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October 6, 2016

Jennifer McCarthy
Chief, Regulatory Division
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, Massachusetts 01742

Re: Northern Pass Transmission Project

Dear Ms. McCarthy:

I am writing on behalf of Northern Pass Transmission, LLC (“NPT”) in response to the July 14, 2016 letter submitted by Jacqueline LeClair, Chief of the Wetlands Protection Unit for EPA Region I on the Northern Pass (the Project) Clean Water Act Section 404 permit application.¹ This response demonstrates that our proposed route is the least environmentally damaging practicable alternative, and that we have been exhaustive in our work to ensure minimal impacts to the wetlands. This conclusion is supported by the voluminous information included in the Project’s state and federal applications and the additional information attached to supplement that analysis.

From an environmental perspective, this Project is critically important to New Hampshire and New England. Bringing 1,090 megawatts of hydroelectricity to the region, the Project integrates the cleanest forms of power used today into the grid, which will reduce our need to burn fossil fuels for electricity. That, in turn, will reduce regional carbon emissions by up to 3.3 million tons a year, an equivalent to taking about 690,000 cars off the road.

As the largest owner/operator of hydropower in the United States, the Army Corps of Engineers (“USACE”) can appreciate those objectives. In its proposed design of this project,

¹ In its letter, EPA concludes that the Northern Pass application lacks sufficient information for EPA to be able to recommend approval of the application.

NPT has looked at all that is available and capable of being done after taking into consideration cost, existing technology and logistics in light of the overall project purpose [pursuant to 40 CFR 230.3(q)]. We hope the information provided is useful in your review of the EPA response.

Background

NPT's federal and state wetlands applications provide substantial information on how the Northern Pass route was selected to avoid impacts, including secondary impacts mentioned in the EPA letter. They also demonstrate that NPT has designed the Project to represent the least environmentally damaging practicable alternative. The proposed Project corridor now includes 60 miles of underground construction along existing public highway rights-of-way (ROW) at an increased cost of roughly \$500 million.² This will represent the longest stretch of underground electric transmission cable on land in the United States when it is placed in service.

In addition, as described further below, there has been careful attention to minimization of impact in the overhead route design. This includes siting approximately 100 miles of the route within an existing transmission right of way ("ROW"), an effective design element to minimize wetlands impact. Furthermore, 24 miles of the total of 32 new miles of overhead design in the north section of the route are located in the area managed by Wagner Forest Management, an active industrial logging area where disturbances and human activity are already common at the landscape level.

EPA asks whether 32 miles of the line might also be placed underground in the north section. NPT's design engineers with input from NPT's consulting scientists have designed the entire route and all facility locations to minimize impacts to the extent practicable. This evaluation included not only cost, but logistics and existing technology. An additional 32 underground miles is not practicable given the substantial additional cost that would entail on top of the costs Northern Pass has already incurred to minimize wetlands and other impacts. Further,

² The Project was initially designed as an all overhead line in 2010 with an estimated cost of \$1.1 billion. In 2013, the design was amended to add 8 miles of underground with an estimated cost of \$1.4 billion. Finally, in 2015, the proposed project, including a change in technology and an additional 52 miles of underground construction was announced. The estimated cost of the proposed project is now \$1.6 billion.

additional underground construction would also pose additional logistical difficulties and would result in considerable additional delay.

In its letter, EPA recognizes that additional underground routing may not be practicable, and it elicits additional information on this issue. This letter and the accompanying documents provide the additional information EPA requests.

Alternatives

As the NHSEC application makes clear, there will be permanent direct wetlands impacts of only 2.53 acres.³ The enclosed additional material recently provided to NHDES in response to its questions on the state wetlands application and to various letters and e-mails submitted by towns, Local River Advisory Committees and environmental groups provide further information on and explanation of these avoidance and minimization efforts.⁴

DOE has examined many underground alternatives in its NEPA alternatives analysis, and NPT in its Section 404 application provides a robust explanation of how the Applicant has designed its Project along the selected route to avoid and minimize wetlands impacts. The proposed Northern Pass route minimizes impact to the "maximum extent practicable" in multiple distinct ways: (1) it follows previously disturbed areas along approximately eight miles of public highway ROW in the northern section of the route; (2) it includes approximately 24 miles within the Wagner Forest – an area that experiences regular industrial-level logging operations; (3) it places 52 miles of the line underground through and near the White Mountain National Forest; and, (4) along most of the remaining route – which is within existing ROW – NPT has designed the line to avoid wetlands impacts where practicable, as demonstrated by the very low level of direct, permanent impacts on wetlands.

When NPT revised its Project design to put a total of 60 miles of the line underground, it made the technology change necessitated by the 52-mile underground segment that entailed –

³ The much higher number that appears in the Department of Energy (DOE) Draft Environmental Impact Statement (DEIS) may be the result of categorizing wetland impacts differently, and possibly using different impact assumptions, but the 2.53 acres is the correct number.

⁴ *Responses to May 16, 2016 NHDES Requests for More Information on Wetlands Application* (Enclosure 1).

and the line lost 110 MW of capacity as a result. While additional underground may be technically feasible, the cost and logistics associated with 32 miles of additional underground would both be significant, and the logistics challenges compound the cost increase.

EPA's suggested additional underground is not practicable. In considering the practicability of 32 miles of new underground corridor, it must be recognized that NPT has already taken on an additional \$500 million in Project costs to place underground a total of more than 60 miles of its proposed route – almost a third of the total Project – and NPT has avoided wetlands impacts to the extent practicable. The more than 60 miles of underground transmission NPT intends to construct in previously disturbed transportation corridors will have effectively no wetlands impacts. It is not appropriate to isolate one overhead segment of the line for analysis, while giving no credit for the extensive wetlands avoidance incorporated into the Project as a whole. Rather, any analysis of the potential for burial of 32 more miles of the line must be considered in light of the wetlands avoidance efforts already reflected in the Project.

EPA's comments include a table on cost assumptions that assume a \$1.3 billion total for the Northern Pass proposed alternative.⁵ In fact, the estimated cost of the Project as proposed is approximately \$1.6 billion, not \$1.3 billion. This cost estimate is based on the fixed price contract NPT has negotiated.

The substantial increase in costs associated with construction of 60 miles of underground transmission has been accompanied by an equally substantial decrease in expected Project revenues. The line's capacity has been reduced from 1,200 MW to 1,090 MW as the result of a change in technology to accommodate a 52 miles stretch of underground construction. The reduced capacity means that there is a corresponding reduction in revenue from electricity sales, as well as clean energy benefits.

Assuming geology and other ground conditions along the 32 miles EPA asks about are comparable to those along the 60 miles NPT has already committed to, the cost of that additional underground construction would be in excess of \$300 million. There would be offsetting reductions in cost for the associated reduction in overhead construction, but there would also be at least an additional year of construction required for completion of the Project.

⁵ EPA Letter at 2.

Underground construction can occur in New Hampshire only during an eight-month window each year, from April to November.⁶ Because of the limited availability of equipment necessary to do the trenchless crossings that NPT has already committed to, the planned 60 miles of underground will require two construction seasons. The additional 32 miles of underground would require at a minimum, another eight-month window for construction. This would delay the delivery of the Project's benefits another year and further increase the costs of construction.⁷ At a time when the President and CEO of ISO-NE is pointing out that New England's current energy situation is "precarious" and that it could become "unsustainable" in extreme cold weather after 2019,⁸ such a delay should be taken very seriously.

The impracticability of 32 miles of additional underground has another, fundamentally important aspect. As NPT has explained, the power delivered by the Project must compete in the New England power market. While Project costs have risen substantially because of the 60 miles of underground to which NPT has already committed, the forecasted revenues from energy sales have dropped significantly as a result of declining natural gas prices. While New England electricity prices remain among the highest in the Nation, the wholesale energy price expected when Northern Pass enters service will be about 50% of that which prevailed when HQ made its initial investment decision; HQ will be able to deliver 10% less energy than it expected; and the U.S. transmission cost of those deliveries will have increased by about 50%.

Storm water impact has been minimized. EPA also asks whether the Section 404 permit application adequately justifies wetlands impact for stormwater treatment at Transition Stations 1 and 5 and at the Deerfield Substation. All three of those sites are highly constrained, which challenges the ability to engineer a stormwater treatment solution without some wetlands impact.

⁶ State of New Hampshire Department of Transportation, *Utility Accommodation Manual (NH DOT UAM)* at 67.

⁷ Further information on these costs is contained in a report prepared by the Applicants' engineering consultants entitled *An Evaluation of All UG Alternatives for the Northern Pass Transmission Project*, dated May 31, 2016. (This report is being submitted separately today with a request for treatment as Business Confidential Information.) The report also identifies some significant logistical challenges that would be associated with the 32 additional miles of underground that EPA proposes.

⁸ <http://www.unionleader.com/energy/New-Englands-energy-situation-precarious-ISO-leader-says-092916>.

NPT intends to perform geotechnical surveys on all three sites in order to further refine the engineering designs, which may reduce the amount of wetlands impact. Thus, the Applicants have demonstrated that the wetlands impacts at these three discrete locations are being minimized to the extent practicable.

The Border crossing was evaluated to determine whether modifications could reduce impacts to wetlands and other waters. In its initial application to DOE, NPT identified a proposed border crossing and, while not required, it also identified two alternative crossing locations. However, NPT made clear that the technically feasible alternatives were both longer and had significant environmental disadvantages.⁹ On July 1, 2013, when the Amended Application was filed, NPT identified a single border crossing location, and it withdrew support for the previously identified alternatives. It noted that the previously identified alternatives were longer, would involve the acquisition of many more parcels of land (some from unwilling landowners), and importantly offered no apparent environmental benefits. The border crossing NPT has proposed is where it could acquire the necessary land to reasonably interconnect with the HQ line on the Canadian side of the border. The location presents no significant environmental disadvantages as compared to other alternatives, and it is the only practicable site available.

Impact to Aquatic Resources and Mitigation

We appreciate EPA's recognition that NPT has made a "solid effort" to minimize adverse impact to aquatic resources. We believe that NPT has done that not only for wetland and other aquatic resources, but for other potential effects of the Project as well. The effort to further refine the Project design to avoid wetlands impacts continues, and NPT expects that wetlands impacts will be less than the small amount of impact indicated in the present proposal by the time the design is finalized. NPT has also committed that it will take great care to avoid unintended impacts to aquatic resources during construction by: following best management practices; training staff to understand and follow those practices; and providing environmental monitors during construction. NPT also supports EPA's suggestion that NHDES hire a full-time staff person to monitor construction activities.

⁹ Letter to DOE dated February 15, 2011, at 2, <http://www.northernpasseis.us/library/documents/P120>.

EPA focuses its attention on the impacts on the northern section of the route. NPT has catalogued the Project's permanent, temporary, and secondary impacts that the EPA letter mentions. The impacts that are unavoidable after the Project's avoidance and minimization efforts are, of course, addressed in the Project's mitigation plan. Secondary and permanent impacts are included in the impact calculation. EPA notes that, even with the Project's minimization efforts, the Project will have a fragmentation impact on wildlife habitat and natural communities that extends up to 200 meters from the edge of the ROW. As NPT explained in its application materials, however, the amount of fragmentation that clearing of the new ROW adds to the landscape is relatively minimal,¹⁰ particularly given that, in many locations, the matrix forest is already subject to regular selective or clear-cutting, especially in the Wagner Forest.

EPA accurately summarizes the Northern Pass mitigation package. The mitigation package for wetlands impacts is nearly complete, and the core mitigation components have been in place since the NHSEC and wetlands applications were filed. One significant new development, however, is that NPT has secured rights to a parcel of land in Concord that is very well suited as mitigation for potential impacts to Karner blue butterfly and its habitat.

Eversource Land Trust (ELT) has experience with land stewardship. EPA also questions the use of the Eversource Land Trust (ELT) to hold the compensatory wetlands acreage.¹¹ The ELT has been in existence since 2012, having been established at the time of the merger between Northeast Utilities and NSTAR as a demonstration of Eversource's commitment to the preservation of key open spaces. It was not recently formed to hold conservation easements for this Project, as EPA suggests. ELT now holds six conservation parcels (four in fee and two as conservation easement holder), and it has established a good track record of stewardship of these lands.¹² Also, in its mitigation submission, NPT proposed that, while ELT would be the initial easement holder, ELT will seek alternative easement holders with more New Hampshire

¹⁰ See Section 9.4.5 in *Northern Pass Transmission Project Wildlife Report and Impact Assessment*, <http://www.northernpass.us/assets/filings/Volume%20XXXI/Volume%2031%20-%20Wildlife%20Report%20and%20Impact%20Assessment%20Redacted.pdf>.

¹¹ EPA Letter at 5. The mitigation package consists of a very substantial amount of land to be put into conservation and a large payment to the NH Aquatic Resources Mitigation Fund. The exact number of acres and total dollar amount of the ARM payment will be finalized in consultation with the resource agencies.

¹² The USACE has worked with ELT at two mitigation sites in Connecticut, and it has approved the conservation restrictions and management plan for those sites.

experience. The draft conservation easement deeds for the conservation areas that comprise part of the Northern Pass mitigation package include a provision to this effect.

Conclusion

The New Hampshire state siting process is well underway. NPT filed its application with the NH Site Evaluation Committee (NHSEC) last fall, and the NHSEC determined that the application was complete on December 18, 2015. This triggered the formal NHSEC application review process which both affords substantial opportunities for public input, formal discovery and adjudicatory hearings, and includes the parallel agency review of related applications for wetlands and other permits. Pursuant to the NHSEC's 8/29/16 *Order on Agency Requests to Suspend Reporting Deadlines*, the NH Department of Environmental Services (NHDES) is scheduled to make a final decision on the state wetlands application by March 1, 2017.

Since the scoping process under the National Environmental Policy Act (NEPA) opened in February 2011, NPT has considered many alternatives, and it has made very significant modifications to the route that was first proposed based on input from the public and concerns of regulators. The proposal that is now before the state and federal agencies incorporates meaningful and significant route and Project design modifications that respond to the input NPT received about the Project. Given both the careful attention NPT has paid to avoiding, minimizing and mitigating wetlands impacts and the extensive commitment to underground routing NPT has already made, we think the resulting route represents all that is practicable. Therefore, we urge USACE to recognize and acknowledge that the additional underground construction EPA has inquired about is not practicable.

Thank you for considering our input in support of the Northern Pass application. We encourage, as always, both the Army Corps and EPA to let us know as questions arise so that we can provide any further information you require in your consideration of the permit application.

Sincerely,



Catherine Finneran

Enclosures

cc w/enclosures:

Jacqueline LeClair, USEPA

cc w/out enclosures:

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Thomas Burack, Commissioner, NHDES

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