Clean Power Link, a project of TDI New England, described by that company as follows:[3]

> The New England Clean Power Link is a proposed 1,000 MW High Voltage direct current (HVdc) underwater and underground transmission cable that will bring clean, low-cost energy from the U.S.-Canadian border to Vermont and the New England marketplace. Once completed, the project will lower costs for consumers, reduce environmental emissions, create jobs, increase tax revenues, and diversify fuel supply in New England, all while respecting Vermont's natural beauty by burying the cable.

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[2] For a discussion of greenhouse gas emissions associated with hydroelectric power, see n.55 *infra* and references cited therein.

[3] *See* http://www.necplink.com/index.php. CLF notes that it has entered into a settlement agreement with TDI-NE regarding the Clean Power Link, and is on record stating that, "TDI-NE sets an important example of a transmission project that successfully meets high standards for our environment, our people, and our communities." *See* Approval for Transmission Under Lake Champlain to Bring Power to New England, Sandy Levine (Jan. 6, 2016) available at http://www.clf.org/blog/approval-for-transmission-under-lake-champlain-to-bring-power-to-new-england/; Settlement on Large Transmission Project Adds Benefits for Communities, Environment, and Climate, Sandy Levine (July 2, 2015) available at http://www.clf.org/blog/settlement-on-large-transmission-project-adds-benefits-for-communities-environment-and-climate/.

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- The Northeast Energy Link, a project of Emera Maine and National Grid, described by those companies as follows:[4]

> The Northeast Energy Link is a proposed 230-mile 1,100 MW direct current (DC) transmission line delivering renewable energy capacity and diverse supply from northern and eastern Maine and eastern Canada into southern New England. Current project planning is considering an underground transmission line route utilizing existing transportation corridors in eastern Maine, New Hampshire and Massachusetts.

- The Maine Green Line, a project proposed by Anbaric Transmission, National Grid and the Green Line Devco, LLC. The project website describes the proposal as follows:[5]

> Maine Green Line will move up to 1200 megawatts (MW) of power from Maine to eastern Massachusetts. Its goals are to encourage the development of renewable resources in northern New England by providing the necessary infrastructure to bring "green" power to more densely populated areas to the south, including the Boston area, while at the same time increasing the supply of reliable energy into the largest demand center in New England.

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These projects, like Northern Pass, are intended to serve the objectives of enhancing access to diverse, non-intermittent, and low-carbon energy supplies, and they are planned to provide a similar amount of total energy to the New England region. In order to determine whether the Northern Pass Project is in fact needed by New England, and whether it is environmentally advantageous, it is incumbent upon DOE to consider Northern Pass in light of New England Clean Power Link, the Maine Green Line and the Northeast Energy Link. Notably, all of these projects propose full burial of their transmission lines in land or water, unlike Northern Pass.

The responses to the New England Clean Energy Request for Proposals ("Clean Energy RFP") contain various examples of projects that match the second solution set – i.e., projects that serve similar needs to Northern Pass but that vary in scope or nature. The Clean Energy RFP is a joint solicitation by the states of Connecticut, Rhode Island, and Massachusetts seeking proposals for low-carbon energy projects meeting a number of criteria.[6] In recent weeks, dozens of bids have been submitted in response to the Clean Energy RFP.[7] Although Northern Pass is

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[4] *See* http://www.northeastenergylink.com/project/default.aspx.
[5] *See* http://anbarictransmission.com/projects/mainegreenline/.
[6] *See* Clean Energy RFP website at http://cleanenergyrfp.com/.
[7] *See* Public Versions of Bids Available at http://cleanenergyrfp.com/2016/02/01/public-versions-of-bids-available/.

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among the RFP bidders, so are other viable projects that will provide the same or substantially similar regional energy services:[8]

- The Clean Energy Connect bid, a proposed cooperative project of Iberdrola Renewables, EDP Renewables North America, Brookfield Renewable Erie Power, Brookfield Transmission, and Eversource Energy Transmission Ventures, intended to provide to the New England power markets 600 MW of new wind together with existing run-of-the-river hydro power to providing balancing for the wind;
- The Wind and Hydro Response: Vermont Green Line bid, a proposal whereby the Vermont Green Line would transmit to New England's markets 400 MW of total combined power from Invenergy's Bull Run wind farm in connection with balancing hydroelectricity from Hydro-Quebec; and
- The Maine Renewable Energy Interconnect bid, a project proposed by Central Maine Power Company and Emera Maine to transmit energy from the wind farms of EDP Renewables and SunEdison, with the goal of making available to the ISO-NE grid as much as 1,248.6 MW of wind energy.

Each of these proposed projects is intended to address some or all of the objectives that DOE has identified for Northern Pass, and would represent a significant new power resource, though the amounts of power made available by each would vary. In order to determine whether the Northern Pass Project is in fact needed by New England, DOE should consider Northern Pass's claimed attributes in light of contemporary project proposals such as these. Notably, some of these projects feature potential benefits that Northern Pass lacks, such as the benefits that can be derived from tethering wind and hydroelectric power together, which include the potential to simultaneously address intermittency, carbon reduction goals, and the need for more low-impact renewable generation sources.

Finally, among the alternatives belonging to the third solution set are energy efficiency and distributed generation. These energy resources can address the same underlying purposes as Northern Pass through a substantially different means. They are available at a scale comparable to Northern Pass when viewed in the aggregate, as is permitted and encouraged by ISO-NE. Despite requiring a different approach than discrete transmission projects like Northern Pass, they are highly valued resources with many benefits that overlap with and likely exceed those identified by DOE relative to Northern Pass.

Energy efficiency can accomplish each of the three project objectives that DOE suggests Northern Pass can serve, but can do it with no traditional environmental impacts to speak of, at a lower cost, and with greater carbon reductions. Between 2000 and 2013, energy efficiency has

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[8] *See* bid documents provided at http://cleanenergyrfp.com/2016/02/01/public-versions-of-bids-available/.

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reduced New England electricity demand by over 2 gigawatts ("GW"), saving consumers $1.5 billion during the winter of 2014 alone.[9] Approximately 300 MW of energy efficiency resources has cleared the ISO-NE Forward Capacity Market auction for the years 2017 and 2018.[10] The Massachusetts Office of the Attorney General recently commissioned a report that demonstrating that energy efficiency and other resources will defray the need for many new investments in traditional generation and transmission-based projects.[11] DOE should consider the potential that energy efficiency, alone or in combination with another energy resource, will eliminate or reduce the asserted need for Northern Pass.

Distributed generation also can accomplish many of the same objectives that DOE identifies for Northern Pass, but must be balanced by an alternative energy or storage resource to address intermittency.[12] Distributed generation is an increasingly sizable resource, expected to continue its exponential growth. This year, ISO-NE adjusted the installed capacity requirement for its forward capacity auction downward by 367 to 390 MW to account for behind-the-meter distributed solar power that has already been or is projected to be installed by 2019 and is not yet embedded in load.[13] This will likely save consumers around $30 million in avoided capacity costs between 2019 and 2020, and possibly more.[14] DOE should consider the potential that distributed generation, alone or in combination with another energy resource, will eliminate or reduce the asserted need for Northern Pass. Notably, distributed generation and energy efficiency both also have the benefit of reducing the need for costly and potentially high-impact investments in transmission lines, such as the Northern Pass Project itself.

As this discussion illustrates, the solutions to the regional energy demands that DOE addresses in the Project Objectives section of the DEIS are many. Before determining that Northern Pass is needed to satisfy these energy needs, DOE must address the regional and temporal context in which Northern Pass has been proposed. This project is being advanced at a time when developers, combined, are proposing to build more than 12,000 MW of generation to serve New England markets, including 4 GW of wind.[15] It is being advanced at a time when

[9] Acadia Center, *Winter Impacts of Energy Efficiency in New England* (Apr. 2015), *available at* http://acadiacenter.org/wp-content/uploads/2015/04/AcadiaCenter_Efficiency-Restrospective-Analysis_041615_Final.pdf.
[10] *See* Challenges for Electric System Planning, Synapse Energy (July 24, 2015), Table 2 at 10, attached as Ex.1and available at http://www.synapse-energy.com/sites/default/files/Challenges-for-Electric-System-Planning_0.pdf.
[11] *See* Power System Reliability in New England, Analysis Group (Nov. 2015), attached as Ex. 2 and available at http://www.mass.gov/ago/docs/energy-utilities/reros-study-final.pdf.
[12] E.g., wind power or batteries. *See infra* Section V.B.(1) for a discussion of such solutions.
[13] *See* Joint Comments on ISO New England's Draft 2016 PV Forecast (March 9, 2016), at 1, attached as Ex. 3 and available at http://www.iso-ne.com/staticassets/documents/2016/03/joint_draft2016pvforecast_comments.pdf.
[14] *See id*. n.2.
[15] Stephen J. Rourke, New England's Energy Resource Mix is Changing Rapidly (June 15, 2015), at 9 (ISO-NE presentation prepared for EIA Energy conference), attached as Ex. 4 and available at https://www.eia.gov/conference/2015/pdf/presentations/rourke.pdf.

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creative renewable energy solutions and technologies are proliferating, including battery storage options. It is being advanced at a time when the demand for low-impact renewables and energy efficiency is greater than ever. DOE cannot reasonably conclude that Northern Pass serves the region's needs absent a rigorous assessment of need that addresses this context.

IV. The Purpose and Need Statement is Unlawfully Narrow, Establishing a Self-Fulfilling Prophecy in Favor of the Project and Unlawfully Constraining DOE's Alternatives Analysis

An EIS must include a statement of purpose and need. 40 C.F.R. § 1502.10. The agency conducting an EIS "bears the responsibility for defining at the outset the objectives of an action" and "must look hard at the factors relevant to the definition of purpose." *Citizens Against Burlington v. Busey,* 938 F.2d 190, 196 (D.C. Cir. 1991). As CLF stated in its scoping comments dated April 12, 2011, it is axiomatic that a purpose and need statement must be defined by the nature of a proposed project and the impacts associated therewith, and that it must be framed in such a way as to allow for a reasonable range of alternatives to be identified and analyzed. *See, e.g., Border Power Plant Working Group v. Dep't of Energy*, 260 F. Supp. 2d 997, 1030 (S.D. Cal. 2003).[16] Indeed, as the Seventh Circuit explained in *Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 666 (7th Cir. 1997):

> When a federal agency prepares an Environmental Impact Statement (EIS), it must consider "all reasonable alternatives" in depth. 40 C.F.R. §1502.14. No decision is more important than delimiting what these "reasonable alternatives" are. That choice, and the ensuing analysis, forms "the heart of the environmental impact statement." 40 C.F.R. §1502.14.. To make that decision, the first thing an agency must define is the project's purpose. *See Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 195-96 (D.C. Cir. 1991). The broader the purpose, the wider the range of alternatives; and vice versa. The "purpose" of a project is a slippery concept, susceptible of no hard-and-fast definition. One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing "reasonable alternatives" out of consideration (and even out of existence). The federal courts cannot condone an agency's frustration of Congressional will. If the agency constricts the definition of the project's purpose and thereby excludes what truly are reasonable alternatives, the EIS cannot fulfill its role. Nor can the agency satisfy the Act. 42 U.S.C. § 4332(2)(E).

[16] In *Border Power Plant*, 260 F. Supp. 2d at 1030, the court rejected the argument that the purpose and need of the project, which was subject to DOE Presidential Permit process, pertained solely to transmission lines, to the exclusion of generating facilities in Mexico, stating in pertinent part: "There, the scope of the action relates only to the transmission lines, but the nature of the action includes the full scope of the analysis, including the effects of the action. The nature of the action therefore includes the importation of power generated in Mexico."

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Thank you for your comment. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE's purpose and need reflects this limited authority. While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground/overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives, including two alternative border crossings, were considered but eliminated from further detailed analysis.

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At Section 1.2 of the Northern Pass DEIS (at 1-3), DOE provides the following statement of purpose and need:

> The purpose of, and need for, the DOE's action is to determine whether or not to grant the requested Presidential permit for the Project at the international border crossing proposed in the amended Presidential Permit application.

There are two ways to interpret the plain meaning of DOE's purpose and need statement. They are: (1) whether or not to grant a permit for the Project as proposed by the Applicant; or (2) whether or not the proposed transmission line should be permitted *at the specified border crossing*, or at an alternate border crossing. Because DOE fails to seriously consider a border crossing other than the one proposed in the Project Application, as amended, one must conclude that DOE's purpose and need statement asks simply whether to grant a permit for the Project as proposed by the Applicant.

In constraining the issues to this binary question, DOE's purpose and need statement is unreasonably narrow and contrary to law. As the Sixth Circuit articulated in *Save Our Cumberland Mountains v. Kempthorne*, 453 F.3d 334, 345 (6th Cir. 2006), a binary purpose and need statement will generally be unacceptable:

> Whether in the context of environmental assessments or environmental impact statements, other courts have been skeptical of this kind of agency solipsism—that the agency's licensing responsibility gives it authority only to say "yes" or "no" to permit applications, making these the only alternatives the agency must discuss. As these courts correctly have recognized, the National Environmental Policy Act prevents federal agencies from effectively reducing the discussion of environmentally sound alternatives to a binary choice between granting or denying an application.[17]

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[17] The court supported this proposition with the following:

> *See Davis v. Mineta,* 302 F.3d 1104, 1122 (10th Cir.2002) ("[O]nly two alternatives were studied in detail: the no build alternative, and the preferred alternative. [The agency] acted arbitrarily and capriciously in approving an [environmental assessment] that does not provide an adequate discussion of [p]roject alternatives."); *see also Colo. Envtl. Coal. v. Dombeck,* 185 F.3d 1162, 1174 (10th Cir.1999) ("[T]he National Environmental Policy Act and Council on Environmental Quality Regulations require [an agency] to study in detail all 'reasonable' alternatives [in an environmental impact statement].... [Courts] have interpreted this requirement to preclude agencies from defining the objectives of their actions in terms so unreasonably narrow they can be accomplished by only one alternative."); *Simmons v. United States Army Corps of Eng'rs,* 120 F.3d 664, 666-67 (7th Cir.1997) ("One obvious way for an agency to slip past the strictures of [the National Environmental Policy Act] is to contrive a purpose so slender as to define competing 'reasonable alternatives' out of consideration (and

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DOE's critical error is that it fails to identify the *underlying purpose* of the action before it. NEPA requires that the EIS "briefly specify the underlying purpose and need" of agency action. 40 C.F.R. § 1502.13. "[T]he evaluation of 'alternatives' mandated by NEPA is to be an evaluation of alternative means to accomplish the *general goal* of an action." *Simmons v. Army Corps of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997) (emphasis added) (citing *Van Abbema v. Fornell*, 807 F.2d 633, 638 (7th Cir. 1986); 40 C.F.R. § 1502.13). A purpose and need statement that is overly specific to the parameters of the proposal put forward by the project applicant, without rising to the necessary level of generality, fails to accomplish this fundamental requirement.[18] That is the case here, where DOE has impermissibly constrained its purpose and need to only "whether or not to grant the requested Presidential permit for the Project at the international border crossing proposed."

It is precisely because an agency's purpose and need dictates the range of reasonable alternatives that an agency cannot define its objectives in such unreasonably narrow terms. *See City of Carmel-By-The-Sea v. U.S. Dept. of Transp*., 123 F.3d 1142, 1155 (9th Cir. 1997). Here, as further discussed in Section V of these comments, DOE has relied upon its improperly narrow purpose and need statement to eliminate from detailed analysis a number of alternatives that *are* in fact within the reasonable range of alternatives. For example, DOE specifically relies on its purpose and need statement to summarily reject other transmission projects from detailed analysis, stating:

> DOE determined that this alternative does not meet the purpose and need for DOE's action. The purpose of, and need for, the DOE's action is to determine whether or not to grant the requested Presidential permit for the Project, which is a proposed transmission line crossing the international border (i.e. the proposed Northern Pass project) in the location identified in Northern Pass's amended Presidential Permit application.

DEIS at 2-37. It rejects from detailed analysis alternative forms of power generation on similar, equally flawed grounds, stating:

> even out of existence). The federal courts cannot condone an agency's frustration of Congressional will. If the agency constricts the definition of the project's purpose and thereby excludes what truly are reasonable alternatives, the [environmental impact statement] cannot fulfill its role."); *cf.* 40 C.F.R. § 1500-6 ("Each agency shall interpret the provisions of the [National Environmental Policy Act] as a supplement to its existing authority and as a mandate to view traditional policies and missions in the light of the Act's national environmental objectives.").

[18] *See id.* An agency should not limit its EIS to the parameters defined by the project applicant. *See Simmons*, 120 F.3d at 669.

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> DOE determined that this alternative does not meet the purpose and need for DOE's action. The purpose of, and need for, the DOE's action is to determine whether or not to grant the requested Presidential permit for the Project, which is a proposed transmission line crossing the international border carrying electricity generated by hydropower in Canada (i.e., the proposed Northern Pass project). Other sources of electricity generation are not the subject of the application for a Presidential permit, and, therefore, are outside the scope of the draft EIS.

DEIS at 2-37. DOE offers the same analysis-free rationale, premised on its improperly narrow purpose and need statement, for declining detailed consideration of energy conservation. *Id.*

Executive Order 10485 imposes an expansive "public interest" review, not a cramped or constrained mandate.

Furthermore, given the purpose and need statement set forth in the DEIS at Section 1.2 is so constrained as to merely give rise to a "yes" or "no" ultimatum on the Project as proposed, DOE's selection and purported consideration of *any alternatives* outside this binary ultimatum is rendered an empty formality.

It is well-established that an agency must consider the statutory directives—or, in this case—executive directives that provide the agency with its authority to act. *See City of New York v. Dept. of Transp*., 715 F.2d 732, 743-45 (2d Cir. 1983).[19] Here, Executive Order 10485 mandates a broad "public interest" review, which DOE's purpose and need statement greatly undermines.

CLF observes that the Project Objectives section of the DEIS (Section 1.4, discussed in Section III of these comments) identifies several factors relevant to the agency's public interest review as well as the purpose and need for action. There, DOE asserts that the Project would provide three benefits to New England's electricity system, namely diversity of electricity supply; low-carbon characteristics, and non-intermittency. These three factors should be evaluated for inclusion in a revised purpose and need statement. In addition, CLF submits that DOE must consider the public interest in promoting the advancement of domestic clean energy sources and energy efficiency.

To this end, CLF urges DOE to consider adopting a statement of purpose and need that includes at least the following: the objective of serving regional need for additional low-carbon electrical energy, of a character that is either non-intermittent or appropriately balanced such that it can serve in a "baseload-like" manner as a "firming" resource to complement, without

[19] *See also Citizens Against Burlington,* 938 F.2d at 196.

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unnecessarily diminishing demand for, the competitive development of appropriately sited in-region renewable energy and energy efficiency.

A purpose and need statement that incorporates these factors would be consistent with Applicant's own characterization of the role of the Project, as well as the regional needs outlined by DOE at Section 1.4 of the DEIS, and the broader public interest as required by Executive Order 10485.

Absent a meaningful statement of purpose and need that is sufficiently broad and identifies the appropriate public interest factors, consistent with Executive Order 10485 and NEPA, the DOE's Presidential Permit review will be nothing more than an exercise in costly and protracted regulatory rubberstamping.

V. DOE's Alternatives Analysis is Flawed as a Matter of Law

An EIS must contain a detailed discussion of "alternatives to the proposed action." 42 U.S.C. § 4332(2)(iii). Section 102(2)(E) of NEPA calls upon each federal agency to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." *Id.* § 4332(2)(E) (1976). The alternatives analysis required by NEPA is the "the heart of the environmental impact statement." *Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998) (quoting 40 C.F.R. § 1502.14). Accordingly, an agency issuing an EIS must "[r]igorously explore and objectively evaluate all reasonable alternatives."[20] The failure to consider a reasonable alternative renders an EIS invalid.[21] As the Council on Environmental Quality has made clear:

> In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense…

Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,033. *See also* 40 C.F.R. §§ 1502.14(c)-(d). Significantly, the alternatives considered need not be within the jurisdiction of the agency to approve, nor must

[20] *Westlands Water Distr. v. Dept. of Interior*, 376 F.3d 853, 868 (2004) (quoting 40 C.F.R. §§ 1502.14(a), (c)).
[21] *Friends of Southeast's Future*, 153 F.3d at 1065 (citing *Alaska Wilderness Recreation & Tourism Ass'n v. Morrison*, 67 F.3d 723, 729 (1995)).

they be within the power of the permit applicant to accomplish.[22] The alternatives merely must address the project need, in whole or in part.[23]

DOE's alternatives analysis fails to comply with NEPA and its implementing regulations as follows.

A. The DEIS's Alternatives Analysis is Fatally Flawed because it is Premised on an Unlawfully Narrow Purpose and Need Statement.

As discussed in Section IV, the alternatives analysis in an EIS flows from the agency's statement of purpose and need. *See supra* Section IV *(*citing *City of Carmel-By-The-Sea*, 123 F.3d at 1155). For this reason a cramped purpose and need statement inevitably leads to an inadequate alternatives analysis. *See id.* In order to ensure that its alternatives analysis complies with NEPA, DOE must issue a Supplement to the DEIS that rectifies the errors with its purpose and need statement and ensures a rigorous and objective analysis of reasonable alternatives.

B. The DEIS's Alternatives Analysis is Deficient Because It Excludes From Detailed Analysis a Number of Reasonable Alternatives

As stated above, DOE has an affirmative duty under NEPA to conduct a rigorous and objective analysis of all reasonable alternatives. Contrary to this obligation, however, the DEIS improperly excludes from detailed analysis numerous alternatives – including but not limited to alternative forms of power generation and alternative means of transmission – that *should* have been analyzed,[24] as follows.

(1) The DEIS is Deficient for its Failure to Include Power Generation Alternatives among the Reasonable Range of Alternatives For Detailed Analysis

The DEIS explicitly "considered," but rejected from detailed analysis, power generation alternatives such as wind power, biomass and other generation sources. DEIS at 2-37. The sum

[22] *See id.*; 40 C.F.R. §§ 1502.14(c)-(d). *See also Natural Resources Defense Council v. Morton*, 458 F.2d 827, 835-36 (D.C. Cir. 1972).
[23] *Natural Resources Defense Council*458 F.2d at 836 (holding that it is not appropriate to "disregard alternatives merely because they do not offer a complete solution to the problem").
[24] 40 C.F.R. § 1502.14(a). *See also Friends of the River v. FERC,* 720 F.2d 93, 104-05 (D.C. Cir. 1983) (permit to operate hydroelectric plant; alternative of purchasing power from other producers considered); *Mason County Med. Ass'n v. Knebel,* 563 F.2d 256, 262-63 (6th Cir. 1977) (permit to build coal-fired steam electric generator; alternatives of nuclear, geothermal, conservation, purchased power, and others considered); *North Carolina v. FPC,* 533 F.2d 702, 707 (D.C. Cir. 1976) (permit to build hydroelectric plant; alternative of conservation considered), *vacated on other grounds,* 429 U.S. 891 (1976).

0083-4

0083-4
Thank you for your comment. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE's purpose and need reflects this limited authority. While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground/overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives, including two alternative border crossings, were considered but eliminated from further detailed analysis.

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0083-5
Thank you for your comment. Northern Pass has applied to the Department of Energy for a Presidential permit for an international border crossing associated with an HVDC transmission line that would run from Quebec, Canada to Deerfield, NH. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public

interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE, however, does not have siting authority for the Project. In this case, the New Hampshire Site Evaluation Committee has siting authority for the Project in the state of New Hampshire. Additionally, the USFS has siting authority for portions of the Project located in the White Mountain National Forest. (For further discussion, see Sections 1.1-1.3 of the final EIS.) While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from detailed analysis. Section 2.4 of the final EIS has been updated with additional information on alternatives considered but eliminated from detailed analysis. A power generation alternative was considered but was eliminated from detailed analysis in the EIS because DOE determined it was not a reasonable alternative. Section 2.4.8 of the final EIS has been updated with additional information about this alternative.

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total of its consideration, leading to DOE's decision to exclude alternative forms of power generation from its alternatives analysis, is as follows:

> Under this alternative, hydropower generated in Canada would not be transmitted into the U.S. Generation alternatives could include wind power, biomass, natural gas, and other generation sources in New Hampshire.
>
> DOE determined that this alternative does not meet the purpose and need for DOE's action. The purpose of, and need for, the DOE's action is to determine whether or not to grant the requested Presidential permit for the Project, which is a proposed transmission line crossing the international border carrying electricity generated by hydropower in Canada (i.e., the proposed Northern Pass project). Other sources of electricity generation are not the subject of the application of a Presidential permit and, therefore, are outside of the scope of this draft EIS.

Id.

The DEIS's failure to include alternative forms of power generation in its alternatives analysis is flawed for numerous reasons. First, as discussed above, it is premised on an unlawfully narrow purpose and need statement. Second, whereas Northern Pass proposes to import power to be used regionally, DOE constrained its description of power generation alternatives to "generation sources *in New Hampshire*." *Id.* (emphasis added). There is no logical or justifiable reason for doing so, particularly given that the proposed project seeks to serve as a regional source of electricity. Any electricity imported into, or generated in, New England is bought, sold, transmitted, and distributed via the regional ISO-NE electricity grid, and all such power is equally available for use or consumption across New England. Third, the DEIS includes the arbitrary and capricious declaration that because the Applicant proposes to import electricity generated by Canadian hydropower, other forms of power generation are not the subject of the application for a Presidential permit and therefore cannot be considered. *Id.* The law's command that DOE must consider a reasonable range of feasible alternatives nowhere limits such alternatives to only those that would also require a Presidential Permit.[25]

Declining to consider renewable energy alternatives is contrary to the public interest standard of Executive Order 10,485 and the public policy goal of reducing greenhouse gas emissions. In describing the asserted need for the Northern Pass Project, DOE states Northern Pass may assist in furthering federal, regional, and state policies intended to promote greenhouse gas reductions including the President's Climate Action Plan, RGGI, the New Hampshire Climate Action Plan, and the Massachusetts Global Warming Solutions Act. DEIS at 1-5 to 1-6.

[25] *See, e.g.*, 40 C.F.R. § 1502.14.

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Without a detailed analysis of generation alternatives, however, DOE lacks the requisite support to conclude that Northern Pass promotes these goals better than other reasonable alternatives.[26]

Unlike large-scale hydroelectric power, renewable energy sources such as solar and wind power are promoted under the renewable energy policies of every state in New England. Similar to state greenhouse gas reduction goals, Renewable Portfolio Standards ("RPSs") reflect the objective of reducing greenhouse gases by promoting the development of diverse, low-impact clean power sources.[27] A key difference is that these policies also restrict eligibility based on the non-carbon impacts of the power sources.[28] While state RPSs generally exclude large-scale hydroelectric power because of its outsized environmental impacts and lack of need for financial support, they explicitly promote the increased state and regional penetration of clean energy technologies such as wind and solar. This comparative benefit and public policy interest should be an important factor in the DEIS and in DOE's alternatives analysis.

DOE should not discount or ignore renewable generation alternatives on the basis of scale or scalability. Wind projects proposed to serve the region total 4,200 MW (not including 800 MW of existing wind power), while regional photovoltaic solar development goals total 2,400 MW (not including 900 MW of existing solar PV).[29] With solar alone poised to total 2,400 MW in New England in eight years,[30] it is unreasonable to discount renewable energy sources in energy planning or in comparing the benefits of energy projects.

DOE also should not discount or ignore renewable generation alternatives on the basis of intermittency. Market products already support the "firming" or "balancing" of intermittent renewable power. Many of these market products began to proliferate after the Applicant conceived of and requested permitting for the Northern Pass project, making the Project's claimed benefits to the region dated.[31] DOE's alternatives analysis should reflect the modern state of technology and the markets.

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[26] For a discussion of greenhouse gas emissions associated with hydroelectric power, see n.55 *infra* and references cited therein.
[27] New Hampshire's RPS statute, RSA 362-F, requires each electricity provider to meet customer load by purchasing or acquiring certificates representing generation from renewable energy based on total megawatt-hours supplied. Information on RSA 362-F can be found at http://www.puc.state.nh.us/sustainable%20energy/renewable_portfolio_standard_program.htm. A range of information on state RPSs across the country can be found at http://www.dsireusa.org/.
[28] *See id*. (www.dsireusa.org).
[29] ISO-NE Overview and Regional Update on the Growth of Renewables, slide 9 (Feb. 4, 2016), attached as Ex. 5 and available at http://www.ncsl.org/Portals/1/Documents/energy/Gray-present.pdf.
[30] *Id*. slide 11 (citing Final PV Forecast (April 2015). CLF notes that ISO-NE's solar projections consistently underestimate growth. *See* Joint Comments on ISO New England's Draft 2016 PV Forecast, Ex. 3.
[31] *See, e.g*., Presidential Permit Application dated October 14, 2010 at 30-31.

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Among the market products that address intermittency is energy storage. Energy storage is playing an increasingly significant role in residential, commercial, and utility-scale solar applications, and is expected to reduce the need for alternative power generation to "balance" or "integrate" intermittent resources like solar, including distributed rooftop solar. California, Hawaii, and Massachusetts are among the states working to advance energy storage solutions.[32] Under AB 2514, California utilities are subject to an energy storage procurement mandate.[33] Southern California Edison has already awarded roughly 250 MW of storage contracts. *Id*. In response to a recent solicitation for 74 MW of energy storage, Pacific Gas & Electric Company received applications totaling 5,000 MW of potential storage. *Id*. In Hawaii, Hawaiian Electric Company is working to pair distributed generation with energy storage solutions that are controlled remotely.[34] Massachusetts is engaged in an initiative to accelerate the development of commercial storage technologies, attract energy storage companies to the state, and develop market signals appropriate to the benefits that storage technologies offer.[35] Storage also is featured in responses to the Clean Energy RFP discussed above, in Section III.[36] Solutions such as distributed generation paired with batteries and time of use rates are viable alternatives to reduce the need for new transmission projects such as Northern Pass.

Intermittency can also be addressed by tethering appropriate amounts of hydroelectric power directly to renewable energy such as wind power to produce a balanced energy product. The responses to the Clean Energy RFP discussed in Section III highlight the fact that large or small hydroelectric power projects can be tied directly to the generation of renewables including wind to ensure a balanced supply of energy. These types of pairings not only have the potential to reduce the per-MW environmental impacts of the overall energy project, they also can help to mitigate the greenhouse gas impacts of hydropower as well as the potentially harmful impacts that projects like Northern Pass may have on the growth of clean, renewable energy resources in the United States (including those supported by state RPS mandates).

In short, there is no rational basis for excluding other sources of power from the alternatives analysis, rendering the DEIS deficient as a matter of law.

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[32] Georgia is another such state. *See* http://www.businesswire.com/news/home/20141208005012/en/Washington-Gas-Energy-Systems-Evaluate-Battery-Storage.
[33] *See, e.g.*, California Dreaming: 5,000 MW of Applicants for 74 MW of Energy Storage at PG&E, Greentech Media (May 28, 2015), attached as Ex. 6 and available at http://www.greentechmedia.com/articles/read/california-dreaming-5000mw-of-applications-for-74mw-of-energy-storage-at-pg.
[34] HECO, E-Gear try storage to resolve solar installation bottleneck in Hawaii, Utility Dive (Mar. 9, 2016), attached as Ex. 7 and available at http://www.utilitydive.com/news/heco-e-gear-try-storage-to-resolve-solar-installation-bottleneck-in-hawaii/415246/#.
[35] *See* Energy Storage Initiative, the Official Website of the Executive Office of Energy and Environmental Affairs, attached as Ex. 8 and available at http://www.mass.gov/eea/energy-utilities-clean-tech/renewable-energy/energy-storage-initiative/.
[36] *See supra* n.7 (link to public RFP responses).

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(2) The DEIS is Deficient for its Failure to Include Other Transmission Projects among the Reasonable Range of Alternatives for Detailed Analysis

The DEIS is flawed because it fails to rigorously and objectively assess alternative transmission projects. The DEIS explicitly "considered," but eliminated from its reasonable range of alternatives, other transmission projects in the region, stating:

> Under this alternative, other proposed projects such as the Champlain Hudson Power Express, Northeast Energy Link, or New England Clean Power Link would serve as alternatives to the Project. This alternative could include either adding capacity to these other projects or joining Northern Pass's Project to one of these other projects.
>
> DOE determined that this alternative does not meet the purpose and need for DOE's action. The purpose of, and need for, the DOE's action is to determine whether or not to grant the requested Presidential permit for the Project, which is a proposed transmission line crossing the international border (i.e., the proposed Northern Pass project) in the location identified in Northern Pass's amended Presidential Permit application.

DEIS at 2-37. But DOE's analysis here is deeply flawed.

As discussed above, DOE's analysis is premised on an unlawfully narrow purpose and need statement. Moreover, as demonstrated in Section III above, and as set forth in CLF's comments during the scoping period,[37] other transmission projects in the region are, indeed, reasonable alternatives to Northern Pass. Such other projects include underground transmission projects, above-ground transmission projects, and transmission-generation pairings. Among these, in addition to the projects enumerated in the DEIS (at 2-37), are the Maine Green Line, Northeast Energy Link, New England Clean Power Link, Vermont Green Line, the Maine Renewable Energy Interconnect, and others.[38] Exclusion of these other transmission projects from the alternatives analysis renders the DEIS deficient and in violation of NEPA.

[37] CLF Scoping Comments dated Apr. 12, 2011 at 12-13; CLF Second Supplemental Scoping Submission dated Oct. 14, 2011 at 4-5; CLF Fifth Supplemental Scoping Submission dated Nov. 5, 2013 at 2-5, 7-8.

[38] According to ISO-NE, as of January 1, 2016, eleven elective transmission projects had been proposed in the ISO Interconnection Queue, totaling more than 7,000 MW of potential transfer capability. Gordon van Welie, State of the Grid: 2016, ISO on Background (Jan. 26, 2016), slide 35, attached as Ex. 9 and available at http://www.iso-ne.com/static-assets/documents/2016/01/20160126_presentation_2016stateofthegrid.pdf.

0083-6

0083-6
Thank you for your comment. Northern Pass has applied to the Department of Energy for a Presidential permit for an international border crossing associated with an HVDC transmission line that would run from Quebec, Canada to Deerfield, NH. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE, however, does not have siting authority for the Project. In this case, the New Hampshire Site Evaluation Committee has siting authority for the Project in the state of New Hampshire. Additionally, the USFS has siting authority for portions of the Project located in the White Mountain National Forest. (For further discussion, see Sections 1.1-1.3 of the final EIS.) While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from detailed analysis. Section 2.4 of the final EIS has been updated with additional information on alternatives considered but eliminated from detailed analysis. Adding capacity to other transmission projects, such as Champlain Hudson, Northeast Energy Link or New England Clean Power Link, or joining Northern Pass's Project to one of these projects was also considered as an alternative to the Project but was eliminated from detailed analysis in the EIS because DOE determined it was

not a reasonable alternative. Section 2.4.7 of the final EIS has been updated with additional information about this alternative. Section 1.4 and Appendix D of the final EIS have been updated to include other reasonably foreseeable regional energy projects. Under the No Action Alternative, it is assumed that existing energy sources would continue to supply the ISO-NE region.

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(3) The DEIS is Deficient for its Failure to Consider Demand-Side Management, Including Energy Efficiency, Among the Reasonable Range of Alternatives for Detailed Analysis

The DEIS is flawed because it fails to rigorously and objectively assess demand-side management, including energy efficiency, to offset the need for the generation Northern Pass proposes to transmit. At present, energy efficiency holds regional electricity demand essentially flat in New England.[39] Between 2014 and 2024, ISO-NE predicts that energy efficiency will grow from 1,500 MW to 3,600 MW.[40] Through 2023, state-sponsored energy efficiency programs are forecast to save New England 1,518 gigawatt-hours ("GWh") per year.[41] DOE cannot credibly render determinations regarding the need for the Project, its purported carbon benefits, or its economic impacts in the absence of analysis of demand-side management including energy efficiency.

Furthermore, promoting energy efficiency is unarguably within the scope of the public interest. Not only does DOE support energy through federal grants and other programs, each state in the region has a range of tax and energy policies designed to promote energy efficiency.[42] The region invested approximately $3 billion in energy efficiency from 2009-2013, and ISO-NE estimates that the region will invest an additional $6.2 billion in energy efficiency from 2019-2024.[43] Indeed, the bulk of Regional Greenhouse Gas Initiative funds are directed towards energy efficiency programs precisely because of the unambiguous benefits of this low-cost and no-carbon energy resource.[44] In Docket DE15-137 of the New Hampshire Public Utilities Commission, New Hampshire is currently in the process of developing an Energy Efficiency Resource Standard that would accelerate and enhance its existing utility-run energy efficiency programs and bring it in line with the nationally prominent efficiency programs of its New England neighbors.

DOE's failure to include demand-side management alternatives, such as energy efficiency, renders the DEIS deficient and a violation of NEPA.

[39] ISO-NE Overview and Regional Update on the Growth of Renewables, Ex. 5, at slide 4 (finding that energy efficiency flattens the growth in overall electricity demand to 0.1% annually in the region).
[40] *Id.* slide 9. Moreover, ISO-NE projections of energy efficiency, like its solar projections, are notoriously low relative to actual growth in this resource. *See* Joint Comments on ISO-NE's Draft 2016 Energy Efficiency Forecast, March 4, 2016, attached as Ex. 10 and available at http://www.iso-ne.com/static-assets/documents/2016/03/joint_comments_on_iso_ne_draft_2016_ee_forecast.pdf.
[41] *See* Ex. 11, ISO-NE 2015 Regional Electricity Outlook at 28.
[42] See information on state energy efficiency programs at www.dsireusa.org.
[43] *See* Rourke, Ex. 4, slide 13 (entitled "Energy Efficiency is a Priority for New England").
[44] *See* http://www.rggi.org/rggi_benefits/why_efficiency.

0083-7

0083-7
Thank you for your comment. Section 1.4 of the final EIS has been updated to include new information on market trends and energy use, including demand-side management and energy efficiency, since the draft EIS was published in 2015. An energy conservation alternative was considered but was eliminated from detailed analysis in the EIS because DOE determined it is not a reasonable alternative, in part because energy efficiency and conservation cannot alone meet the growing demand for electricity in ISO-NE. Section 2.4.9 of the final EIS has been updated with additional information about this alternative.

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(4) The DEIS is Deficient for its Failure to Include a Detailed Analysis of Underground Transmission Cable in Railroad Rights-of-Way

The DEIS specifically eliminated as part of its alternatives analysis the burial of transmission cable in railroad rights of way. DEIS at 2-34 to 2-35. It did so having considered only one route, and on the basis of superficial assumptions pertaining to average right-of-way widths, non-specific observations that in some locations "property owners adjacent to the railroad corridor have constructed structures (e.g., fences/walls) along one or both edges of easement such that additional width may not be available,"[45] and based on generic historic-resources concerns. *Id.* The DEIS further states that for railroad segments owned in fee by the State of New Hampshire, "there *may be* limitations on how the land may be used. . . ." *Id.* at 2-35 (emphasis added).

DOE's consideration of transmission burial in railroad rights-of-way, and the grounds upon which it excluded this alternative from the reasonable range of alternatives warranting detailed consideration, are deeply flawed. In the first instance, DOE considered only one route – a route consisting of railroad corridors owned by Genesee & Wyoming, Inc. and the State of New Hampshire. *Id.* However, it could have, and indeed should have, explored other railroad rights of way and route configurations.[46] Such other rights of way and route configurations should have included:

- Use of the Washington County Railroad (owned by the State of Vermont) which roughly parallels I-91 and provides a connection to the so-called Northern Line, an inactive rail right-of-way (owned by the State of New Hampshire) which connects Lebanon and Concord.
- Use of railroad rights-of-way from various New Hampshire entry points (Stewartson or North Strafford) to the Mountain Division railroad line (owned by the State of New Hampshire) to a point in Carrol, continuing via roadways to the Concord-Lincoln line (owned by the State of New Hampshire) and continuing south on such corridor to Concord.
- Use of railroad rights-of-way from various New Hampshire entry points (Stewartson or North Strafford) to the Mountain Division corridor, continuing on to the Conway Scenic railroad line, over a portion of inactive railroad to the New Hampshire

[45] The fact that Northern Pass may have to acquire temporary or permanent easements, or even interests in fee, to address such locations is by no means justification for DOE to eliminate railroad corridors from detailed evaluation. Indeed, Northern Pass has acquired significant property interests as part of its effort to assemble a route for its project proposal.

[46] *See* N.H. Department of Transportation Railroads map (Nov. 2015), attached as Ex. 12.

0083-8

0083-8
Thank you for your comment. As noted by the commenter, an alternative involving underground cable in railroad and connecting roadway corridors was considered but eliminated from further detailed analysis (see Section 2.4.2 of the EIS). A number of alignments and configurations were considered in order to connect a route from the U.S./Canada border crossing to Deerfield, NH. Additional information about the routes considered has been added to Section 2.4.2 of the final EIS.

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Northcoast Railroad, continuing on to the Boston & Maine Railroad (owned by Pan Am), then west, on inactive rail line owned by the State of New Hampshire, to Raymond or Candia, and then into Deerfield.

- Use of the railroad rights-of-way from various New Hampshire entry points (Stewartson or North Strafford) to the Mountain Division corridor, continuing into Maine over the St. Lawrence and Atlantic Railroad Company line to a location near Buxton,[47] which could serve as the transmission project terminus.[48]
- Use of the configuration described in the DEIS, but using the Concord-Lincoln line rather than I-93.

More detailed consideration of a variety of routes, including those described above, would have provided DOE and the public valuable information, including information regarding: available right-of-way widths; potential areas with insufficient width and the manner in which such restrictions could be addressed (such as by purchase of temporary or permanent easements, or interests in fee); and guidance or restrictions by other railroad owners (e.g., the State of Vermont, Conway Scenic Railroad, and NH Northcoast Railroad) pertaining to the burial of underground transmission infrastructure.

DOE's decision to eliminate railroad right-of-way alternatives from its alternatives analysis is particularly disappointing in light of the significant role railroad rights-of-way have played in another project reviewed by DOE, the Champlain Hudson Power Express ("CHPE"). As described in DOE's Final EIS for that project – which will transmit 1,000 MW of Canadian power to New York – CHPE will include 127 miles of terrestrially-buried cable in the rights-of-way of the New York State Department of Transportation, and the Canadian Pacific and CSX Transportation railroads.[49] Of those 127 miles, 122 will be located in the existing railroad rights-of-way of Canadian Pacific and CSX.[50] DOE issued its Record of Decision for the CHPE project in September 2014, and issued a Presidential Permit (No. PP-362) October 6, 2014. In light of the foregoing, the DEIS is significantly flawed for its failure to include a detailed

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[47] *See* Maine Department of Transportation Maine Rail System Map (2016), attached as Ex. 13 and available at http://www.maine.gov/mdot/downloadmaps/docs/RailSystem_2016.pdf.

[48] While CLF realizes the use of Buxton substation as a terminus would require reinforcement of AC transmission infrastructure, this alternative should nonetheless be analyzed. Even if this approach were to result in higher costs for AC infrastructure reinforcement, it may also result in lower costs with respect to the HVDC portion of the project.

[49] *See* Final Champlain Hudson Power Express Transmission Line Project Environmental Impact Statement Summary, DOE/EIS-0447 (Aug. 2014) (http://chpexpresseis.org/docs/library/final-eis/full/1_CHPE%20FEIS_Summary_Aug14.pdf).

[50] *Id.*

analysis of the burial of transmission line in rail rights-of-way – including multiple rail corridor configurations, in combination with highways as necessary – as part of its alternatives analysis.

(5) The DEIS is Deficient for its Failure to Include a Detailed Analysis of Alternative Border-Crossing and Termination Points

DOE's alternatives analysis utterly fails to consider border-crossing locations other than the one proposed by the Applicant, precluding detailed analysis of alternative transmission routes and approaches that could involve lesser environmental impact, such as alternatives involving highways and railroad rights-of-way in Vermont. Because the EIS should not limit itself to the Applicant's desired outcome, there is no reasonable explanation for failing to consider alternate border crossings. *See Simmons*, 120 F.3d at 669.

With respect to termination points, the DEIS specifically eliminates from detailed analysis alternative locations to Deerfield, New Hampshire. In doing so, the DEIS states: "DOE determined that this alternative was not reasonable because DOE is unaware of other alternative substations in NH that are capable of receiving 1,000 or 1,200 MW of power." DEIS at 2-38. The DEIS's failure to consider terminus locations outside of New Hampshire is arbitrary and capricious and precluded consideration of alternative project termination points such as the Buxton, Maine substation and associated alternative routes.[51] The DEIS is further flawed in that it fails to assess or describe the inability of the Scobie Pond substation in Londonderry to receive the power associated with the proposed project.

C. The DEIS is Deficient for its Failure to Adequately Assess Certain Alternatives Selected for Detailed Analysis

As discussed above, NEPA mandates that agencies engage in a rigorous and "detailed statement" of the alternatives. *Dept. of Transp. v. Public Citizen*, 541 U.S. 752, 756 (2004) (quoting NEPA, 42 U.S.C. § 4332(2)(C)). The level of detail should be sufficient to sharply define the issues and provide a clear basis for choice among options by the decisionmaker and the public.[52] DOE's analysis of alternatives selected for detailed evaluation fails to comply with this mandate for the following reasons.

[51] *See, e.g.,* discussion of Buxton, Maine as a potential termination point for a rail-corridor alternative discussed *supra* in Section IV.B.(4).
[52] 40 C.F.R. § 1502.14; *see, e.g., Greenpeace v. National Marine Fisheries S*ervice, 55 F. Supp. 2d 1182, 1194 (W.D. Wash. 1999).

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0083-8 Continued

0083-9

0083-9
Thank you for your comment. The final EIS considered two alternative border crossings. One alternative border crossing that DOE considered but eliminated from analysis was an alternative that would utilize the existing National Grid Phase I/II route, including its border crossing in Vermont. Based on its review of the National Grid alternative DOE determined that this alternative is not reasonable. Section 2.4.3 of the final EIS has been updated with additional information related to the National Grid alternative. Separately, in response to comments received on the draft EIS, DOE considered a second alternative border crossing in Vermont, specifically identified as a border crossing at Derby Line, VT that would utilize I-91. DOE determined that this alternative is not reasonable. Section 2.4.17 of the final EIS has been updated to reflect consideration of this alternative and DOE's determination. Alternative project terminus and converter station locations, including some outside of NH, were also considered but eliminated from detailed analysis in the EIS because they are not reasonable alternatives. Section 2.4.14 of the final EIS has been updated with additional information about this alternative. Finally, impacts of AC system upgrades between Deerfield and the Scobie Pond Substation in Londonderry, NH were analyzed in the EIS.

0083-10

0083-10
Thank you for your comment. The No Action Alternative is analyzed throughout the EIS. The No Action Alternative represents a continuation of the existing condition which is described in Chapter 3 of the EIS. Chapter 3 describes in detail the existing condition for all resources throughout the study area. In particular, existing electricity system infrastructure is described in Section 3.1.2.5 of the EIS; this information has been updated for the final EIS. Section 1.4 of the EIS has also been updated to reflect current trends and conditions in the regional energy market. Additionally, the Socioeconomics Technical Report includes a discussion of modeling completed for this EIS, including a projection of future base case conditions in New Hampshire and the ISO-NE region through 2030. The modeling was updated for the final EIS to incorporate current market conditions and trends. The future base case condition was modeled based on the best available information from ISO-NE; this modeling represents the potential condition under the No Action Alternative and serves as a baseline against which to

analyze the potential impacts of the Project. While the EIS analyzes possible impacts to the electricity system in the socioeconomics analysis, a detailed analysis of these impacts is performed through DOE's reliability study completed in cooperation with ISO-NE via a separate process. Adding capacity to other transmission projects, such as Champlain Hudson, Northeast Energy Link or New England Clean Power Link, or joining Northern Pass's Project to one of these projects was also considered as an alternative to the Project but was eliminated from detailed analysis in the EIS. Section 2.4.7 of the final EIS has been updated with additional information about this alternative.

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(1) The DEIS Is Deficient Because It Fails to Include Meaningful Analysis of the No-Action Alternative

As part of its alternatives analysis, the DEIS discusses the No-Action Alternative – an alternative that must, as a matter of law, be conducted for purposes of complying with NEPA's mandates – as follows:

> Under the No Action Alternative, DOE would not issue a Presidential permit and the USFS would not issue a SUP for the Project, the proposed transmission system would not be constructed, and the potential impacts from the Project would not occur. The CEQ and DOE regulations require consideration of the No Action Alternative. The No Action Alternative serves as a baseline against which the potential environmental impacts of the Proposed Action and alternatives are evaluated.

DEIS at 2-13. Aside from a reference to Map 5 in Appendix A of the DEIS, the above three sentences comprise the entirety of the DEIS's discussion and evaluation of the No-Action Alternative. *Id.*

NEPA's mandate that agencies rigorously and objectively analyze all reasonable alternatives includes the rigorous and objective analysis of No-Action alternatives. Indeed, NEPA analyses that fail to comply with this requirement have been found by courts to be invalid. *Southeast Alaska Conservation Council v. Fed. Highway Admin.*, 649 F.3d 1050, 1058 (9th Cir. 2011) (concluding that agency's "cursory" three-paragraph description of No-Action alternative "does not represent the 'substantial treatment' required by NEPA's implementing regulations to any non-construction alternatives," and stating "[t]he EIS thus falls below NEPA's standards because it fails to provide policymakers and the public with sufficient information 'to make an informed comparison of the alternatives.'") (*citing* 40 C.F.R. § 1502.14(b), *Animal Def. Council v. Hodel*, 840 F.2d 1432, 1439 (9th Cir. 1988), *amended by* 867 F.2d 1244 (9th Cir. 1989)). *See also Natural Resources Def. Council v. Hughes*, 437 F. Supp. 981, 990-991 (D.D.C. 1977) ("The Final Statement perfunctorily devoted a few paragraphs to the 'no action' alternative. . . . Apparently the Department and the BLM believed this to be sufficient to fulfill their regulatory obligations which specifically require the consideration of the 'no action' alternative. It appears, however, that the Department's treatment of this alternative is sufficient neither under the statute nor under the regulations. . . . The cursory treatment of the 'no action' alternative provided in the Final EIS does not satisfy the statutory mandate of §102(C) of NEPA.") (citations omitted).

The DEIS's treatment of the No-Action Alternative is grossly deficient and violates DOE's unambiguous obligations under NEPA to conduct a rigorous and objective analysis of alternatives to enable informed and meaningful participation by policymakers and the public, and informed decision-making. To meet these requirements, the DEIS should have contained a detailed and thorough analysis of circumstances *without* the proposed project. Such analysis can

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and must include detailed consideration of the factors discussed above in Section III, including but not limited to *other* transmission projects that, absent Northern Pass, could nonetheless fulfill objectives associated with the proposed project. Unless and until DOE conducts a comprehensive assessment of the No-Action Alternative – premised on a valid purpose and need statement, and with meaningful opportunity for public review and comment – its proceedings will stand in stark contrast to, and will violate, the requirements of NEPA and its implementing regulations.

(2) DOE's Analysis of Underground Cable Alternatives in Highway Corridors is Deficient

CLF appreciates DOE's consideration of I-93 for purposes of burying HVDC cable and its determination that, as considered within certain enumerated alternatives, I-93 presents a viable option. With specific regard to I-93, however, it is CLF's position that DOE should have analyzed an alternative that relies on burial in the I-93 corridor north of Franconia notch, into Vermont, with continued burial in the I-91 transportation corridor.[53] The DEIS also should have considered use of I-91 in Vermont in combination with the use of I-89 and/or railroad rights of way, such as those that would allow access from the west and northwest, as described above. Highway corridors provide an opportunity to avoid the use of overhead transmission lines and their long-term impacts and potentially at lower cost than other routes not located on transportation corridors.[54] The DEIS has not adequately assessed the important opportunity highway corridors could serve.

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[53] This should be the case even if the portion of I-93 located in Franconia State Park was somehow deemed infeasible. In such case, detailed consideration of I-93 both north and south of Franconia State Park is warranted.
[54] In 2012, the N.H. Legislature enacted legislation (SB 361) establishing a commission, with representation from the N.H. Department of Transportation, to study the feasibility of using existing state-owned transportation rights-of-way as corridors for energy infrastructure, including electric transmission. The commission met twelve times and, receiving testimony from a broad range of interests and experts, including two N.H. Department of Transportation representatives, found, *inter alia*:

> Limited access rights-of-way (interstate, turnpike and divided highways) are the only roadways where the state owns the underlying land in fee. In accordance with RSA 236:18, the state has the exclusive rights insofar as they do not conflict with any federal statute to build, lease, or utilize for any public purpose the air space directly above or below the toll highways and the interstate system highways within the state. These limited access rights-of-way could be available for use as energy infrastructure corridors.
>
> For purposes of this report, the DOT has identified four highway corridors as possible energy infrastructure corridors. The DOT considered several factors in identifying these corridors, including but not limited to:
>
> - a continuous corridor of significant length that is owned in fee by the state
> - a corridor that provides connectivity with adjoining states
> - corridors that are wide and well-defined

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0083-11

0083-11
Thank you for your comment. Northern Pass has applied to the Department of Energy for a Presidential permit for an international border crossing associated with an HVDC transmission line that would run from Quebec, Canada to Deerfield, NH. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE, however, does not have siting authority for the Project. In this case, the New Hampshire Site Evaluation Committee has siting authority for the Project in the state of New Hampshire. Additionally, the USFS has siting authority for portions of the Project located in the White Mountain National Forest. (For further discussion, see Sections 1.1-1.3 of the final EIS.) While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Several alternatives analyzed in detail in the EIS include segments of underground cable within the I-93 corridor, including Alternatives 4a, 4b, 4c, 5a, 6a, and 6b which are described in Sections 2.3.4, 2.3.7, and 2.3.10. Alternatives 4a, 5a, and 6a include burial in I-93 through Franconia Notch. Laws and regulations governing the installation of utilities in interstate

highways are discussed in Section 3.1.6.4 of the EIS. Additionally, seventeen alternatives were considered but eliminated from detailed analysis. Alternative project alignments utilizing underground cable in railroad corridors were considered but eliminated from detailed analysis in the EIS. This is not reasonable due to technical and legal constraints regarding the railroad corridors. Section 2.4.2 of the final EIS has been updated with additional information about this alternative. In response to comments received on the draft EIS, DOE considered a second alternative border crossing in Vermont, specifically identified as a border crossing at Derby Line, VT that would utilize I-91. DOE determined that this alternative is not reasonable because it does not meet DOE's purpose and need. It is also not reasonable because there is no proposal under review at this time either by DOE or the State of New Hampshire for a border crossing in Vermont. A proposed border crossing for a transmission line in Vermont would require a separate Presidential permit application. Section 2.4.17 of the final EIS has been updated to reflect consideration of this alternative and DOE's determination.

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(3) The Analysis of Numerous Alternatives is Premised on Inaccurate Assumptions Relative to the Proposed Franklin Converter Station

The DEIS identifies the Applicants' Project as Alternative 2 and describes such alternative as involving the transmission of 1,200 MW of electricity. *See* DEIS at 2-2. It proceeds to describe the converter station associated with Alternative 2, stating in pertinent part: "The converter station would be designed for a continuous HVDC to HVAC transfer rating of 1,200 MW." *Id.* at 2-13.

The DEIS alternatives analysis considers several transmission alternatives that would transmit 1,000 MW of electricity, as opposed to 1,200 MW. *Id.* at 2-2. In describing several of those alternatives – namely, Alternatives 5A, 5C, 6A, and 6B, the DEIS cross-references the description of the Franklin converter station included as part of the description of Alternative 2. *Id.* at 2-24 (Alternative 5A), 2-28 (Alternative 5C), 2-31 (Alternative 6A), 2-33 (Alternative 6B). In other words, it incorporates a converter station designed to accommodate 1,200 MW of electricity, as opposed to the reduced amount of electricity (1,000 MW) to be transmitted by these alternatives. The Supplemental DEIS, in describing the Applicants' revised proposed project (identified as Alternative 7) – another alternative that would transmit 1,000 MWs of electricity – appears to repeat this mistake.

- corridors which are relatively free of existing energy infrastructure

The corridors identified include I-89 (between the intersection of I-93 and the Vermont border); I-93 (between the Massachusetts border and the Vermont border); I-95 (between the Massachusetts border and the Maine border); and NH Route 101 (between the intersection of I-93 and the intersection of I-95). These State-owned transportation rights-of-way, and potentially others, could be used to locate underground energy transmission corridors.

See Final Report of SB 361 Commission (Nov. 30, 2012), attached as Ex. 14 and available at http://www.briantilton.com/NorthernPass/361Commission-FinalReport113012.pdf.

Of significance, legislation passed the N.H. House of Representatives this session, and is currently pending before the N.H. Senate, which, if enacted, could establish the four above-referenced highway corridors ("excepting approximately 1.7 miles of I-93 in the White Mountain National Forest north of Franconia Notch state park") as corridors within which energy infrastructure, including high voltage DC or AC electric transmission facilities of 115kV or greater, could be sited underground. HB 626-FN-A, as amended by the House, as attached as Ex. 15.

Also noteworthy, the state of Maine has adopted an approach that encourages the use of transportation corridors, including highways, for purposes of locating and constructing transmission projects.

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0083-12
Thank you for your comment. The analysis of impacts in the final EIS has been revised to incorporate the most up-to-date Project design information. This includes an updated Franklin Converter Station design which does deviate from the original design in Alternative 2 because of the change in technology. The error in Table 2-3 has also been corrected in the final EIS. Finally, the cost of the converter station does vary by alternative based on the size and technology of the alternative.

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As a result of the DEIS's and SDEIS's persistent "mismatch" of transmission and converter station capacity, DOE has failed to accurately analyze the above-referenced 1000 MW alternatives. It can and should be assumed that the cost and physical footprint associated with the Franklin converter station as described for Alternative 2 (i.e., a converter station designed to accommodate 1,200 MW of electricity) would be reduced if appropriately down-scaled to accommodate 1000 MW of electricity. The existing mismatch undermines the accuracy and validity of DOE's alternatives analysis, including but not limited to the anticipated costs of the various alternatives as set forth in Table 2-3 of the DEIS,[55] and Table 3 of the SDEIS, as well as the public's ability to understand and compare the various alternatives.

VI. DOE's Impacts Analysis is Deficient as a Matter of Law because it Entirely Fails to Address Certain Impacts and Inadequately Addresses Others

NEPA requires that agencies "take a 'hard look' at how the choices before them affect the environment, and then [] place their data and conclusions before the public." *Or. Natural Desert Ass'n v. Bureau of Land Mgmt*., 625 F.3d 1092, 1099 (9th Cir. 2008). This "hard look" requires a "full and fair discussion of significant environmental impacts." 40 C.F.R. § 1502.1. On the basis of both omissions and inadequacies, the DEIS fails to meet this standard.

A. The DEIS is Deficient Because it Fails to Assess the Impacts of Generation and Transmission in Canada

DOE improperly omits any analysis whatsoever of the Project's foreseeable impacts in Canada, including the terrestrial and water impacts of new or expanded reservoirs, as well as increases in greenhouse gas emissions. As CLF stated in its scoping comments,[56] it is essential that DOE consider environmental impacts in Canada, particularly in light of the fact that the Applicant premises the need for the Project on claims that the power source is environmentally beneficial and will result in lower greenhouse gas emissions. DOE adopts many of the Applicant's claims as to the potential environmental benefits of the Project, yet it is impossible to

[55] Table 2-3 of the DEIS contains a significant error, inhibiting the public's ability to understand the costs associated with each alternative. The error presumably results from the erroneous assignment of costs associated with Alternative 1 (the No-Build Alternative). *Compare* DEIS Table 2-3 *with* SDEIS Table 3.

[56] CLF Scoping Comments dated Apr. 12, 2011 at 14-23. *See also* CLF Scoping Comments dated Oct. 14, 2011 at 5-7 (discussing hydropower GHG emissions and potential displacement of clean, local energy); Feb. 14, 2012 (addressing GHG emissions of hydropower and RPS eligibility); Nov. 5, 2013 at 10-11 (addressing GHG emissions of hydropower). CLF hereby incorporates by reference the facts, arguments and analysis on this subject that are contained in the April 12, 2011 scoping comments at 15-17.

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Potential impacts in Canada from the construction and operation of electricity infrastructure, including hydropower generation and transmission in Canada, are beyond the scope of this NEPA analysis. NEPA does not require an analysis of potential environmental impacts that occur within another sovereign nation that result from actions approved by that sovereign nation. Additionally, the construction and operation of Hydro-Quebec power generation projects and electricity transmission line projects in the bulk Hydro-Quebec system will occur regardless of and independent to whether DOE issues a Presidential permit for the proposed Northern Pass Project international border crossing. For these reasons, potential environmental impacts in Canada are not addressed in this EIS. Section 1.5.4.1 of the EIS has been updated in response to this comment.

All comments received during the scoping process, including those submitted by CLF, were considered in the preparation of the draft EIS. The Scoping Report available on the project website (http://media.northernpasseis.us/media/The%20Northern%20Pass%20EIS%20Scoping%20Report_final_3_12_2014.pdf) describes comments received. Section 1.4.2 of the final EIS has been updated to clarify that the NREL study cited was a literature review and cite additional published resources relating to GHG emissions and hydropower.

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test such claims without rigorous analysis of environmental impacts that occur across the border.[57]

Damming natural water bodies for hydroelectric power inundates large expanses of land upstream of dams. This inundation results in impacts including:

- Dislocation of human settlements
- Elimination of existing ecosystems and habitat
- Greenhouse gas emissions[58]

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[57] *See Border Power Plant Working Group*, 260 F. Supp. 2d at 1012-15 (environmental impacts of generating facility that will export power through international transmission line requiring Presidential Permit must be considered under NEPA).

[58] In the Project Objectives section of the DEIS (Section 1.4.2), DOE relies on an NREL report published in 2010 to suggest that the GHG emissions of the generation source are similar to that of solar or wind:

> In 2010 DOE National Renewable Energy Laboratory (NREL) conducted a Life Cycle Assessment (LCA) study to systematically review estimates of life cycle GHG emissions published between 1970 and 2010 from electricity generation technologies. The LCA considered emissions from all stages in the life cycle of an electricity generation technology, from component manufacturing, to operation of the generation facility to its decommissioning, and including acquisition, processing, and transport of any required fuels. The results of this study demonstrate that hydropower was equivalent to other sources of low-carbon power (wind and solar).

DEIS at 1-5 n. 5. DOE fails to note that the NREL report was a literature review, not an independent research study. In addition, that report grouped all forms of hydroelectric power together despite their greatly varying characteristics. NREL has issued the following qualification as to the potentially outsized GHG emissions impacts of reservoir hydroelectric power, in contrast to run-of-river or pumped storage:

> The majority of life cycle greenhouse gas (GHG) emission estimates for hydropower cluster between about 4 and 14 g CO2eq/kWh.
>
> The outliers, which show reservoir hydropower estimates of over 150 g CO2eq/kWh—much higher than run-of-river or pumped storage—stem from studies that included assessments of GHG emissions from land use change (LUC) from reservoir hydropower, an area of active research. In comparison to fossil energy generation technologies, the life cycle GHG emissions from hydropower systems are low.

http://www.nrel.gov/analysis/sustain_lca_hydro.html (same url cited in DEIS at 1-5 n.5). NREL notes that studies pertaining to the GHG emissions of reservoir hydroelectricity are ongoing. Expert analysis moreover indicates that GHG emissions associated with hydroelectric power can vary greatly by project:

> [Life-Cycle Assessments] carried out on hydropower projects up to now have demonstrated the difficulty of generalizing estimates of lifecycle GHG emissions for hydropower projects across climatic conditions, pre-impoundment land cover types and hydropower technologies.

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- Re-engineering of natural landscapes
- Loss of native plant life and wildlife
- Changes to natural water systems

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Kumar, A., T. Schei, et al., 2011: Hydropower. An IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation, Cambridge University Press, Cambridge, attached as Ex. 16, available at http://srren.ipcc-wg3.de/report/IPCC_SRREN_Ch05.pdf and cross-linked on NREL's website at http://www.nrel.gov/analysis/sustain_lca_hydro.html.

Furthermore, CLF has already filed in this docket a review of the literature on greenhouse gas emissions from hydroelectric power plants that is more recent than the NREL review (2012 versus 2010). *See* Third Supplemental Scoping Comments dated February 14, 2012, Exhibit A attached thereto, Hydropower Greenhouse Gas Emissions: State of the Research, Synapse Energy (Feb. 14, 2012) (available online at http://www.clf.org/wp-content/uploads/2012/02/Hydropower-GHG-Emissions-Feb.-14-2012.pdf). That report includes initial information from a 2010 study of the emissions associated with a new Hydro-Quebec hydroelectric reservoir at Eastmain 1. As summarized in the Synapse Energy report (at 14):

> Research done at Hydro-Quebec's Eastmain 1 reservoir showed that net GHG emissions rates within one year of reservoir creation increased from 3,200 to 500,000 tonnes of carbon, a 156-fold increase, over pre-flooded conditions. This carbon increase at Eastmain 1, calculated as a rate per unit of energy output, suggests that hydropower from the reservoir produced more GHG emissions than a natural gas combined-cycle facility each year for three years after impoundment.

After completion of the Eastmain 1 study, Cristian Teodoru et al. subsequently published a detailed analysis of the study results, which found that the rates of carbon emissions of the Eastmain 1 reservoir during the initial years after inundation were as much as 77% higher than the equivalent emissions of the most efficient thermal power plants using a natural-gas combined-cycle. Cristian R. Teodoru, Julie Bastien, et al., "The net carbon footprint of a newly created boreal hydroelectric reservoir," Global Geochemical Cycles, v. 26, issue 2 (June 2012), at 11, attached as Ex. 17 and available at http://onlinelibrary.wiley.com/doi/10.1029/2011GB004187/epdf. Emissions dropped in later years, though for obvious reasons the entire life cycle of this new Hydro-Quebec facility has not yet been studied. *See id.*

Based on this new research, not only must the emissions from hydropower be assessed on a case-by-case basis, relative to their "climatic conditions, pre-impoundment land cover types and hydropower technologies," as indicated by the IPCC's expert analysis above—it is also important to note that the emissions impacts of constructing new Hydro-Quebec hydroelectric facilities can be very heavy in the first years following inundation. *See id.* The development of multiple such reservoirs in an effort to reduce greenhouse gas emissions thus could result in a short-term spike in such emissions, potentially contributing to near-term global warming and its associated impacts.

In sum, it is essential that DOE rigorously analyze the likely GHG impacts of Northern Pass's proposed source of power.

[58] *See Border Power Plant Working Group*, 260 F. Supp. 2d at 1012-15 (environmental impacts of generating facility that will export power through international transmission line requiring Presidential Permit must be considered under NEPA).

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CLF's April 12, 2011 Scoping Comments identified these and other impacts that NEPA requires DOE to address.

The Council on Environmental Quality ("CEQ") unambiguously directs federal agencies to address cross-border impacts under NEPA, including impacts that are indirect and/or cumulative in character.[59]

> Neither NEPA nor the Council on Environmental Quality's (CEQ) regulations implementing the procedural provisions of NEPA define agencies' obligations to analyze effects of actions by administrative boundaries. Rather, the entire body of NEPA law directs federal agencies to analyze the effects of proposed actions to the extent they are reasonably foreseeable consequences of the proposed action, *regardless of where those impacts might occur*. Agencies must analyze indirect effects, which are caused by the action, are later in time or farther removed in distance, but are still reasonably foreseeable, including growth-inducing effects and related effects on the ecosystem, as well as cumulative effects. Case law interpreting NEPA has reinforced the need to analyze impacts regardless of geographic boundaries within the United States, and has also assumed that NEPA requires analysis of major federal actions that take place entirely outside of the United States but could have environmental effects within the United States.
>
> Courts that have addressed impacts across the United States' borders have assumed that the same rule of law applies in a transboundary context…
>
> In sum, based on legal and policy considerations, CEQ has determined that agencies *must include* analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States.

Council on Environmental Quality Guidance on NEPA Analysis for Transboundary Impacts, July 1, 1997, at 2-3 (citing *Swinomish Tribal Community v. FERC*, 627 F.2d 499 (D.C. Cir. 1980); *Wilderness Society v. Morton*, 463 F.2d 1261 (D.C. Cir. 1972) (emphasis added).

U.S. District Courts have applied this guidance to environmental impacts in both Canada and Mexico and concluded that cross-border impacts must be considered. In *Border Power Plant Working Group v. DOE*, 260 F. Supp. 2d at 1012-15, the court found infirm DOE's failure to consider power plant emissions in Mexico when power from those plants would be transmitted into the United States across a proposed transmission line subject to DOE's permitting review.

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[59] *See Sierra Club v. Marsh*, 769 F.2d 868, 877-79 (1st Cir. 1985) (NEPA required Federal Highway Administration to evaluate reasonably foreseeable indirect effects of proposed construction project) (citing 40 C.F.R. § 1508.8); *Border Power Plant Working Group*, 260 F. Supp. 2d at 1030.

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Similarly, in *Province of Manitoba v. Salazar*, 691 F. Supp. 2d 37, 51 (D.D.C. 2010), the court held that NEPA required the Bureau of Reclamation to consider the foreseeable environmental impacts in Canada of a proposed biota transfer in the Hudson Bay Basin.

As CLF indicated in its prior comments, the proposed project may result in the development of new reservoirs in Canada.[60] The development of new reservoirs would entail major terrestrial and water impacts in Canada, as well as air and climate impacts such as those enumerated above and in CLF's scoping comments. The Project may also result in greenhouse gas "leakage" in Canada, to the extent that electricity from existing hydroelectric facilities is redirected to the United States and dirtier sources of energy are substituted for domestic Canadian purposes, in addition to the displacement of cleaner energy sources.[61] Any foreseeable results such as these must be addressed in the EIS review process, and must be a factor as DOE compares the impacts of the proposed project to the impacts of reasonable alternatives. Its failure to do so renders its analysis incomplete and in violation of NEPA and its implementing regulations

B. The DEIS is Deficient Because it Fails to Consider Negative Impacts on the Development of Renewable Energy and Energy Efficiency in New England

DOE erred in failing to consider negative impacts that the Project, if approved, could foreseeably have on the development of clean energy projects in New Hampshire and New England, as well as energy efficiency. As noted above, there is a strong policy interest in the advancement of renewable energy—particularly RPS-eligible clean energy sources—and energy efficiency. *See*, *e.g.,* Section III, *supra.* This public interest is reflected in the numerous federal, state, and local policies that are designed to enhance opportunities for development and deployment of these relatively nascent and under-funded resources. An example of such a public policy-based funding stream for such resources would be a state-sanctioned and utility commission-authorized long term contract. Because the Northern Pass project seeks to be funded using this same public policy mechanism that is designed to foster and propagate renewable energy and efficiency programs, it is reasonably foreseeable that applying this tool for the benefit of hydropower generated in Canada will reduce opportunities for such contracts for other energy resources including domestically derived, in-region, renewable energy and efficiency. In failing to consider the carbon and socio-economic impacts of reducing opportunities for clean, renewable power sources and no-carbon energy efficiency in New

[60] *See* CLF Scoping Comments dated April 12, 2011 (citing Hydro-Quebec and Northern Pass witness statements supporting this possibility).
[61] *See* Paul Steenhof and C.J. Weber, "An assessment of factors impacting Canada's electricity sector's GHG emissions," Energy Policy 39, 4089–96 (June 2011).

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0083-13 Continued

0083-14
Thank you for your comment. Social and economic impacts are addressed in Section 4.1.2 of the EIS and include an assessment of impacts on electricity rates and the anticipated mix of current and future generation types. There is no evidence that the Project would reduce or alter the construction of new renewable power sources in the U.S., other than by potentially affecting the general price of electricity within the market. Potential Impacts of environmental pollution emissions of other past, present and future energy projects have been included in Chapter 5 Table 5-2.

0083-14

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Hampshire and New England, the DEIS is deficient. *See, e.g., Border Power Plant Working Group*, 260 F. Supp. 2d at 1030.

C. The DEIS is Deficient because it Fails to Accurately Assess Either the Value of New Hampshire's Viewsheds or the Impacts of the Project on those Viewsheds

The DEIS accurately concludes that New Hampshire's North Country has a high intrinsic visual quality. DEIS at 3-60. The DEIS also concludes that the area is characterized by "a very low level of development" and a low population density. *Id.* Consistent with this low population density and low level of human development, the DEIS enumerates a large number of parks available for public use in the areas of scenic concern in the North Country: White Mountain National Forest, Weeks and Dixville Notch State Parks, Coleman, Cape Horn, Percy and Nash Stream State Forests, Connecticut River National Byway, Moose Path Trail, Presidential Range Tour, White Mountain Trail Northern Loop, Pontook Reservoir, Lancaster Town Forest, and Kauffman Forest. *Id.* at 3-61.[62]

However, the technical report to the DEIS erroneously relies on population data as the basis for conclusions as to the overall visual impact of the proposed project, including its impacts on the North Country. Section 2.4.2.5 of the Visual Impact Assessment explains that, in the absence of available data on the usage of the scenic or recreational resources in New Hampshire, DOE's consultant, T.J. Boyle and Associates, assessed viewer exposure based on population numbers.

> Use data are generally not available for scenic or recreation resources in New Hampshire. Therefore a different approach is taken—potential visual exposure is approximated as a function of population density based on 2010 U.S. Census block-level data.

Visual Impact Assessment at 40.

Applying this approach to the North Country, the Visual Impact Assessment falsely concludes that viewer impacts will be low because there are few residents (at 85):

> Just over half of the Northern Section has no residents, and another 40 percent has very low population density. In most of the area, it is unlikely there will be many viewers to be affected by a visual change.

As a general matter, assessing viewer exposure based on U.S. Census data is an arbitrary and unsupportable approach due to the fact that scenic recreational areas are by definition areas

[62] *See also* Visual Impact Assessment at 38-39, enumerating a large number of outdoor activities that take place.

0083-14 cont'd

0083-14 Continued

0083-15

0083-15
Thank you for your comment. The value of scenic sensitivity used in the analysis is the greater of scenic concern or viewer exposure, not the average. Therefore, low viewer exposure in the Northern Section and the WMNF, for example, does not lower the scenic sensitivity of these areas. The rationale for the viewer exposure ratings is explained in Section 2.4.2.5 of the Visual Impact Assessment Technical Report. As discussed, use data are generally not available for scenic or recreation resources in New Hampshire and estimates of transient and tourist populations would be excessively speculative. Therefore, census data were used as an indicator of how many potential viewers exist in an area. The scenic value of the undeveloped nature of the area is captured through the other elements of the landscape assessment, including intrinsic visual quality. The viewer exposure metric was included in this analysis to represent the sensitivity of areas with many viewers but less intrinsic scenic quality.

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that do not entail habitation. This approach leads to particularly dramatic errors when applied to less developed areas such as the North Country, which serves as a region-wide resource for outdoor activities and appreciation of the natural environment.[63]

The North Country's intrinsic visual quality stems from the fact that it has a low population density and level of development, but a high number of parks and natural viewscapes accessible to the general, non-resident public. For this reason, resident population density is a particularly illogical basis for drawing conclusions as to visual impact, including viewer exposure. The use of U.S. Census information as a substitute for usage data inevitably leads to a substantial undervaluation of visual impacts that DOE must correct.

DOE's viewshed impacts analysis is also infected with other unsupported conclusions. For example, Table 9 of the Visual Impact Assessment (at 38), which rates the importance of scenery to the experience of various activities known to take place in New Hampshire, contains arbitrary and unsupported conclusions including:

- that although campgrounds, picnic areas, and recreation resorts are often selected based on their scenic locations, they do not rate "very high" for importance of scenery;
- that parks are not valued highly for their scenic value;
- that areas used for activities such as skiing, swimming, boating, fishing, and golfing are not highly valued for their scenic quality because of the attention they require to an activity;
- that the setting is "non-contributing" to the experience of rockhounding; and
- that special events (presumably including weddings and other celebrations) are held indoors, and therefore the scenic quality of the environment is very low value to those activities.

Among other things, it is widely known that celebrations such as weddings are often held outside, and the scenic environment can be a critical element of the experience. That the visual impacts analysis upon which DOE relies fails to engage either common sense or objective data to draw conclusions as to the importance of visual quality is in clear error, rendering the analysis of viewshed impacts grossly deficient.

[63] Furthermore, as to those who do live in the North Country, the value of the scenic environment is likely to rank much higher among their priorities in choosing a residence, and potentially engaging in activities, than it does among residents of more developed areas.

0083-15 cont'd

0083-15 Continued

0083-16

0083-16
Thank you for your comment. The rationale for the viewer experience ratings is explained in Section 2.4.2.4 of the Visual Impact Assessment Technical Report. Table 8 of the Visual Impact Assessment Technical Report presents criteria for determining the role of scenery in various activities. These criteria were applied to the range of activities in the project area using professional knowledge of visual impact analysis and knowledge of the New England landscape. In this analysis, experiences, not places, are rated. In the examples of hiking, fishing, or special events, DOE assumes that it is the presence of rocks, fish, and the event itself that influence the user's selection of location rather than scenery, as suggested by the commenter. In most cases where the activity is most sensitive to visual impacts, those situations have been identified and considered accordingly. This has been clarified in the final EIS and the Technical Report. It is recognized that the landscape analysis provides a general overview of experiences and scenic values in the area.

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D. The Socioeconomic Technical Report Contains False and Unsupported Assumptions that Infect Core Conclusions of the DEIS

DOE's analysis of the socio-economic impacts of the Project is infected with errors and conclusions that are only partially supported or not supported at all. DOE's conclusions regarding the socio-economic impacts of the Project rely on the Socioeconomic Technical Report, prepared by Edgeworth Economics, together with an underlying report entitled Energy Market Evaluation of the Northern Pass Transmission Project ("GE Report"), prepared for Edgeworth Economics by GE Energy Consulting. Errors and unsupported conclusions contained in these reports include, *inter alia*:

- The assumption that the Project will operate at an average of approximately 76% of maximum capacity throughout the year (Socioeconomics Technical Report at 23; GE Report at 18), whereas the average capacity factor for hydroelectric power in ISO-NE is approximately 40%.[64]
- Estimates of annual property tax impacts that do not appear to accurately or sufficiently account for property tax decreases due to visual impacts on affected regions/properties. *See* Socioeconomics Technical Report at 18 Table 7.For example, the assumption that properties 500 feet or more from the proposed transmission line will not suffer any property value impacts at all (Socioeconomics Technical Report at 28-31), failing to recognize that the mountainous topography of New Hampshire can lead to unusually extreme visual impacts over broad swathes of land and landscapes, at a distance far greater than 500 feet.
- The assumption of a base case (no Northern Pass) annual average load-weighted wholesale locational marginal price of approximately $68 for ISO-NE in 2019 (Socioeconomics Technical Report at 25; GE Report at 20), whereas actual average prices in ISO-NE historically have been lower.[65]
- Forecasts of ISO-NE peak demand for 2019 at 30,335 MW and for 2025 at 32,297 MW (GE Report at 12, Table 3-4) that appear to be outdated and over-estimated as more recently ISO-NE has predicted peak demand for 2019 at 29,975 MW and for 2025 at 31,794 MW.[66]

[64] *See* ISO New England EFORd Class Averages from NERC Brochure (Nov. 1, 2011), attached as Ex. 18 and available at http://www.iso-ne.com/genrtion_resrcs/gads/class_ave_2010.pdf.
[65] *See, e.g.*, ISO-NE's Internal Market Monitor, 2014 Annual Markets Report (May 20, 2015) at 2 (Table 1-1), attached as Ex. 19 and available at http://www.iso-ne.com/static-assets/documents/2015/05/2014-amr.pdf and ISO-NE Monthly Market Operations Report (Jan. 2016), at 9-12, available at http://www.iso-ne.com/static-assets/documents/2016/02/2016_01_monthly_market_report.pdf.
[66] *See* Draft 2015 CELT ISO-NE Annual Energy and Summer Peak Forecast, ISO-NE Forecast Team (March 11, 2016), at slide 15, attached as Ex. 20 and available at http://www.iso-ne.com/static-assets/documents/2016/03/Final_LFC_Prelim_2016CELT_ISONE_Forecast.pdf.

0083-17

0083-17
Thank you for your comment. The GE Model utilized to evaluate the Project relies upon utilization rates for the Project based on estimates of pricing, power flows, and other factors, through extensive back-casting and benchmarking against historic data. These parameters are incorporated into the modeling software and are reevaluated periodically based on observed conditions. The commenter is referred to the Socioeconomics Technical Report for the final EIS. There is no basis to expect that historic capacity factors at hydroelectric facilities in ISO-NE represent more accurate predictors for the anticipated performance of the Project. Therefore, the analysis presented in the EIS relies upon the best information reasonably available. Additionally, the parameters used are consistent with the performance of other observed power lines from Hydro Quebec into the U.S.

0083-18

0083-18
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on property values and tax assessments using the most relevant available research. Adjustments to the original analysis presented in the draft EIS have been updated in the final EIS to reflect comments on the methodology and assumptions. Additionally, Section 4.1.1 of the EIS details the potential impact to visual resources and provides an analysis of viewshed, visibility distances, and the size of the viewshed based upon topography and vegetative conditions.

0083-19

0083-19
Thank you for your comment. The economic modeling upon which the socioeconomic analysis partially relies was updated and repeated in January 2017 to capture; current demand forecasts, assumptions regarding planned plant retirements, new plant construction, additional sources of supply, and price/supply forecasts for natural gas. The Socioeconomic Technical Resource Report for the final EIS, and the final EIS (Section 4.1.2) have now been updated to reflect these new and changed market conditions and forecasts. Additionally, based on comments (and additional studies) provided during the draft EIS review, several key assumptions within the economic analysis have updated. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

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- The acknowledgement that gas prices are the single largest driver of the region's electricity prices,[67] but reliance on gas price forecasts[68] significantly higher than other recent forecasts.[69] A comparison of more recent forecasts commissioned and currently utilized in state utility commission proceedings suggests GE overestimates gas prices by 35-95% for the period 2019-2025.
- The power plant retirement information and assumptions appear to be outdated and inaccurate. (GE Report at 15 Table 3-9).
- The assumption of only 113 MW of new solar installations in ISO-NE from 2014 through 2025 (GE Report at 17 Table 3-11), whereas ISO-NE estimates that the total annual nameplate capacity for solar PV will have increased 1,540.3 MW from 2014 levels by the close of 2024.[70] The report's assumption that total wind resources in ISO-NE will grow only 1655 MW from 2014 through 2025 (GE Report at 17) is also low given 3,400 MW of additional wind have already been proposed over today's levels.[71]
- Inflated estimates of locational marginal prices in Figure 4-1 of the GE Report (at 19) due to overestimated gas prices (*see, e.g.*, points two and four in this bullet list).
- Generation-type assumptions advanced in Section 4.3 of the GE Report (at 23), which require reassessment in light of the report's over-estimated gas price forecasts, as do the related emissions and transmission assumptions that appear in Sections 4.4 and 4.5 (at 24).

These faulty assumptions are not minor; they infect key conclusions that lie at the very core of the DEIS. Some of the most significant impacts of these errors include the following:

1. Despite recognizing that gas prices are the single most influential factor in market price forecasts in New England, the data that the DEIS relies on to determine the market impacts of Northern Pass includes grossly over-estimated gas prices. This error infects DOE's analysis as to whether the Project's impacts outweigh its purported (market) benefits.
2. DOE identifies generation source diversity as one of three objectives of the Project, yet the data that DOE relies on for regional generation analysis severely underestimates the

[67] GE Report at 12.
[68] *See* GE Report at 13, Table 3-7, putting the Algonquin Citygate Gas Price for 2019 at $6.76 and for 2025 at $8.22.
[69] *See, e.g.*, Maine Energy Cost Reduction Act: Cost benefit analysis of ECRC proposals, by London Economics International (Feb. 22, 2016) (public redacted version), at 31 Figure 14
(putting the Algonquin Citygate gas prices for 2019 at $3.75 and for 2025 at $4.15, attached as Ex. 21; Maine Energy Cost Reduction Act: Cost benefit analysis of ECRC proposals, by London Economics International (June 20, 2015) (public redacted version), at 27 Figure 15 (putting Algonquin Citygate gas prices for 2019 at $4.00 and 2025 around $4.75), attached as Ex. 22.
[70] Final 2015 Solar PV Forecast Details, ISO-NE, at slide 35, attached as Ex. 23 and available at http://www.iso-ne.com/static-assets/documents/2015/04/2015_solar_forecast_details_final.pdf.
[71] ISO-NE Overview and Regional Update on the Growth of Renewables, Ex. 5, at slide 9.

0083-20

0083-20
Thank you for your comment. A new GE Report was prepared for the final EIS which reflects updated market conditions (Appendix 8 of the Socioeconomics Technical Report). Section 4.1.2 of the final EIS has been updated to reflect an analysis of impacts on the electricity system based on more recent data, including updated forecasts for natural gas pricing and supply.

0083-21

0083-21
Thank you for your comment. The economic modeling upon which the socioeconomic analysis partially relies was updated and repeated in January 2017 to capture; current demand forecasts, assumptions regarding planned plant retirements, new plant construction, additional sources of supply, and price/supply forecasts for natural gas. The Socioeconomic Technical Resource Report for the final EIS, and the final EIS (Section 4.1.2) have now been updated to reflect these new and changed market conditions and forecasts. Additionally, based on comments (and additional studies) provided during the draft EIS review, several key assumptions within the economic analysis have updated. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

0083-22

0083-22
Thank you for your comment. The economic modeling upon which the socioeconomic analysis partially relies was updated and repeated in January 2017 to capture; current demand forecasts, assumptions regarding planned plant retirements, new plant construction, additional sources of supply, and price/supply forecasts for natural gas. The Socioeconomic Technical Resource Report for the final EIS, and the final EIS (Section 4.1.2) have now been updated to reflect these new and changed market conditions and forecasts. Additionally, based on comments (and additional studies) provided during the draft EIS review, several key assumptions within the economic analysis have updated. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

0083-23

0083-23
Thank you for your comment. Section 4.1.2 of the final EIS has been updated to reflect an analysis of impacts on the electricity system based on more recent data, including updated forecasts for natural gas pricing and supply.

0083-24

0083-25

0083-26

0083-24
Thank you for your comment. Section 4.1.2 of the final EIS has been updated to reflect an analysis of impacts on the electricity system based on more recent data, including updated forecasts for natural gas pricing and supply.

0083-25
Thank you for your comment. Section 4.1.2 of the final EIS has been updated to reflect an analysis of impacts on the electricity system based on more recent data, including updated forecasts for natural gas pricing and supply.

0083-26
Thank you for your comment. The economic modeling upon which the socioeconomic analysis partially relies was updated and repeated in January 2017 to capture; current demand forecasts, assumptions regarding planned plant retirements, new plant construction, additional sources of supply, and price/supply forecasts for natural gas. The Socioeconomic Technical Resource Report for the final EIS, and the final EIS (Section 4.1.2) have now been updated to reflect these new and changed market conditions and forecasts. Additionally, based on comments (and additional studies) provided during the draft EIS review, several key assumptions within the economic analysis have updated. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

growth of other diverse energy sources such as renewable generation. DOE cannot accurately assess the need for, or the cost-to-benefit ratio, of Northern Pass without an accurate understanding of generation trends in the New England energy markets.

3. DOE is well aware that the visual and property value impacts of the Project are a grave public concern,[72] yet the DEIS relies on erroneous assumptions that property tax reductions due to visual impacts in mountainous areas cannot occur past 500 feet. This can only lead to a serious underestimation of the threat Northern Pass poses to New Hampshire communities.

E. The DEIS is Deficient because it Fails to Identify and Consider Impacts on Landscape-Level Historical and Cultural Resources While there is Still the Potential to Avert Those Impacts

The DEIS states that the assessment of eligibility for listing on the National Register of Historic Places ("NRHP") will take place prior to construction of the Project but after an EIS (and potentially a permit) has been issued, stating:

> NRHP eligibility has not yet been determined for all historic and cultural resources identified in Project-specific surveys to date; this determination would occur prior to construction, but after a final route has been selected or potentially approved.

DEIS at 4-58.

Consistent with this procedural approach, and in connection with the Section 106 proceeding now underway, CLF understands that DOE intends to defer the inventory and impacts analysis of landscapes, traditional cultural properties, and rural historic districts until after the agency's permitting decision. This deferral is entirely unacceptable given the high level of public concern on this subject, and would violate the National Historic Preservation Act ("NHPA") as well as NEPA.

Impacts on landscape-level resources lie at the heart of public concern about the Northern Pass project. The route planned by the Applicant is expected to affect many such resources, including rural historic districts; cultural and recreational landscapes, including vistas from historic properties or sites; scenic byways; and hiking trails that date back to the 19th century. In order to avoid substantial harm to public confidence in DOE's review process, it is incumbent on

[72] *See, e.g.*, Geology and Soils Technical Report at 5 ("The DOE, in coordination with cooperating agencies, developed an initial list of potential alternatives in response to the issues raised during scoping… In consideration of issues raised during scoping, it became evident that alternatives with increased use of underground infrastructure and burial of project components should be analyzed in detail.").

0083-26 cont'd

0083-26 Continued

0083-27

0083-28

0083-27
Thank you for your comment. Section 4.1.2 of the EIS addresses the anticipated impacts of the Project on adjacent properties, property values, and current/future tax assessments/payments. An exhaustive literature evaluation was undertaken to identify peer-reviewed studies which specifically assessed the potential impact of transmissions lines on adjacent real estate values. This information is presented in the Socioeconomic Technical Resource Report for the final EIS and in the EIS (Section 4.1.2). As a result of comments on the methodology and assumptions provided on the draft EIS, adjustments to the original analysis have now been updated in the final EIS. As these details are far too complex to be summarized within this response, the commenter is referred to both the Socioeconomic Technical Resource Report for the final EIS, and Section 4.1.2 of the final EIS.

0083-28
Thank you for your comment. The NEPA review and the Section 106 process are separate, independent processes, each with its own schedule. DOE is coordinating its compliance with Section 106, in a manner consistent with 36 C.F.R. Section 800.8, with the pertinent standards of the National Environmental Policy Act of 1969 ("NEPA") pursuant to 40 C.F.R. Sections 1500-1508. DOE's final EIS will contain the appropriate level of information on cultural resources, informed by DOE's Section 106 process for the proposed Northern Pass project. Both the NEPA review and Section 106 process inform DOE's decision whether or not to issue a Presidential permit for the proposed Northern Pass project. DOE would issue a ROD for its Presidential permit decision for the proposed Northern Pass project no sooner than 30-days following the issuance of the Environmental Protection Agency's Notice of Availability of the Final Environmental Impact Statement for the project in the Federal Register. Additional information has been added to Section 3.1.8.3 of the EIS regarding cultural landscapes. Section 1.4.8 has been added to the Cultural Resources Technical Report to discuss the New Hampshire Division of Historical Resources' (DHR) scope of work for addressing cultural landscapes for the Northern Pass Project. Additionally, Appendix B in the Technical Report has been revised to reflect stipulations in the Programmatic Agreement that address the identification and evaluation of cultural landscapes. Cultural landscapes, including traditional cultural properties and rural historic districts, will be identified and evaluated for eligibility

for the National Register of Historic Places using DHR's scope of work. Cultural landscape studies are being conducted through the Section 106 process in accordance with guidance from NH DHR regarding how cultural landscape studies should be identified and documented. These studies will evaluate the significance, integrity, and National Register eligibility of any cultural landscapes that exist within the Pemigewasset River Valley and the Suncook River Valley. In light of these studies, NPT will also determine whether additional cultural landscapes are present in the Great North Woods Project Area or other areas in the vicinity of the proposed Northern Pass project, including in Vermont. NH DHR's guidance is based on California's General Guidelines for Identifying and Evaluating Historic Landscapes.

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0083-28
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DOE to identify these resources, evaluate the Project's expected impacts on these resources, and afford a meaningful opportunity for public comment now.

NHPA and NEPA require DOE to address landscape-level impacts now rather than later. NHPA requires a federal agency to "take into account the effect of the undertaking" at a time "prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license ..." 16 U.S.C. § 470f. An agency may only proceed with "conducting or authorizing non-destructive project planning activities before completing compliance with Section 106, *provided that such actions do not restrict the subsequent consideration of alternatives to avoid, minimize or mitigate the undertakings' adverse effects*." 36 C.F.R. § 800.1(c). NEPA similarly directs that that all federal agencies must include at the EIS stage a detailed statement on "any adverse environmental effects which cannot be avoided should the proposal be implemented." 42 U.S.C. § 4332(C)(ii).

Once a route for Northern Pass is approved and a permit granted, there will be no effective means to mitigate impacts on large, landscape-level resources. Whereas mitigation measures identified at the post-permit, pre-construction stage may serve to minimize or eliminate impacts on discrete, small-scale historic and cultural resources (e.g., a discrete archeological site), this is not the case with respect to landscape-level resources. *See generally Corridor H Alternatives, Inc. v. Slater*, 166 F.3d 368 (D.C. Cir. 1999); *New Mexico ex rel. Richardson v. Bureau of Land Management*, 459 F. Supp. 2d 1102, 1124-25 (D.N.M. 2006)[73] *aff'd in other part, vacated in other part, rev'd in other part*, 565 F.3d 683 (10th Cir. 2009). For this reason, NHPA and NEPA require DOE to identify and evaluate all landscape-level resources that will be

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[73] In *New Mexico ex rel. Richardson,* 459 F. Supp. 2d at 1124-25, the court reasoned:

> Unlike BLM, however, the Court finds that [traditional cultural properties ("TCPs")] may not be able to be adequately protected if the Section 106 consultation process is delayed until the APD stage, after land has already been leased for oil and gas development. BLM's argument focuses on historical sites covering relatively small areas, such as discrete archaeological sites. For such sites, mitigation of impacts can be accomplished simply by moving the proposed drill site to a different location on the leased parcel. For landscape-level TCPs that may or may not be located on the leased parcel itself, however, such movement may not be adequate mitigation. It is possible, for example, that the entire leased parcel could be located on a TCP. *See, e.g., Pueblo of Sandia, supra,* 50 F.3d at 857 (due to tribal members' varied religious uses of canyon, tribe maintained that entire canyon constituted a TCP). As discussed in the NEPA section above, once a parcel of land has been leased for oil and gas, BLM does in fact lose a great deal, if not all, of its ability to entirely preclude drilling or other development on the parcel. If BLM could stop all development the lease would likely be illusory, as the lessee would be receiving nothing in return for a substantial investment. *See, e.g., Amber Resources Co. v. United States,* 68 Fed.Cl. 535, 547 (2005). In cases where such total preclusion is necessary to protect a TCP, waiting until the APD stage to complete the Section 106 consultation process does not comply with NHPA.

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impacted by the Northern Pass Project now – not once the impacts are a foregone conclusion. *See id*. CLF urges DOE to include this information in a Supplemental EIS as soon as possible.

CLF further urges DOE to be as transparent and inclusive of public participation as possible in the Section 106 and NEPA processes regarding historical and cultural properties. These processes should not be treated as a mere exercise.

F. DOE Has Failed to Comprehensively Assess Cumulative Impacts

A discussion of the cumulative environmental effects of a proposed action is an essential part of an EIS. *See, e.g., Kern v. Bureau of Land Mgmt*., 284 F.3d 1062, 1075 (9th Cir. 2002). As the Ninth Circuit has articulated:

> Consideration of cumulative impacts requires "some quantified or detailed information; ... [g]eneral statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided." *Neighbors of Cuddy Mountain,* 137 F.3d at 1379–80. The cumulative impact analysis must be more than perfunctory; it must provide a "useful analysis of the cumulative impacts of past, present, and future projects." *Muckleshoot Indian Tribe,* 177 F.3d at 810. Finally, cumulative impact analysis must be timely. It is not appropriate to defer consideration of cumulative impacts to a future date when meaningful consideration can be given now. *See Neighbors of Cuddy Mountain,* 137 F.3d at 1380; *City of Tenakee Springs,* 915 F.2d at 1312–13. When an agency's determination of what are "reasonably foreseeable future actions" and appropriate "component parts" is " 'fully informed and well-considered,' " we will defer to that determination. *Blue Mountains Biodiversity Project v. Blackwood,* 161 F.3d 1208, 1211 (9th Cir.1998) (quoting *Save the Yaak Comm. v. Block,* 840 F.2d 714, 717 (9th Cir.1988)). But we "need not forgive a 'clear error in judgment.' " *Id.*

Id.

The cumulative impacts analysis contained in the DEIS and SDEIS is deficient in numerous respects. Among the flaws in DOE's cumulative impacts analysis are the following:

- The DEIS and SDEIS fail to identify all reasonably foreseeable energy projects for purposes of assessing cumulative impacts. For example, for cumulative impacts purposes the DEIS identifies the Tennessee Gas Pipeline Northeast Energy Direct (DEIS at 5-2), but does not identify other similar projects such as the Spectra Energy Atlantic Bridge or Access Northeast projects. It identifies the Champlain Hudson Power Express, New

0083-28 cont'd

0083-28 Continued

0083-29

0083-29
Thank you for your comment. Chapter 5 of the EIS discusses potential cumulative impacts to 14 resources across all alternatives considered in detail. Appendix D of the final EIS has been updated to include information about regional gas pipeline projects in New England including Atlantic Bridge and Access Northeast (both of which have been cancelled). On the electric transmission side, the referenced Emera Atlantic Link project is considered under the Massachusetts Clean Energy RFP (MA RFP) analysis along with all of the other potential entrants in that solicitation. From a cumulative impacts standpoint, not all of these projects under the MA RFP will be selected nor built. At this stage not all are reasonably foreseeable. What is reasonably foreseeable is the construction of the transmission capacity to deliver 9,450,000 MWhr/Yr by 2022, and this was used in the cumulative effects analysis found in Chapter 5.

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England Clean Power Link, and National Grid/Anbaric Green Line, but omits the Emera Northeast Energy Link project and others. *Id.*

- The cumulative impacts analysis fails to assess the impacts that Northern Pass, combined with other hydroelectric and natural gas infrastructure projects, would have on the development of clean, renewable energy in New Hampshire and New England (and, relatedly, greenhouse gas and other emissions, air quality generally, and the ISO-NE energy markets).[74]
- The cumulative impacts analysis fails to assess the cumulative emissions and other cross-border impacts of the Northern Pass project, in combination with other reasonably foreseeable projects that propose to import Canadian power, such as New England Clean Power Link, Northeast Energy Direct, and Champlain Hudson Power Express.
- False conclusions as to the economic benefits of Northern Pass, in combination with other projects, that appear to include faulty assumptions such as market data that relies on outdated and excessively high forecasts for natural gas prices. *See* DEIS at 5-7.
- The failure of the SDEIS to include rigorous, detailed analysis of Alternative 7 relative to cumulative impacts, including the extent to which Alternative 7 differs from other alternatives.[75]

[74] The DEIS concludes that there will be positive cumulative impacts on air quality and emissions, as well as state and regional renewable energy (DEIS at 5-24 and 5-25), but this conclusion lacks substantial evidence absent a discussion of the extent to which a combination of new large hydroelectric and natural gas projects cumulatively will have a negative impact on the growth of clean, renewable energy that is located in New Hampshire and New England.

[75] The SDEIS contains only three paragraphs regarding the scope, nature, and extent of the cumulative impacts of Alternative 7. SDEIS at 23. These paragraphs furthermore contain little more than formulaic and conclusory assertions that are generally unsupported and lacking in substance. *See id.* The SDEIS contains the following formulaic and conclusory assertions as to the extent of the impacts associated with Alternative 7 (SDEIS at 23):

> Alternative 7 would result in a moderate contribution to cumulative impacts on visual resources and soils and geology; a moderate beneficial contribution to cumulative impacts at a more localized scale on socioeconomics; a minor contribution to cumulative impacts on recreation, health and safety, noise, wildlife, vegetation, and water resources; a negligible contribution to cumulative impacts on land use; no cumulative impact to environmental justice; and a long-term beneficial contribution to cumulative impacts on air quality. Alternative 7 would result in a substantial short-term contribution to cumulative impacts on traffic and transportation. Depending on the resource, the impacts would be short-term and/or long-term in duration.

It is not clear on what basis DOE selects modifiers such as "moderate," "minor," and "negligible," where these modifiers fall an overall scale, or how DOE reached its conclusions with respect to Alternative 7.

0083-29 cont'd

0083-29 Continued

0083-30

0083-31

0083-32

0083-33

0083-30
Thank you for your comment. Social and economic impacts are addressed in Section 4.1.2 of the EIS and include an assessment of impacts on electricity rates and the anticipated mix of current and future generation types. There is no evidence that the Project would reduce or alter the construction of new, or reliance upon existing, renewable power sources in the U.S., other than by potentially affecting the general price of electricity within the market. Therefore, it is not anticipated that the Project would cumulatively contribute to the displacement of renewable energy in New England.

0083-31
Thank you for your comment. Potential impacts in Canada from the construction and operation of electricity infrastructure, including hydropower generation and transmission in Canada, are beyond the scope of this NEPA analysis. NEPA does not require an analysis of potential environmental impacts that occur within another sovereign nation that result from actions approved by that sovereign nation. Additionally, the construction and operation of Hydro-Quebec power generation projects and electricity transmission line projects in the bulk Hydro-Quebec system will occur regardless of and independent to whether DOE issues a Presidential permit for the proposed Northern Pass Project international border crossing. For these reasons, potential environmental impacts in Canada are not addressed in this EIS. Section 1.5.4.1 of the EIS has been updated in response to this comment. Chapter 5 of the EIS analyzes the potential cumulative impacts, including greenhouse gas emissions, of reasonably foreseeable projects to all resources areas in the United States under all alternatives. Appendix D list of reasonably foreseeable projects has been updated to incorporate new information and projects between the issuance of the draft EIS and final EIS.

0083-32
Thank you for your comment. The final EIS has been updated to reflect an analysis of impacts on the electricity system based on more recent data, including updated assumptions about new plant construction and additional sources of market supply. Section 1.4 and Appendix D of the final EIS have been updated

to include other regional energy projects bidding into ISO-NE and the Massachusetts Clean Energy RFP. The economic analysis has been updated to include the most recent data and the discussion can be found in Sections 4.1.2 and 4.2.2.

0083-33
Thank you for your comment. The final EIS and Resource Technical Reports have been revised to fully incorporate the analysis of Alternative 7 - Proposed Action in all resource analyses and geographic sections, including an analysis of cumulative impacts (see Chapter 5 of the EIS). DOE has considered this comment and no change to the EIS was made.

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VII. The Purpose and Need Statement for the U.S. Forest Service's Special Use Permit Repeats the Failings of DOE's Purpose and Need Statement

The purpose and need statement of the U.S. Forest Service ("Forest Service"), relative to the issuance of a special use permit for the construction of the Northern Pass transmission line in the White Mountain National Forest, is "to decide whether to grant a SUP [special use permit] for the Project." DEIS at 1-4. As indicated in Section IV above, an agency's purpose and need statement cannot – as this one is – be limited to the binary question of whether or not to approve the project as proposed, and must rise to a level of generality that enables the identification of the underlying purposes of agency action. The Forest Service's purpose and need statement, which is binary and overly specific in nature, fails to meet this bar for the same reasons that DOE's purpose and need statement is infirm. *See* Section IV, *supra*.

To the extent that a corrected purpose and need statement would properly lead to the consideration of alternative routes for the transmission line that do not pass through the White Mountain National Forest, such as a border crossing in Vermont, then that analysis should be incorporated into the alternatives analysis of the DEIS.[76] Because the DEIS serves as a basis for the Forest Service's permitting decision as well as that of DOE, the DEIS must encompass reasonable alternatives to the Forest Service's issuance of the permit under the terms proposed by the Applicant.

In addition, DOE and the Forest Service have also erred in failing to include in the SDEIS clear information addressing the extent to which recent modifications to the proposed route and configuration of the Project alter the parameters of the Forest Service's review, including its consideration of the need for and impacts of a special use permit.

VIII. In Preparing the DEIS, DOE Committed Procedural Errors that Remain Unremediated

CLF hereby incorporates by reference its prior comments, documentation, and legal analysis as to the requirement that DOE select NEPA contractors without relying on the Applicant's guidance.[77] CLF previously objected to the fact that the Applicant's counsel recommended SE Group to DOE, and that the Applicant's counsel advocated for and acted as an agent for the prospective contractor team at SE Group. *Id.* DOE also engaged in other procedural irregularities detailed in CLF's comments during the scoping process. *Id.*

[76] The Forest Service's review is subject to a number of factors, found at 36 C.F.R. § 251.54(g)(3)(ii)(A)-(H), and may include a consideration of alternatives. *Id.* at 251.54(g)(3)(iii).
[77] *See generally* Fourth Supplemental Scoping Comments of CLF dated Oct. 9, 2012, with attachments.

0083-34

0083-34
Thank you for your comment. The USFS will consider the application for use of National Forest System lands and determine if the Project is in the public interest and is appropriate, based on the WMNF Forest Plan (USDA Forest Service 2005a). The Forest Supervisor will use the EIS to inform the decision regarding: 1) whether to issue a Special Use Authorization under the Federal Land Policy and Management Act; 2) the selection of a preferred alternative; 3) any need to amend the Forest Plan; and 4) what specific terms and conditions should apply if a SUP is issued. Information gained through scoping and resource analysis was used to generate a range of alternatives, including the No Action Alternative and eleven action alternatives, that have been analyzed in detail in the EIS. These alternatives include a variety of alignments and overhead and underground configurations that address resource issues with the original Project (as described in the 2013 amended Presidential permit application). Many of the action alternatives were generated in response to resource concerns and Forest Plan inconsistencies in the WMNF. Additionally, seventeen alternatives, including two alternative border crossings, were considered but eliminated from further detailed analysis (see Sections 2.4.3 and 2.4.17 of the EIS). Additional rationale for elimination has been incorporated into Section 2.4 of the final EIS. The range of alternatives in the EIS satisfies the USFS need for alternatives. Alternative 7 - Proposed Action would still require a SUP for the Project to traverse the WMNF as an underground cable. This has been clarified in Section 1.1.2 of the final EIS.

0083-35

0083-35
Thank you for your comment. DOE conducted a thorough, independent review of potential contractors. DOE was solely responsible for, and did not delegate, the selection of a contractor to support the preparation of this EIS. Disclosure statements indicating that neither the contractor selected by DOE nor any of the sub-consultants have a financial or other interest in the outcome of the Project are included in Appendix I.

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Despite CLF's concerns, DOE relied upon SE Group in the preparation of the DEIS. The DEIS details the nature of its reliance on SE Group at Chapter 6, "List of Preparers":

> This section lists the individuals who filled primary roles in the preparation of this draft EIS. Brian Mills of the DOE Office of Electricity Delivery and Energy Reliability directed the preparation of the draft EIS. The EIS Preparation Team, led by Kent Sharp of the EIS contractor SE Group, provided primary support and assistance to DOE. Other members of the team included a range of resource specialists, NEPA specialists, and technical writers.
>
> DOE provided direction to SE Group, which was responsible for developing analytical methodology and assessing the potential impacts of the alternatives, coordinating the work tasks, performing the impact analyses, and producing the document. DOE was responsible for the scope, content, and organization of the EIS data quality, and issue resolution and direction.
>
> DOE independently evaluated all supporting information and documentation prepared by SE Group. Further, DOE retained the responsibility for determining the appropriateness and adequacy of incorporating any data, analyses, and results of other work performed by SE Group in the draft EIS. SE Group was responsible for integrating such work into the draft EIS.

An agency is "obliged to pick a contractor itself, and not to delegate the responsibility." *Citizens Against Burlington*, 938 F.2d at 383 (citing 40 C.F.R. § 1506.5(c)). To the extent that DOE has relied on a contractor recommended and/or solicited by the Applicant, DOE's actions are contrary to law. *See id*.

IX. Conclusion

Again, CLF appreciates the opportunity to comment on the DEIS and SDEIS regarding the proposed Northern Pass electric transmission project. Consistent with well-settled law, we consider NEPA's EIS process to be essential to ensuring a clear and comprehensive understanding of the context in which the project is being proposed, including the extent to which it is needed; alternatives; and the proposed project's impacts – all to enable meaningful public involvement and informed agency decision-making. For the reasons discussed above, the DEIS and SDEIS fail to meet this important standard, and to fulfill the important functions NEPA and implementing regulations require them to serve. Because many of the deficiencies in the DEIS and/or SDEIS are so fundamental to the overarching analysis – such as the DEIS's unlawfully narrow purpose and need statement, which in turn led to an unlawfully narrow analysis of alternatives – it is essential that DOE not proceed to the Final EIS stage at this time. Rather, to enable the meaningful public involvement mandated by NEPA, and the additional information and analysis that would result therefrom to the benefit of better-informed decision-

0083-35 cont'd

0083-35 Continued

0083-36

Thank you for your comment. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection." (EO 10485). DOE's purpose and need reflects this limited authority. While DOE's authority is limited to the approval or denial of the amended Presidential permit application (August 2015) as requested by the Applicant, DOE's policy is to analyze not only the proposed border crossing, but also the alignment of new infrastructure required between the proposed border crossing and connection to the existing U.S. electricity system as a connected action. In keeping with this policy, DOE analyzed the potential environmental impacts of the alignment proposed by the Applicant. In addition, in response to input from Cooperating Agencies, other agencies, and extensive public comment, DOE analyzed a range of other alignments and underground and overhead configurations between the proposed border crossing and connection with the existing U.S. electricity system. The EIS analyzes in detail the No Action Alternative and eleven action alternatives. Additionally, seventeen alternatives were considered but eliminated from further detailed analysis. Section 2.4 of the final EIS has been updated with additional information on alternatives considered but eliminated from detailed analysis. Preparation of a supplement to either a draft or final EIS is required if there is a "substantial change[s] in the proposed action that [is] relevant to environmental concerns" or a "significant new circumstance[s] or information relevant to environmental concerns and bearing on the proposed action or its impacts." (40 CFR Section 1502.9(c)(1)(i)-(ii)). DOE issued a Supplement to the Draft EIS in November 2015 to address an amendment to the Presidential permit application that was proposed by the Applicant in August 2015 (after issuance of the draft EIS). The November 2015 Supplement to the Draft EIS analyzed this proposal, referred to as Alternative 7. The comment

period on the draft EIS and the supplement to the draft EIS was extended to April 2016, and public hearings were held in March 2016. The final EIS has been updated to include Alternative 7 and information raised during the comment period. These updates do not constitute changes or information that would necessitate preparation of another supplement.

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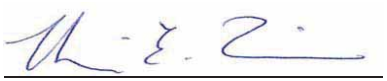
making, we urge DOE to address the deficiencies discussed in these comments in a further supplementation of the DEIS, with all attendant public review and comment opportunities.

0083-36
Continued

Respectfully submitted,



Melissa Birchard, Staff Attorney, CLF New Hampshire*
Tom Irwin, VP and CLF New Hampshire Director
Greg Cunningham, VP and CLF Clean Energy & Climate Change Program Director

*Barred in the District of Columbia; License Pending in New Hampshire

THE NORTHERN PASS™

P.O. Box 270
Hartford, CT 06141-0270
(860) 728-4551
Email: james.muntz@eversource.com

James A. Muntz
President – Northern Pass Transmission LLC

August 19, 2015

Mr. Brian Mills
Office of Electricity Delivery and Energy Reliability
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Re: Northern Pass Transmission LLC
Docket No. PP-371
Comment on Draft Environmental Impact Statement

Dear Mr. Mills:

Northern Pass Transmission LLC ("Northern Pass") hereby submits this initial comment on the Draft Environmental Impact Statement ("Draft EIS") on the Northern Pass application for a Presidential Permit posted on the Department of Energy ("DOE") Northern Pass EIS website for public comment on July 21, 2015. Specifically, Northern Pass identifies below elements of the Alternatives Analysis in the Draft EIS that it supports to reduce the potential impacts identified in the Draft EIS, as well as two minor additional siting adjustments.

Additional Underground

In parallel with the environmental impacts analysis DOE has undertaken over the last year that is described in detail in the Draft EIS, Northern Pass has been evaluating the alternatives DOE described in its Alternatives Addendum, issued in May 2014. Based on its own analysis, Northern Pass supports 52.3 miles of additional underground in two segments.

First, Northern Pass supports an additional 49.3 miles of underground construction along state roads between Bethlehem and Bridgewater evaluated in the Draft EIS as portions of Alternatives 4c and 5c. This 49.3 mile segment includes a stretch that begins on State Route 18, where Route 18 intersects the existing Eversource Energy transmission right-of-way, and continues along State Routes 116, 112 and 3, to the point at which Route 3 intersects the existing transmission right-of-way in Bridgewater. This segment takes the place of the corresponding portions of the Proposed Action described in the Northern Pass Amended Application dated July 1, 2013 ("Amended Application"), Alternative 2 in the Draft EIS.

In addition, Northern Pass proposes a three-mile underground segment along state roads in the public right-of-way extending immediately to the north of the underground option evaluated in Alternative 5c. This segment begins at the point at which the existing transmission right-of-way intersects Route 302 and continues along Route 302 to Route 18 and along Route 18 for a total distance of three miles. This segment would take the place of an overhead segment that is part of Alternative 2 and that would pass over one site listed on the National Registry of Historic Places (the Rocks Estate) and would be visible from another site that is eligible for listing (Baker Cabins). This additional three-mile underground segment is proposed to avoid potential impacts on these two sites.

The potential impacts associated with underground construction in roadways are fully addressed in the Draft EIS at Sections 2.3.2.5, 2.3.3.5 and 2.3.4.5, among others. Although not specifically considered in the Draft EIS, the additional three-mile segment Northern Pass proposes to place underground in the roadway presents no impacts of a nature or degree not already fully assessed in the Draft EIS.

Exhibits 7A, 8A and 9A, attached hereto, reflect the routing that Northern Pass now supports, noting as relevant where Northern Pass is adopting an Alternative discussed in the Draft EIS. These maps correspond to, and take the place of, Exhibits 7, 8 and 9 submitted with the Amended Application.

Technology Change

As described in Section 2.4.1 of the Draft EIS, the originally proposed 1,200 megawatt (MW) traditional HVDC technology, involving mass impregnated cable, is not practical or economic for long underground distances. Accordingly, the inclusion of additional underground requires a change in the technology for the Project to voltage source converter (VSC) technology. The VSC technology would deliver between 1,000 to 1,090 MW of power. Voltage for the HVDC section will also change from +/- 300kV to +/- 320kV. The Draft EIS considers the potential impacts associated with this technology alternative at Sections 4.1.2.3, 4.1.4.2, 4.1.10.2 and 5.1.2.4, among others.

Two Additional Transition Stations

As Northern Pass explained in the Amended Application, transition stations will be required where the Project moves from overhead to underground and from underground back to overhead. To accommodate the additional 52.3 miles of underground, two additional transition stations will be required, one in Bethlehem and one in Bridgewater. Both transition stations will be located on property owned by an affiliate of Northern Pass. The locations for these transition stations are shown on Exhibits 7A and 8A. The potential impacts associated with transition stations are addressed in the Draft EIS at Sections 4.1.1.2, 4.1.3.2, 4.1.7.1, 4.1.13.1 and 4.1.14.1, among others.

Slight Shift in Border Crossing

As the result of siting needs on the Canadian side of the border that have only recently emerged, the border crossing must move from Latitude 45.017820, Longitude -71.501217 to Latitude 45.017719, Longitude -71.500028, a distance of approximately 100 feet in an area that is similar in character throughout. This is reflected on the map shown in Exhibit 10A, a replacement for Exhibit 10 in the Amended Application. However, we note that the change is so modest that it is not visible at the scale of the map, which is the scale DOE regulations specify. The slight shift in the location of the border crossing will not require any change in location of the transmission structures, although a few structures will shift orientation.

Conclusion

The additional 52.3 miles of underground Northern Pass supports will avoid some of the least developed portions of New Hampshire, where concerns about the visibility of the Project, particularly in and around the White Mountain National Forest, have been the greatest. The new three-mile underground segment further reduces the potential visual impacts of the Project, as well as the potential impacts on historic resources. While not specifically discussed in the Draft EIS, this three-mile segment in no way represents a substantial change from Alternative 5c. Rather, it is a "minor variation [that is] qualitatively within the spectrum of alternatives discussed" in the Draft EIS.[1]

Northern Pass does not believe that the approximately 100-foot shift in the border crossing location will have any effect at all on the potential impacts evaluated in the Draft EIS.

Except with respect to the foregoing changes, Northern Pass continues to support both the underground and overhead segments of the Proposed Action described in Alternative 2 of the Draft EIS, such that the Project would now include approximately 60.5 miles underground in roadways, approximately 99.5 miles overhead in existing transmission rights-of way, and approximately 32 miles overhead on property in which Northern Pass has a leasehold interest.

Northern Pass submits this initial comment without prejudice to its right to comment further on the Draft EIS once it has had an opportunity to review the Draft in detail.

For the benefit of the interested public, Northern Pass requests that DOE promptly post this comment on the Northern Pass EIS website.

Respectfully submitted,

1 *See* Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,035 (1981).

0084-1

0084-1
Thank you for your comment. The final EIS has been updated to include a full analysis of the revised Proposed Action (Alternative 7), as presented in Northern Pass' Further Amendment to Presidential Permit Application received by DOE on August 31, 2015, and described in this comment.

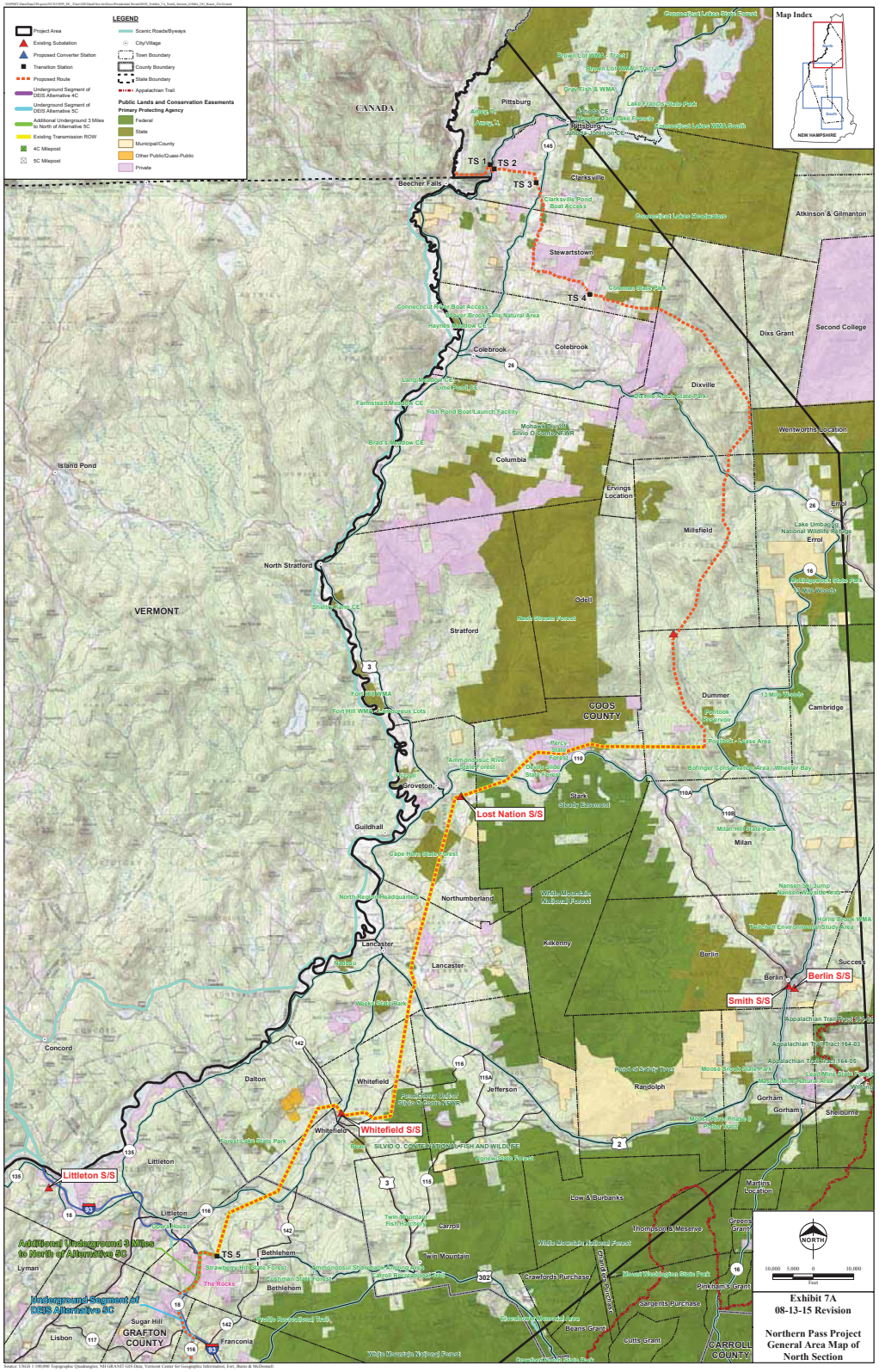
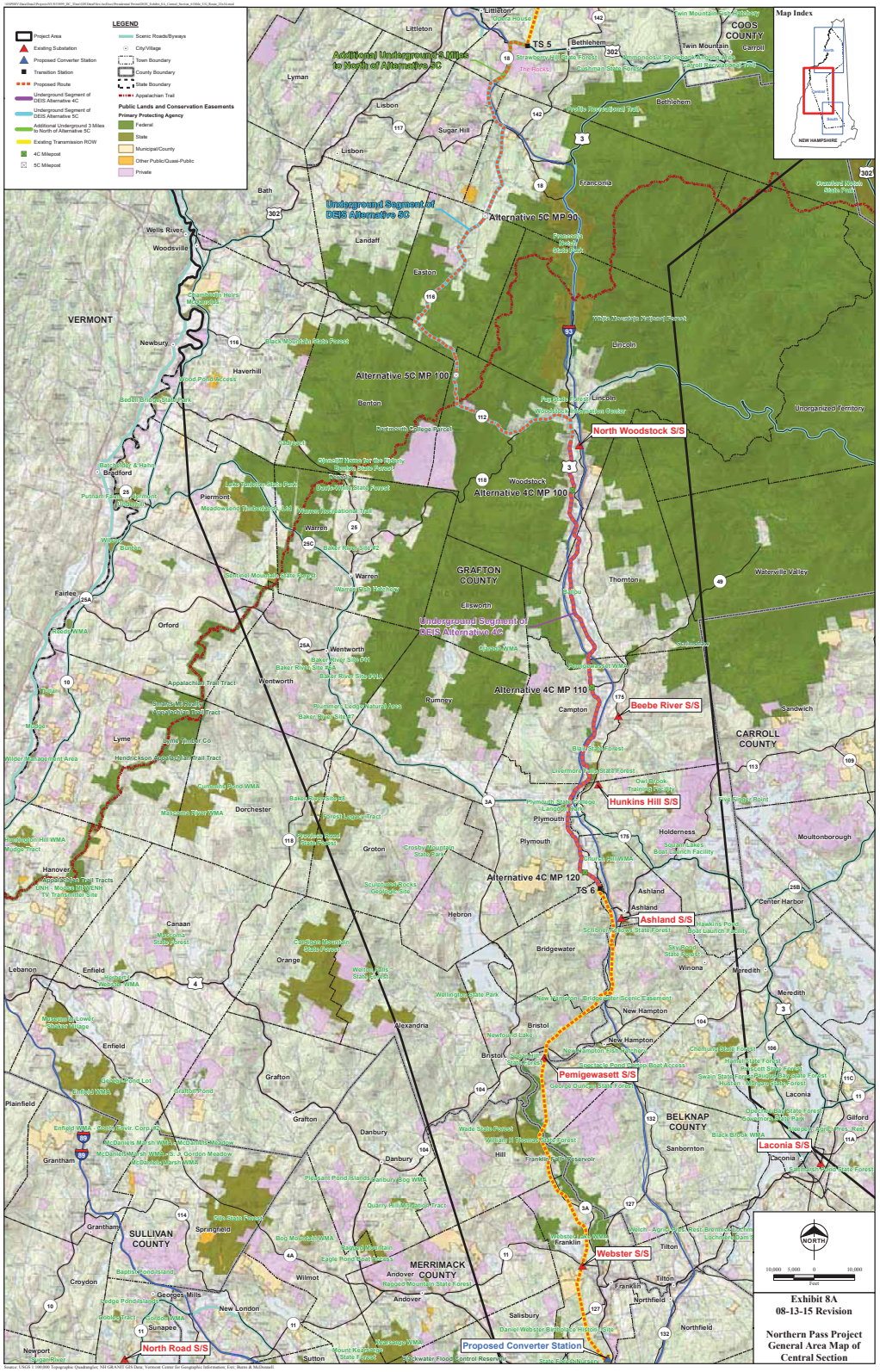
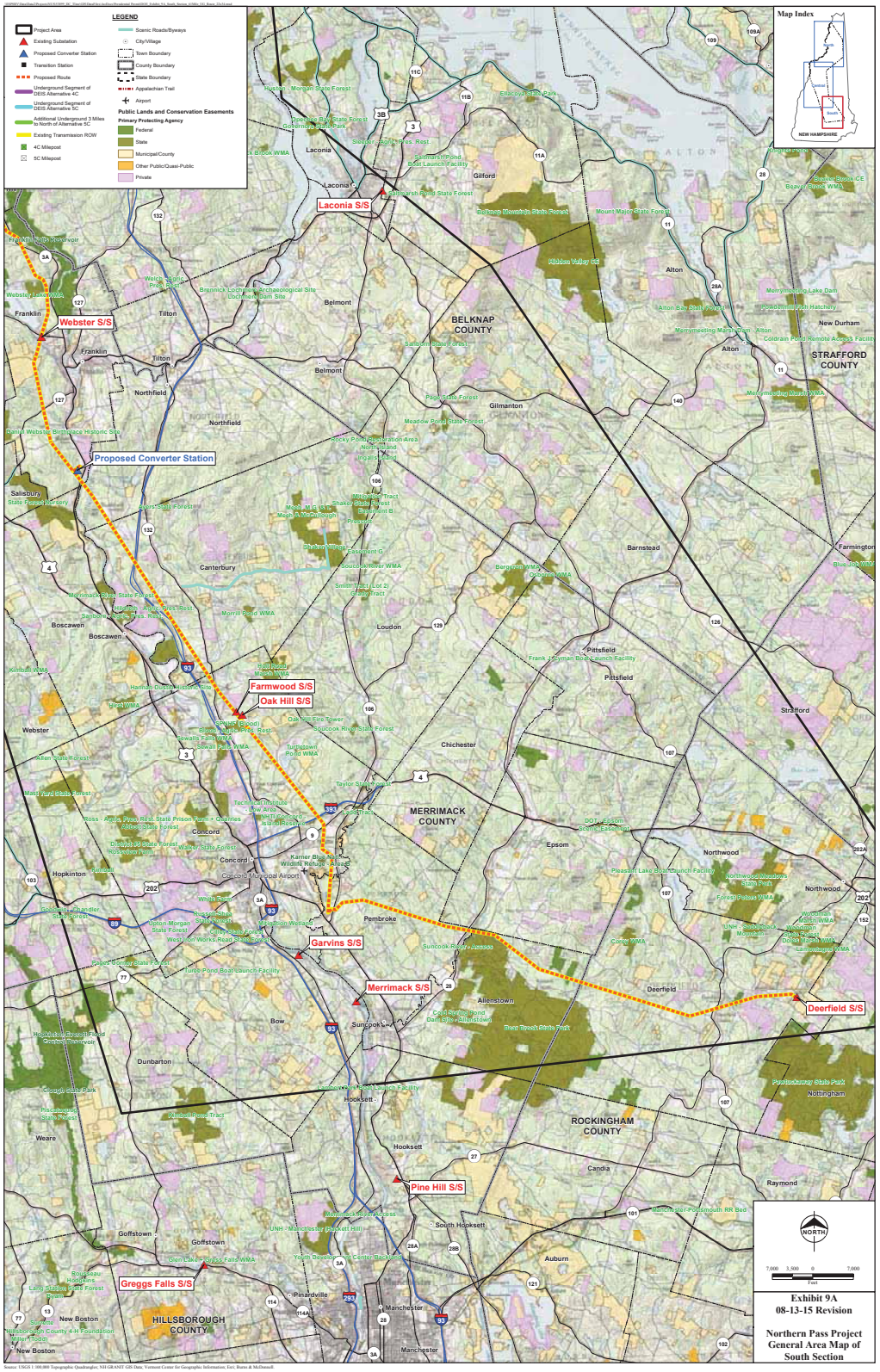


Exhibit 7A
08-13-15 Revision

Northern Pass Project
General Area Map of North Section

Source: USGS 1:100,000 Topographic Quadrangles; NH GRANIT GIS Data; Vermont Center for Geographic Information; Esri; Burns & McDonnell.


LEGEND
Project Area
Existing Substation
Proposed Converter Station
Transition Station
Proposed Route
Underground Segment of DEIS Alternative 4C
Underground Segment of DEIS Alternative 5C
Additional Underground 3 Miles to North of Alternative 5C
Existing Transmission ROW
4C Milepost
5C Milepost
Scenic Roads/Byways
City/Village
Town Boundary
County Boundary
State Boundary
Appalachian Trail
Public Lands and Conservation Easements
Primary Protecting Agency
Federal
State
Municipal/County
Other Public/Quasi-Public
Private
Map Index
NEW HAMPSHIRE
Additional Underground 3 Miles to North of Alternative 5C
Underground Segment of DEIS Alternative 5C
Alternative 5C MP 90
Alternative 5C MP 100
Alternative 4C MP 100
Alternative 4C MP 110
Alternative 4C MP 120
Underground Segment of DEIS Alternative 4C
North Woodstock S/S
Beebe River S/S
Hunkins Hill S/S
Ashland S/S
Pemigewasett S/S
Laconia S/S
Webster S/S
North Road S/S
Proposed Converter Station
TS 5
TS 6
VERMONT
COOS COUNTY
GRAFTON COUNTY
CARROLL COUNTY
BELKNAP COUNTY
SULLIVAN COUNTY
MERRIMACK COUNTY
Littleton
Bethlehem
Lyman
Lisbon
Sugar Hill
Bath
Wells River
Woodsville
Landaff
Easton
Franconia
Twin Mountain
Carroll
Lincoln
Woodstock
Thornton
Waterville Valley
Unorganized Territory
Haverhill
Newbury
Benton
Piermont
Bradford
Warren
Wentworth
Orford
Fairlee
Rumney
Campton
Sandwich
Plymouth
Holderness
Moultonborough
Ashland
Center Harbor
Hebron
Bridgewater
Meredith
Winona
New Hampton
Bristol
Alexandria
Canaan
Enfield
Lebanon
Hanover
Lyme
Dorchester
Groton
Hebron
Grafton
Danbury
Plainfield
Grantham
Springfield
Croydon
Newport
Sunapee
New London
Andover
Wilmot
Salisbury
Sutton
Tilton
Northfield
Franklin
Gilford
Laconia
Sanbornton
Meredith
Exhibit 8A
08-13-15 Revision
Northern Pass Project
General Area Map of
Central Section



Source: USGS 1:100,000 Topographic Quadrangles; NH GRANIT GIS Data; Vermont Center for Geographic Information, Esri, Burns & McDonnell.

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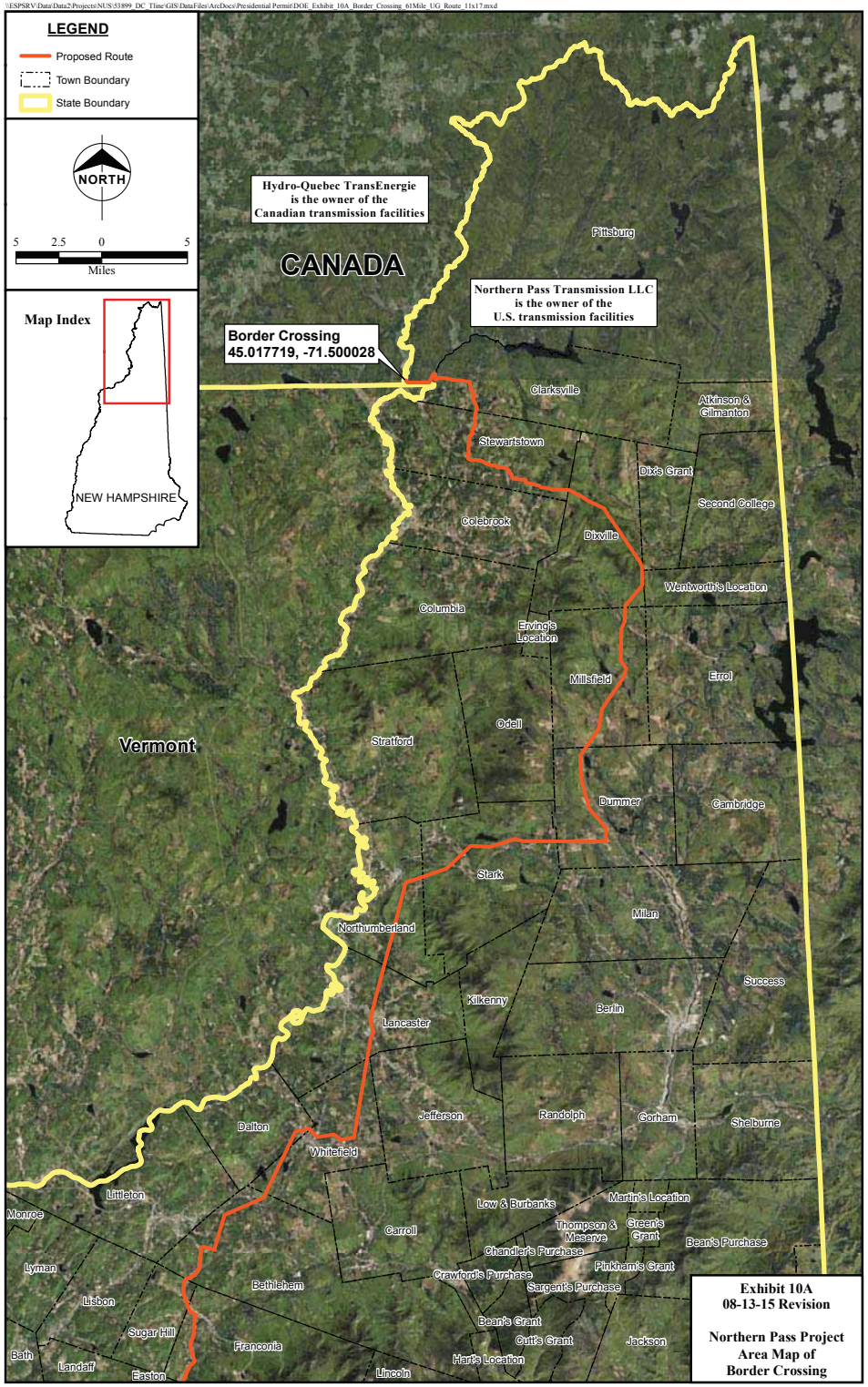

Source: Esri World Imagery; NH GRANIT GIS Data; Vermont Center for Geographic Information; Burns & McDonnell.

Northern Pass EIS Website Comment Receipt

Refers to Comment placed on Aug 12, 2015

ID: 8283

Date Entered: Aug 12, 2015

Source: Website

Topics: Economic

Name: Harry Hintlian

Organization: Reforest The Tropics

Title: Board Chairman

Email: harryhnh@aol.com

Mailing Address: 26 Rockholm Road

City: Gloucester

State: MA

Zip: 01930

Country: US

Comment: The economic effect of the proposed transmission line over the Northern Pass preferred route would have a devastating effect on the current value of real estate properties along the route.

The present transmission line has wooden poles that are barely visable from adjacent properties as the poles barely extend above the treeline where there are trees to block the view of the line. With the proposed higher lines and poles extending well beyond the height of the trees, the negative visual impact increases dramatically.

Whereas the current lines only impact direct abutters, the new higher lines will depreciate real estate values in entire neighborhoods even up to one-half mile away, or more. Who will buy or build a home within eyesight of a power line that's three times higher than their proposed home? It's not just the scenery that's effected but the financial value of hundreds of miles of adjacent lands next to these massive towers and accompanying transmission lines. Buyers come to N.H. for the beautiful scenery and to get away from these kinds of massive intrusions.

There's no real alternative in this day and age but to completely bury the lines.

0085-1

0085-1
Thank you for your comment. Section 4.1.2 of the EIS addresses the potential for impact to property values as a function of proximity of the Project to private property. Adjustments to the original analysis presented in the draft EIS have been updated in the final EIS to reflect comments on the methodology and assumptions.

Sincerely,
Harry N. Hintlian