

January 19, 2018

**Via Electronic Mail**

New Hampshire Site Evaluation Committee  
Pamela G. Monroe, Administrator  
21 South Fruit Street, Suite 10  
Concord, NH 03301

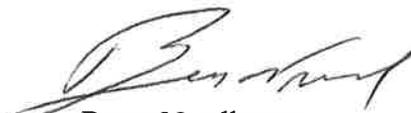
**Re: NH Site Evaluation Committee Docket No. 2015-06: Northern Pass Transmission LLC and Public Service Company of New Hampshire d/b/a Eversource Energy (1) Applicants' Post-Hearing Brief, (2) Applicants' Motion to Authorize Phase I-B Archeological Survey, and (3) Executive Summary**

Dear Ms. Monroe:

Enclosed for filing with the New Hampshire Site Evaluation Committee in the above-captioned docket, please find the Applicants' Post-Hearing Brief and a Motion to Authorize Phase I-B Archeological Survey, which the Applicants are filing as a companion motion to the Post-Hearing Brief. Finally, given the size of Applicants' Brief and the complexity of the issues, we have included a separate Executive Summary.

Please let us know if you have any questions.

Sincerely,



Barry Needleman

cc: SEC Service List

Enclosures

**STATE OF NEW HAMPSHIRE  
SITE EVALUATION COMMITTEE**

**SEC Docket No. 2015-06**

**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**

**APPLICANTS' POST-HEARING MEMORANDUM**

**January 19, 2018**

**TABLE OF CONTENTS**

	<u>Page</u>
<b>PART A--SUMMARY OF POSITION.....</b>	<b>1</b>
<b>I.    INTRODUCTION.....</b>	<b>1</b>
<b>II.   ISSUANCE OF CERTIFICATE.....</b>	<b>2</b>
<b>PART B--BACKGROUND.....</b>	<b>7</b>
<b>I.    BURDEN AND STANDARD OF PROOF.....</b>	<b>10</b>
<b>II.   STATUTORY FINDINGS AND RULEMAKING CRITERIA.....</b>	<b>11</b>
<b>III.  SEC PRECEDENT.....</b>	<b>11</b>
<b>A.    Financial, Technical and Managerial Capability.....</b>	<b>11</b>
<b>B.    Undue Interference with the Orderly Development of the Region.....</b>	<b>12</b>
<b>C.    Unreasonable Adverse Effects.....</b>	<b>14</b>
<b>D.    Public Interest.....</b>	<b>16</b>
<b>IV.  REGULATORY CONTEXT.....</b>	<b>17</b>
<b>A.    Integrated Review.....</b>	<b>17</b>
<b>B.    Need and Alternatives.....</b>	<b>23</b>
<b>V.   OPPOSITION.....</b>	<b>27</b>
<b>A.    Property Owners.....</b>	<b>28</b>
<b>B.    Municipalities.....</b>	<b>28</b>
<b>C.    Non-Governmental Organizations.....</b>	<b>29</b>
<b>D.    Counsel for the Public.....</b>	<b>30</b>
<b>VI.  PROCEDURAL DUE PROCESS.....</b>	<b>31</b>
<b>PART C--ARGUMENT.....</b>	<b>36</b>
<b>I.    The Applicants have the financial, technical and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate.....</b>	<b>36</b>

A.	Financial Capability.....	36
B.	Technical and Managerial Capability.....	40
II.	The site and facility will not unduly interfere with the orderly development of the region. ....	49
A.	Land Use, Employment and the Economy of the Region.....	51
B.	Decommissioning.....	140
C.	Views of Municipal and Regional Planning Commissions and Municipal Governing Bodies .....	142
III.	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.....	145
A.	Aesthetics .....	146
B.	Historic Sites and Archeological Resources .....	220
C.	Air and Water Quality.....	277
D.	Natural Environment.....	301
E.	Public Health and Safety .....	352
IV.	Issuance of a certificate will serve the public interest. ....	377
A.	Legislative and Rulemaking History of Public Interest Finding .....	378
B.	Public Interest Standards.....	381
C.	Statutory Construction.....	382
D.	Supreme Court Decisions .....	384
E.	Purpose Section .....	385
F.	Recent SEC Decisions .....	387
G.	Opponent Briefs .....	388
H.	Conclusion .....	390
	<b>PART D--STATE PERMITS AND APPROVALS.....</b>	<b>392</b>
I.	Department of Environmental Services.....	392

A.	Wetlands Permit.....	392
B.	Section 401 Water Quality Certification.....	394
C.	Shoreland Permits.....	395
D.	Alteration of Terrain Permit.....	395
E.	Permits and Approvals to be acquired Prior to Construction.....	396
II.	Department of Transportation .....	397
III.	Public Utilities Commission .....	397
A.	Petition to Commence Business .....	397
B.	Petitions to Cross Public Waters and Lands Owned by the State.....	398
PART E--STIPULATIONS, CONDITIONS AND DELEGATIONS.....		399
PART F--RESPONSES TO CFP AND INTERVENOR CONDITIONS .....		404
I.	Counsel for the Public .....	404
A.	Best Management Practices – Construction.....	404
II.	Municipal Groups 1 South, 2 , 3 South and 3 North .....	416
III.	City of Berlin Recommended Conditions .....	417
IV.	Pemigewasset River Local Advisory Committee (“PRLAC”) Recommended Conditions.....	419
V.	Abutting Property Owners Bethlehem to Plymouth Proposed Conditions (“APOBP”) .....	421

## **PART A--SUMMARY OF POSITION**

### **I. INTRODUCTION**

The Applicants, Northern Pass Transmission LLC (“NPT”) and Public Service Company of New Hampshire d/b/a Eversource Energy (“PSNH”), set forth here the legal and factual basis for the Site Evaluation Committee (“SEC” or, in this case, “Subcommittee”) to issue a Certificate of Site and Facility (“Certificate”) for the Northern Pass Project. An Application was filed on October 19, 2015, to provide 1,090 MW of clean, renewable electricity over a 192-mile electric transmission line from the Canadian border in Pittsburg, New Hampshire to a substation located in Deerfield, New Hampshire (the “Project”). The Project comprises a 158.3 mile, +/-320 kV direct current (“DC”) segment, approximately 60 miles of which is underground, and a 33.7 mile, 345 kV alternating current (“AC”) segment, as well as a DC to AC converter terminal in Franklin, New Hampshire and other associated facilities, including six transition stations for the three underground segments and upgrades to PSNH facilities required by the Independent System Operator-New England (“ISO-NE”).

The Applicants have met the requirements of the SEC’s governing statute and rules. Among other things, the Applicants filed a complete Application, which the SEC accepted on December 18, 2015, secured final affirmative decisions from the relevant permitting agencies, which were issued by the New Hampshire Department of Environmental Services (“DES”) on March 1, 2017, the New Hampshire Department of Transportation (“DOT”) on April 3, 2017, and the New Hampshire Public Utilities Commission (“PUC”) on October 14, 2016, and June 16, 2017, provided full discovery to the Counsel for the Public (“CFP”) and the intervenors, and participated in 70 days of adjudicative hearings.

The Applicants describe below the four findings that the Subcommittee must make and they summarize the substantial body of evidence that provides the basis for the Subcommittee to

make those findings and issue a Certificate. Opponents to the Project, including CFP, have argued many points but they have failed to make the case for denying a Certificate. Recognizing the distinct potential for getting lost in the details of the many peripheral arguments pursued by opponents to the Project, and the need to focus on the information relevant to the four findings, the Applicants highlight the most germane evidence and arguments for the Subcommittee's consideration.

## **II. ISSUANCE OF CERTIFICATE**

The Subcommittee must make four separate findings under the energy facility siting statute in order to issue a Certificate. First, the Applicants must show that they have the financial, technical and managerial capability to construct and operate the Project. Second, they must show that the Project will not unduly interfere with the orderly development of the region. Third, they must show that the Project will not have unreasonable adverse effects on aesthetics, air and water quality, historic sites, the natural environment and public health and safety. Finally, they must show that the Project will serve the public interest.

### ***1.) The Applicants Have Financial, Technical and Managerial Capability***

The first finding, concerning financial, technical and managerial capability, is clearly satisfied by substantial credible evidence given that the Applicants are part of the Eversource Energy system, and its proven track record of financing constructing and operating transmission projects in New Hampshire, Massachusetts, and Connecticut, and the experience and expertise of the consultants and contractors that have been engaged to construct and operate the Project, who are all recognized leaders in their respective fields. The preponderance of the evidence in the record supports a finding that the Applicants possess the requisite capabilities and none to refute such a finding.

## ***2.) Northern Pass Promotes the Orderly Development of the Region***

With respect to the orderly development of the region, the Committee's prior decisions have made clear that the focus is on the region, and not on isolated impacts or on a limited number of residences or businesses. The rules require consideration of the extent to which land use, employment, and the economy will be affected. Importantly, the SEC has found with past transmission lines that (1) the use of existing right-of-way is a critical factor in finding that a project will not unduly interfere with the orderly development of the region and (2) municipal views are considered but they are not dispositive.

The substantial credible evidence presented by the Applicants adheres to the SEC's rules and applies them scrupulously, demonstrating that (1) the impact on land use is negligible; (2) the effect on employment is significantly positive; and, (3) the effect on the economy is also significantly positive considering the approximately \$160 million in average annual New Hampshire Gross Domestic Product ("GDP") impacts, \$600 million in total tax revenues over the first 20 years of operation, the isolated effect on real estate values, the very limited short-duration impact on tourism, and the lack of impact on community services and infrastructure. Project opponents repeatedly seek to expand the scope of this finding but they confuse and conflate a multitude of claims under this heading attempting to transform it into a catch-all category that it clearly is not. It is plain, based on SEC rules and precedent, and the preponderance of the evidence produced by the Applicants, that the Project does not unduly interfere with the orderly development of the region.

## ***3.) Northern Pass Has No Unreasonable Adverse Effects***

As a direct consequence of the integral roles played by state and federal agencies, and as demonstrated by substantial credible evidence, the Project will not have unreasonable adverse

effects on aesthetics, historic sites, including archeological resources, air and water quality, the natural environment, including rare, threatened and endangered species, and public health and safety.

Regarding aesthetics, Mr. DeWan demonstrated in great detail that the Project will not have an unreasonable adverse effect on aesthetics. The United States Department of Energy (“DOE”) also independently concluded in its Final Environmental Impact Statement (“Final EIS”) that the average scenic impact of the Project will range from very low to moderate. With respect to historic sites, the Applicants have entered into a Programmatic Agreement with the United States Department of Energy (“DOE”), the New Hampshire Division of Historical Resources (“DHR”), the US Forest Service (“USFS”), United States Army Corps of Engineers (“USACE”) and others, which will assure that the requirements under Section 106 of the National Historic Preservation Act of 1966 are met. With respect to air quality, no air permits are required, and with respect to water quality, the DES has issued the applicable permits and will retain the authority to monitor and enforce compliance. With respect to the natural environment, the Applicants have worked closely with the New Hampshire Natural Heritage Bureau (“NHB”), New Hampshire Fish & Game (“F&G”), United States Fish & Wildlife Service (“USF&W”) and the USFS. Finally, public health and safety is similarly assured due to the roles played by the DOT, New Hampshire Department of Safety (“Safety”), including the State Fire Marshall, the PUC, and the Federal Aviation Administration (“FAA”). The preponderance of the evidence unequivocally supports the conclusion that the Project will not lead to unreasonable adverse effects.

#### ***4.) Northern Pass Serves the Public Interest***

Lastly, the Applicants have provided substantial credible evidence of the Project's significant, widespread and lasting benefits, which demonstrates unequivocally that the issuance of the requested certificate will serve the public interest. The Project will deliver 1,090 MW of clean, renewable electricity to New England and New Hampshire, and create a unique combination of economic, environmental and other benefits. The Project will provide over \$3 billion in economic stimulus in the state by reducing the electricity costs of New Hampshire customers by more than \$60 million annually, producing more than 2,600 New Hampshire jobs at the peak of construction, generating an estimated \$600 million in local, county and State tax revenues over the first 20 years of operation, providing \$200 million in funding for community betterment, economic development, clean energy and tourism through the Forward New Hampshire Plan, sponsoring the \$7.5 million North Country Job Creation Fund, and partnering with the National Fish and Wildlife Foundation ("NFWF") to restore and sustain healthy forests and rivers in New Hampshire. Correspondingly, the Project will reduce regional greenhouse gas emissions by more than 3.3 million tons per year, which will help New Hampshire achieve the goals of the New Hampshire Climate Action Plan and the Regional Greenhouse Gas Initiative.

The Project benefits will be achieved without monetary contribution by New Hampshire customers and with no demand on government services during operation of the Project. Project opponents attempt to diminish the magnitude of these significant benefits by creating the impression that their opposition is widely held, and wrongly implying that this proceeding should be treated as a plebiscite for their limited group, and not a judicial proceeding where the weight of the evidence alone must be the determining factor. Despite those efforts, even if the total benefits were only a fraction of what they have been shown to be, it would still be clear, by a

preponderance of the evidence, that the Project will provide significant benefits to the citizens of New Hampshire and will therefore serve the public interest.

## **PART B--BACKGROUND**

The SEC must conduct a formal judicial proceeding in order to determine whether to issue a Certificate of Site and Facility. Specifically, RSA 162-H:10, II provides that hearings shall be in the nature of an adjudicative proceeding and those hearings are subject to RSA 541-A:31 *et seq.* and the SEC's Practice and Procedure Rules, Site Chapter 200. Thus, the members of the Subcommittee perform the duties of judges and, in fact, are subject to the same type of *ex parte* rules that apply to judges. RSA 162-H:3, IV. Furthermore, RSA 162-H:16, II requires that "any certificate issued by the site evaluation committee shall be based on the record." The record comprises the "evidence, testimony, exhibits, or arguments" presented in the proceeding. See Site 202.26 (a) and (b).

Hence, the Subcommittee members do not sit in the same capacity as elected officials, such as members of municipal boards or legislative committees, whose votes are not subject to the judicial obligations set out in RSA 541-A:34, 35 and 36. Nonetheless, opponents of the Project seek to affect the outcome in this adjudicative proceeding by pursuing strategies used in efforts to influence votes on proposed legislation as exemplified by the coordinated filing of form comments and the last minute flood of postcards.

Unlike elected officials, Subcommittee members are required to weigh and consider evidence in the same manner as judges. RSA 162-H:10, III. While the Subcommittee members are also required to consider and weigh other information and comments, and such information and comments can be useful in guiding the Subcommittee's inquiry into specific areas, it is the testimony and evidence provided under oath and subjected to cross-examination that is due the greatest weight when making findings in an adjudicative proceeding. *See, e.g., New England Hydro-Transmission Corp (HQ Phase II)*, Order No. 18,499, Docket No. DSF-85-155 (December 8, 1986) (the SEC noting that the Town of Bedford expressed concerns about the

proposed transmission line but did not present any facts indicating that the project unduly interfered with the orderly development of the proceeding.)

In their briefs, CFP, Society for the Protection of New Hampshire Forests (“SPNHF”), and Municipal Groups 1 South, 2, 3 South and 3 North (hereinafter “the Joint Munis”), repeatedly contend that there is “overwhelming” opposition to the Project as expressed in municipal views and public comments, suggesting that there is some sort of mandate at work. SPNHF, for instance, says that 92% of the members of the public who have commented oppose the Project, relying on their review of 1,476 comments. *Post-Hearing Memorandum of the Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, p.184.<sup>1</sup> They do not profess, however, that these hundreds of comments are a statistically valid sample or could possibly be considered as representative of the views of the more than 1.3 million residents of New Hampshire. Their emphasis on the so-called unprecedented opposition is, however, clearly meant to encourage the Subcommittee to take the extra-judicial avenue of denying a Certificate as a political calculation, instead of making a judicial finding based on the facts.

---

<sup>1</sup>The position advanced by SPNHF, CFP and the Joint Munis is based on a superficial review of public comments and municipal views that does not capture the full picture. With respect to municipal views, for example, regarding the Town of Deerfield the SEC heard testimony about how the Town voted upon a petition warrant article that was proposed by a group of residents in the Town. *See Tr. Day 66/Afternoon Session*, p. 222. The warrant article asked the residents to vote on whether the Town “shall state its opposition of Northern Pass.” *Id.* at 223. The warrant article continued to list only the alleged negative aspects of the Project, with no mention of any of the benefits. *Id.* Despite this, however, 36% of the residents in the town voted against the warrant article. *Id.* at 223-224. With respect to public comments submitted to the SEC, the review undertaken by the various parties does not account for the fact that many of the comments were filed by intervenors in this proceeding who are essentially repeating the arguments they have already advanced as parties. In addition, many intervenors filed multiple comments. Based on the Applicants’ review, for example, one intervenor filed approximately 50 separate comments. A number of other intervenors filed in excess of 10 comments; multiple other intervenors filed 2 or more public comments. Such comments are largely duplicative of the testimony they provided in the hearings. Finally, aside from public comments filed by intervenors, many people filed more than one comment in which they often simply reiterate points made in prior comments. Therefore, adopting the approach taken by CFP and other parties – looking at public comments merely as a sum total – simply does not reflect the true nature of the comment pool.

Unexpectedly, given its statutory role under RSA 162-H:9, CFP offered the following advice in closing to the Subcommittee: “In addition, CFP notes the overwhelming opposition to the Project expressed by the intervenors, municipal governing bodies, legislators, and the public. This public opposition must be carefully weighed by the Subcommittee, particularly as it assesses the ultimate requirement that ‘issuance of a certificate will serve the public interest.’” *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 171. This is not objective legal advice from the Department of Justice to which the Subcommittee should pay heed by dint of its source, but plainly advocacy of the type pursued by the other parties opposed to the Project and should therefore be weighed no differently. The Applicants explain below in Part C, Section IV why CFP’s interpretation of the public interest finding is incorrect.

Finally, the SEC preempts local regulation of all issues involving the selection of sites and the routing of electric transmission lines. As the New Hampshire Supreme Court found in *Public Service Company of New Hampshire v. Town of Hampton*, 120 N.H. 68 (1980), a fair reading of the energy facilities siting statute “reveals a legislative intent to achieve comprehensive review of power plants and facilities site selection. The statutory scheme envisions that all interests be considered and all regulatory agencies combine for the twin purposes of avoiding undue delay and resolving all issues ‘in an integrated fashion.’” *Id.* at 70-71. The Supreme Court concluded that “the legislature has preempted any power that the defendant towns might have had with respect to transmission lines embraced by the statute.” *Id.*<sup>2</sup>

---

<sup>2</sup> Municipal Group 1 North (“MG1N”) and others wrongly contend in their briefs that municipalities have the authority to approve the installation of electric transmission facilities in locally maintained highways, (while CFP urges the Subcommittee to “defer”) arguing that the over-riding authority of the SEC applies only to municipal ordinances and not to RSA 231:160, yet providing no authority for their claim. The Supreme Court’s finding on the primacy of the SEC in the siting of energy facilities could not be more clear. The Court stated “Local regulation is repugnant to State law when it expressly contradicts a statute or is contrary to the legislative intent that underlies a statutory scheme.” *Id.* In addition: “We regard it as inconceivable that the legislature, after setting up elaborate procedures and requiring consideration of

## I. BURDEN AND STANDARD OF PROOF

SEC rule Site 202.19 Burden and Standard of Proof states:

- (a) The party asserting a proposition shall bear the burden of proving the proposition by a preponderance of the evidence.
- (b) An applicant for a certificate of site and facility shall bear the burden of proving facts sufficient for the committee or subcommittee, as applicable, to make the findings required by RSA 162-H:16.

In the first instance, the Applicants must prove facts sufficient for the Subcommittee to find that they have the financial, technical and managerial capability to construct and operate the facility, that the facility will not unduly interfere with orderly development of the region or have unreasonable adverse effects, and that the issuance of a certificate for the facility will serve the public interest. The Applicants prove those facts in either of two ways: first, by substantial credible evidence in instances where there is no evidence to the contrary, and second, in instances where there is evidence to the contrary, by a preponderance of the evidence, that is, by showing, for instance, that it is more likely than not, or that the balance of the probabilities is, that the Project will not unduly interfere with the orderly development of the region. At the same time, in the event CFP or other opponents of the Project assert a proposition, such as the absurd claim that the Project could result in an annual \$10 million loss in tourism, then that party bears the burden of proving that claim by a preponderance of the evidence. There is no free lunch; opponents to the Project, including CFP, also bear the burden of backing up what they say.

---

every imaginable interest, intended to leave the regulation of transmission lines to the whim of individual towns. Towns are merely subdivisions of the State and have only such powers as are expressly or impliedly granted to them by the legislature.” *Id.* Whether towns receive their power directly through a statute such as RSA 231:160, or exercise that power less directly by establishing an ordinance pursuant to RSA 674:16, is beside the point. Finally, consistent with rules of statutory construction, RSA Ch. 162-H is controlling because it was enacted subsequent to RSA 231:160. The Applicants address this issue further in their companion motion seeking authority to perform a Phase I-B archeological survey.

## **II. STATUTORY FINDINGS AND RULEMAKING CRITERIA**

The SEC's governing statute, under RSA 162-H:16 Findings and Certificate Issuance, provides in subsection IV:

After due consideration of all relevant information regarding the potential siting or routes of a proposed energy facility, including potential significant impacts and benefits, the site evaluation committee shall determine if issuance of a certificate will serve the objectives of this chapter. In order to issue a certificate, the committee shall find that:

- (a) The applicant has adequate financial, technical, and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate.
- (b) The site and facility will not unduly interfere with the orderly development of the region with due consideration having been given to the views of municipal and regional planning commissions and municipal governing bodies.
- (c) 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.
- (d) [Repealed.]
- (e) Issuance of a certificate will serve the public interest.

The SEC's rules, Site 301.13 through 301.16, set forth criteria or considerations corresponding to each statutory finding that guide the Subcommittee's deliberations.

## **III. SEC PRECEDENT**

The SEC has created a significant body of precedent over the years, issuing numerous decisions that interpret and apply RSA 162-H:16, IV, which serve as guideposts for the Subcommittee. RSA 162-H:10, III provides that the Subcommittee "shall consider, as appropriate, prior committee findings and rulings on the same or similar subject matter, but shall not be bound thereby."

### **A. Financial, Technical and Managerial Capability**

An applicant must show capability in all three areas. These capabilities can be demonstrated by actual past experience in constructing, operating and maintaining a project through its own employees or through some combination of its own experience and the

experience of specifically identified contractors. The SEC recently found that an Eversource affiliate, PSNH, had the financial, technical and managerial capability, along with its co-applicant, New England Power, to construct and operate the 345 kV Merrimack Valley electric transmission project in Docket No. 2015-05. *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-05, p. 37-46 (October 4, 2016). The rationale applied to PSNH in the Merrimack Valley proceeding applies equally to NPT in this proceeding.<sup>3</sup>

### **B. Undue Interference with the Orderly Development of the Region**

Over the years, the SEC has developed a framework for considering specific related issues under the heading of orderly development. When considering the impact of a proposed facility on orderly development, it has looked at land use, employment, and the economy of the region (including both tourism and real estate values), all of which have been incorporated into the latest SEC rules.<sup>4</sup>

In its decision in the Groton Wind docket, the SEC noted that the term “orderly development” was not defined. *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 37 (May 6, 2011). It concluded that it “must consider whether the Project will unduly interfere with the ‘orderly development of the region’ as opposed to isolated impacts on a limited number of residences or businesses in the region.” *Id.* It also concluded that it “must first determine whether such interference impacts the entire region” and

---

<sup>3</sup> See also the Public Utilities Commission’s analogous finding in *Order No. 25,953*, Docket No. DE 15-459, p. 11 (October 14, 2016) where the Commission determined that NPT has the technical, managerial and financial expertise to operate as a public utility.

<sup>4</sup> The Subcommittee, not the Applicants, must give “due consideration” to municipal views but it need not defer to such views. Rather, due consideration means that the Subcommittee should give such views the weight they are due, recognizing whether they have been provided under oath, have been subject to cross-examination, are based in fact, or simply reflect a policy choice or outcome. As noted in the SEC’s letter to the Joint Legislative Committee on Administrative Rules, municipal mater plans and zoning ordinances “are only factors to be considered by the SEC and are subject to SEC preemption.” *SEC Response to JLCAR Preliminary Objection to Site 100 and 201-204*, Docket No. 2014-04, p. 4 (November 25, 2015).

thereafter “consider whether the degree of such interference is so excessive that it warrants mitigation or denial of the Certificate.” *Id.* at pp. 37-38.

In this regard, the SEC has historically looked favorably on transmission projects that were to be constructed in existing rights-of-way. *See Findings of the Bulk Power Facility Site Evaluation Committee*, Docket No. DSF-85-155 (October 8, 1986); *see also Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-05, (March 16, 2017); *see also Order No. 20,739*, Docket No. DSF 91-130 (February 2, 1993) (concerning a PSNH 115 kV line in which the SEC concluded that on the issue of orderly development “the single most important factor is the selection of an existing, already occupied utility corridor” and that use of the corridor “will be consistent with the established land use patterns in the area.” *Id.* at p. 50.) The SEC made a nearly identical finding in DSF 93-128 concerning a New Hampshire Electric Coop 115 kV transmission line. *See Order No. 21,268*, Docket No. DSF 93-128 (June 14, 1994) More recently, in approving the Merrimack Valley 345 kV line, the SEC noted that the project would be constructed “within the existing right-of-way that, for years, has been used to transmit electricity and is encumbered by associated structures and equipment. Construction of the Project within an already existing used right-of-way is consistent with the orderly development of the region.” *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-05, p. 58 (October 4, 2016).

The preponderance of the evidence shows that Northern Pass does not unduly interfere with land use, employment or the economy in any way that impacts the region. With respect to land use, the Project will be constructed in 100 miles of existing right-of-way and 60 miles of public highways, while the approximately 32 miles of new right-of-way will comprise 24 miles of working forest, with the remainder being sparsely populated, forested land. Furthermore, to

the extent Northern Pass could conceivably impact aspects of the economy, such as real estate values, tourism, or community services and infrastructure, the interference is not excessive, either in scope or duration. In fact, the substantial credible evidence produced by the Applicants demonstrates that the Project will have significant positive impacts on the economy and employment. Consequently, there is no basis for finding that the Project will unduly interfere with the orderly development of the region.

### **C. Unreasonable Adverse Effects**

To provide some context as to how past SEC decisions have approached issues related to unreasonable adverse effects, the Applicants discuss below as an example the issue of aesthetics, which has been a central point of focus in this proceeding. As noted in the SEC's prior HQ II decision, "every human activity has some effect on the environment" and construction of a transmission line "is no exception to the rule." *Findings of the Bulk Power Facility Site Evaluation Committee*, Docket No. DSF-85-155, p. 18 (October 8, 1986). As noted then, and is the same now, the relevant inquiry under the statute is whether the proposed facility will have an "unreasonable" adverse impact. The decision continues: "whether the impacts are 'unreasonable' depends on the assessment of the environment in which the facility will be located, an assessment of statutory or regulatory constraints or prohibitions against certain impacts, and a determination whether the proposed facility exceeds those constraints or violates those prohibitions." *Id.*

With respect to aesthetics, there is one instance of a finding that a proposed project would have an unreasonable adverse effect. In Antrim Wind, SEC Docket No. 2012-01, the SEC concluded that the facility would have a significant impact on areas of significant value for their viewshed and the surrounding region, that the 492-foot turbines were not appropriately scaled and designed to work within the geographic setting, that they would overwhelm the landscape,

and that the facility would have a particularly profound impact on two scenic resources.

Accordingly, an unreasonably adverse effect does not occur simply because there have been changes in the environment as a result of an energy facility. Rather, the changes must rise to the level where they are extreme in nature and they must be extensive in scope, which Mr. DeWan has demonstrated is not the case for Northern Pass.

Similar to the evaluation of the impact of a proposed project on the orderly development of the region, the unreasonable adverse effects analysis also requires the SEC to evaluate the potential effects on a regional basis. *See Decision and Order Granting Application for Certificate of Site and Facility*, Docket 2015-02, p. 118 (March 17, 2017). While as part of its overall regional assessment the SEC may assess individual resources, this is intended to allow the Committee to appreciate the relationship of the individual parts to the whole area of potential visual effect. The ultimate conclusion must be drawn by looking at the totality of effects and not focusing on any one resource individually. *Id.* at 121 (Noting that “the Subcommittee also considered the Project’s overall visual impacts and determined that those impacts would not have an unreasonable adverse effect on the aesthetics of the region.”) This broad-based, holistic approach is clear from prior SEC decisions and from the language of the new rules.<sup>5</sup>

---

<sup>5</sup> *See, i.e.*, The SEC’s decision in the Lempster Wind docket in which “the Committee considers the effects on the viewshed in the region.” *Decision Issuing Certificate of Site and Facility with Conditions*, Docket No. 2006-01, p. 27 (June 28, 2007); *see also* the Granite Reliable Power decision holding that “the Project will not have unreasonable adverse effects on the aesthetics of the area.” *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2008-04, p. 43 (July 15, 2009); *see also* the Groton Wind decision holding that, “the turbines will not have an unreasonable adverse effect on the aesthetics of the region.” *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 51 (May 6, 2011); *see also*, the prior Antrim Wind docket where the Subcommittee concluded that the project would have an “unreasonable adverse effect on the aesthetics of the region.” *Decision and Order Denying Application for Certificate of Site and Facility*, Docket No. 2012-01, p. 54 (September 25, 2013). Recently, the Committee held in its Order on the Joint Application of New England Power and Eversource that “the Project will not have an unreasonable adverse effect on the aesthetics of the region.” *Decision and Order Granting Application for Certificate of Site and Facility*,

#### **D. Public Interest**

The public interest finding was added in 2014 and only two certificates have been issued since. In both cases, the SEC focused on the economic and policy benefits of the projects and found that they served the public interest. Specifically, the SEC enumerated its other findings, noted that the project would not have unreasonable adverse effects, identified benefits without specifically quantifying them, and found that the project would serve the public interest. In the Merrimack Valley case, the SEC recognized that the transmission line was a reliability project important to the region and in Antrim Wind the SEC recognized economic benefits to the region and the State as well as better air quality.

Northern Pass has provided substantial credible evidence that the Project will serve the public interest in the form of specific, quantifiable benefits, by providing low carbon, competitively priced power from Hydro-Québec to customers in New Hampshire. The preponderance of the evidence shows, as a result, that Northern Pass will lower energy costs, increase GDP, create jobs, increase the tax base, reduce emissions, diversify regional power supply, enhance electric system reliability, and advance state and regional energy and environmental policies. The Final EIS also noted that the Project will address three primary needs concerning New England's energy supply, i.e., diverse electricity supply; low-carbon electricity supply; and, non-intermittent electricity supply. *See Final EIS*, App. Ex. 205, pp. S-5 to S-8 (August 2017).

---

Docket No. 2015-05, p. 65 (October 4, 2016). Also, Site 301.14 (a) (1) requires consideration of the existing area of potential visual impact.

#### **IV. REGULATORY CONTEXT**

##### **A. Integrated Review**

The Supreme Court is unequivocal regarding the integral role of DOT and other state agencies in the process for siting energy facilities. In *Public Service Company of New Hampshire v. Town of Hampton*, 120 N.H. 68, 70-71 (1980), the Court held: “A fair reading of RSA ch. 162-F [the predecessor to 162-H] reveals a legislative intent to achieve comprehensive review of power plants and facilities site selection. The statutory scheme envisions that all interests be considered and all regulatory agencies combine for the twin purposes of avoiding undue delay and resolving all issues ‘in an integrated fashion.’”

Nonetheless, the Grafton County Commissioners (“GCC”), supported by other intervenors, have protested time and again that the Applicants did not provide a final engineering design as part of their October, 2015 Application that would enable GCC to know precisely where the Project would be constructed in public highways. As the Applicants have explained in numerous pleadings, and as the Presiding Officer has acknowledged, GCC fails to appreciate the integrated and comprehensive process established by the Legislature for the review of energy facilities in New Hampshire and, accordingly, its argument lacks any legal foundation. The DOT will exercise its regulatory authority in this case in the same iterative manner that it would review any request to install underground conduits and cables in any highway.

On April 7, 2017, the Presiding Officer denied GCC’s complaint about the way in which the DOT and, in turn, the SEC exercise their regulatory authority. As noted by the Presiding Officer, GCC argued that the Applicants had “failed to provide complete and accurate design plans for the project.” *Order on Lagaspence Motion to Postpone and Grafton County Commissioners’ Motion to Continue*, Docket No. 2015-06, p. 3 (April 7, 2017). The Presiding Officer dismissed this argument, pointing out that “[i]t is customary for developers to

supplement their design plans in response to agency comments and to accommodate newly discovered facts.” *Id.* at 3-4

On September 19, 2017, the Presiding Officer denied GCC’s renewed complaint about the “accuracy” of the Applicants’ plans, reiterating that “[f]inal detailed construction plans are not required to conduct the adjudicative hearing and deliberations. If, after hearing, the Subcommittee considers the plans to be insufficient, it can deny the Application. The Subcommittee can also delegate authority to State agencies as part of a Certificate of Site and Facility.” *Order on Motion to Suspend Adjudicatory Hearing and Recall the Construction Panel*, Docket No. 2015-06, p. 3 (September 19, 2017).

As part of their Application, the Applicants included as Appendix 9 their petition to DOT, which, among other things, notes that, “[i]n accordance with commonly accepted design and construction practices, plans submitted with this application are at the 30% design stage.” *Application*, App. Ex. 1, Appendix 9, p. 1. The Applicants proposed to the DOT an alignment within the route that would avoid unnecessary impacts on the roadsides and abutters, and make extensive use of the previously disturbed areas within the highway. The ultimate alignment and design within the proposed route, however, is up to the DOT to determine in the normal course of exercising its regulatory authority.

The crux of GCC’s complaint is a desire that the DOT regulate petitions pursuant to RSA 231:160 *et seq.* differently than it does. GCC appears to believe that the DOT should not conduct an iterative review of designs and that the Subcommittee should not accede to the manner in which the DOT exercises its regulatory authority, irrespective of the regulatory scheme the Legislature has established in RSA 162-H for the siting of energy facilities.

Finally, the New Hampshire Supreme Court concluded in its January 30, 2017 Order affirming summary judgment in *Society for the Protection of New Hampshire Forests v. Northern Pass Transmission LLC*, No. 2016-0322, 2017 WL 695385 (N.H. Jan. 30, 2017), that the use of a state-maintained highway “for the installation of an underground high voltage direct current electrical transmission line, with associated facilities, falls squarely within the scope of the public highway easement as a matter of law, and that such use is within the exclusive jurisdiction of the DOT to regulate.” *Id.* at \*3.

In their briefs in this proceeding, however, CFP and others make a number of claims that would undo the integrated review that is fundamental to the operation of the SEC. *See Counsel for the Public’s Post-Hearing Brief*, Docket No. 2015-06, pp. 63, 157. As noted above, and more fully discussed in the companion motion, the opponents argue incorrectly that local authority is only partially preempted. In addition, GCC reprises its argument about the way the DOT exercises its regulatory authority. Correspondingly, CFP and others arrive at the wrong conclusion, i.e., that the Subcommittee cannot issue a Certificate before the DOT approves a final design. Furthermore, CFP et al. misunderstand or mischaracterize the nature of the related conditions and delegations that the Applicants propose.

It is important to keep several things in mind. First, it is critical to recognize, as the Supreme Court did, that DOT and other regulatory agencies have been combined to resolve all issues in an integrated fashion. *See supra PSNH v. Hampton*, p. 8. Second, the DOT made its final decision pursuant to RSA 162-H:7, VI-c, on April 3, 2017. Third, the DOT will responsibly exercise its authority, ensuring that the approved final design will not extend beyond the permissible boundaries of its jurisdiction. Fourth, the Applicants have asked the

Subcommittee to make a comparable decision with respect to local highways and to administer it similarly, consistent with the scope of its authority.

As the Applicants have made clear above and in prior filings, GCC's complaint goes to how the DOT exercises its regulatory authority in the normal course. To accommodate GCC's preference, either DOT would have had to alter its procedures so that the final decision it made pursuant to RSA 162-H:7, VI-c included the final approved design for the underground installation, or the Applicants would have had to secure an approved final design from the DOT before filing an application with the SEC, neither of which is contemplated under the statute, and both of which would, in fact, be contrary to the statute and unduly delay the construction of new energy facilities.

In addition, CFP contends that the Subcommittee should deem certain information<sup>6</sup> necessary before issuing any site certificate, such as a "survey approved by NHDOT establishing the extent and location of the public ROWs for those state roads in which the Applicants propose to bury the portions of the Project." *Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p.157. Such a survey is not, however, necessary for the Subcommittee to make its findings and issue a Certificate, and DOT will decide what it needs to do in this regard to exercise its ongoing authority. In sum, the Subcommittee has received the DOT's final decision, DOT is continuing to exercise its regulatory authority in the normal course, and the Applicants have proved facts sufficient for the Subcommittee to make its findings, including any related to DOT's final approved design, such as, the Project will not unduly interfere with the orderly

---

<sup>6</sup> Among other things, CFP mistakenly asserts that an easement gap in the Cape Horn State Forest must be resolved, overlooking the fact that the PUC issued Order No. 26,025 (June 16, 2017) in Docket Nos. DE 15-460, 461, 462 and 463, granting the Applicants a license to cross the Cape Horn State Forest. CFP also wrongly contends that the Applicants must file financial assurance for decommissioning prior to issuance of a Certificate. The logical order of business is for the Subcommittee to determine what form of assurance it requires, memorialize its determination in its written decision, and require evidence of the form of assurance prior to the commencement of construction.

development of the region and it will not have an unreasonable adverse effect on public health and safety.

Furthermore, CFP, SPNHF and others erroneously assert in their briefs that the Applicants propose delegations that are unlawful. In particular, CFP mischaracterizes the nature of the Applicants' proposed delegations and the Subcommittee's responsibilities, while SPNHF argues that the Subcommittee would be "unlawfully abdicating its mandatory duty to make determinations about the impacts that would result from the proposed project." *Post-Hearing Memorandum of the Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, p.191. SPNHF also coins the term "excessive delegation" that would "present constitutional problems," but fails to explain further. *Id.* From the Applicants' perspective, the delegations are either valid or invalid depending on the circumstances; it is not defensible to simply say there are too many.

Starting from the top, the Applicants do not, and do not need to, propose that the SEC delegate to the DOT the authority to make decisions about the final design of the underground section of the Project in state highways; the authority to make that decision already resides with DOT. The Applicants just ask that the Subcommittee issue a Certificate with conditions similar to those employed for the Merrimack Valley Reliability Project. Similarly, the Applicants ask that the Subcommittee issue a Certificate with conditions similar to those typically employed in past proceedings relative to the DHR and the Section 106 process, inasmuch as there is an adequate record for the Subcommittee to find that the Project will not have unreasonable adverse effects on historic sites.

The Applicants' request that the SEC approve installation in approximately 4.7 miles of local highways in Clarksville and Stewartstown, however, has a different posture. Because the

SEC preempts local authority with respect to the siting of energy facilities, which is discussed more fully elsewhere, the SEC has the same authority over local roads that the DOT has over state highways; the municipalities' authority under RSA 231:160 is preempted, or superseded, by RSA 162-H. As a consequence, in their Application, the Applicants asked the SEC to grant them directly the permission to install the Project in local highways, which the SEC can do in the same manner that the DOT made its final decision on April 3, 2017.

As a secondary matter, the Applicants, in their December 12, 2017 Preliminary List of Proposed Delegations, indicated their preference that the Subcommittee, by determining terms and conditions consistent with RSA 162-H:4, I (b), delegate to DOT the authority to monitor construction and operation to ensure compliance with the Certificate pursuant to RSA 162-H:4, I (c) and, delegate to DOT the authority, pursuant to RSA 162-H:4, III-a, to specify the use of any technique, methodology, practice or procedure approved by the Subcommittee, including approval of exception requests, detours, traffic plans, and curb cuts, etc.

DOT filed a letter with the Subcommittee on December 22, 2017, responding to the Applicants' Preliminary List of Proposed Delegations, which both CFP and MG1N mischaracterize. To begin, everyone agrees that the DOT does not have jurisdiction over local roads, but in this case the SEC does have comparable jurisdiction.<sup>7</sup> The outstanding issue is how best to carry out the responsibilities for the additional few miles of local highways that DOT is carrying out for state highways in terms of approving a final design, etc. The Applicants believed that DOT was the obvious choice, inasmuch as the DOT has the relevant experience and

---

<sup>7</sup> The Applicants discuss the preemption issued raised by CFP and others with respect to RSA 231:160 more fully in their companion motion. Curiously, CFP heads down the path to arguing that the SEC does not preempt but pulls up short and says: "Irrespective of what determination the Subcommittee makes with respect to its authority to authorize the use of local roads" it should defer to local authorities, which is not good advice. If the SEC has the authority in the first instance, it cannot simply leave permitting up to local officials; it cannot confer jurisdiction. *Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p. 154.

the SEC does not have staff other than its Administrator, but the Subcommittee could instead employ a consultant pursuant to RSA 162-H:10, V to carry out the necessary duties. Because the bottom line of the DOT letter appears to be a concern about funding, the Subcommittee can address that issue through RSA 162-H:10, V as well by requiring the Applicants to bear the costs of consultants managed by DOT.

To this point, during the recall of the construction panel on October 2, 2017, Attorney Iacopino questioned Mr. Bowes about five potential options available to the Committee to make determinations about the underground design in locally maintained roads. *Tr. Day 43/Afternoon Session*, pp. 120–25. First, the SEC could approve the Application with no exceptions. Second, the SEC could approve the Applicant as proposed and provide a process that it would oversee that is similar to the state exception process. Third, it could approve the Application as proposed and hire a contractor (paid by the Applicants) to oversee the design and construction in town roads. Fourth, it could approve the Application and delegate authority over town roads to the DOT. Fifth, the SEC could condition a Certificate on the town’s approval of the underground project. As discussed above and during the recall of the construction panel, the Applicants suggest that options two, three, and four are acceptable and options one and five are unworkable.

#### **B. Need and Alternatives**

Despite the Legislature’s express repeal of RSA 162-H:16, V (a), which required a finding of the present and future need for electricity, a recurring and groundless theme sounded by Project opponents throughout this proceeding is that the Project is not “needed” in New Hampshire, and that the Applicants should have pursued other alternatives. Opponents of the Project, however, routinely overlook, or choose to ignore, the fact that the Legislature decided more than 20 years ago to restructure the electric industry to harness the power of competitive markets. *See RSA 374-F:1*. A number of parties, nonetheless, continue to press issues that were

last relevant when the construction and operation of electric transmission and generation projects were the exclusive province of regulated utilities, who had the right of eminent domain, and who could pass on the costs of construction and operation of such facilities to their captive ratepayers. In the regulatory context of natural monopolies, with specified geographic franchise boundaries and cost-of-service regulation, it was sensible to require an applicant for a Certificate to demonstrate that there was a need for a project and that available alternatives had been considered,<sup>8</sup> but those circumstances no longer obtain in New Hampshire.

Restructuring the electric industry fundamentally changed the regulatory context for proposed energy facilities. The point of restructuring was to introduce competition and market considerations as a replacement for economic regulation.<sup>9</sup> As a consequence, RSA 162-H:16, IV was amended to delete the requirement that an applicant demonstrate need and the reference to available alternatives was also stricken. Now, RSA 162-H:7, V(b) simply requires that the Applicants “[i]dentify both the applicant’s preferred choice and other alternatives it considers available for the site and configuration of each major part of the proposed facility and the reasons for the applicant’s preferred choice.” The Merriam Webster Dictionary defines an alternative as “a proposition or situation offering a choice between two or more things only one of which may be chosen” and it defines available as “present or ready for immediate use.” The Applicants’ preferred choice is a 192-mile route between Pittsburg, NH and Deerfield, NH, comprising 60.5

---

<sup>8</sup>For instance, in Docket No. DSF 91-130, concerning a PSNH 115 kV transmission line, the PUC considered other routes as well as system alternatives, such as, load management and the addition of generation. While such alternatives were available to public utilities prior to restructuring, they are not alternatives available to the Applicants, or similarly situated market participants, today, whether it be a wind farm or an elective transmission line.

<sup>9</sup>Thus, attacking a proposed energy project in New Hampshire as “for profit” is nonsensical because, among other things, it fails to appreciate that energy facilities have always depended on the recovery of costs and the opportunity to earn a return on the investment in the project. Furthermore, applying 20<sup>th</sup> century regulatory artifacts to this Project runs contrary to the Legislature’s determination that competition is necessary for a productive economy.

miles of underground cable in public highways, 99.5 miles of overhead line in existing right-of-way, and 32 miles of overhead line in new right-of-way.<sup>10</sup> Consistent with the plain language of the statute, and as demonstrated in the record, the Applicants have no available alternatives to the preferred route.

As competitive markets replaced cost-of-service regulation, the universe of potential developers of energy facilities expanded, while the universe of alternatives available to such developers shrunk. Consequently, the required findings by the SEC under RSA 162-H:16, IV(b) and (c) are directed to the merits of the proposed site and facility itself, not whether the Project is better or worse than some alternative that the Applicants are not in a position to construct. These findings do not include consideration of whether some alternative not available to the Applicants would have less effect, or, for that matter, more. The plain language of RSA 162-H:16, IV applies to the effects of a specific proposed energy facility, not some hypothetical facility.

CFP posited earlier in this proceeding that the “availability of viable alternatives” ought to be weighed in the SEC’s consideration of whether the Project unduly interferes with the orderly development of the region. *Counsel for the Public’s Objection to Applicants’ Motion to Strike Certain Track 1 Testimony*, Docket No. 2015-06, p. 3 (April 10, 2017). It created out of whole cloth the notion of “viable” alternatives and tried to link it to the actual required findings. Under CFP’s backdoor theory, the SEC could find that a project unduly interfered with the orderly development of the region, if a viable, less interfering alternative existed, even if the alternative were, in fact, not something the Applicants could construct from a technical, legal or regulatory perspective. CFP thus seeks to undo specific action taken by the Legislature when it

---

<sup>10</sup>The DOE has concluded that the Applicants’ preferred choice, or Proposed Action in EIS parlance, as well as the other action alternatives considered, would not result in a significant impact to the environment. *Final EIS*, App. Ex. 205, p. S-17 (August 2017).

amended RSA 162-H:16, IV in 2014 and removed any reference to alternatives in the findings provision of the statute.<sup>11</sup> Instead, alternatives are now addressed in the application provision of the statute and only in terms of what an applicant considers available, which is logically consistent with the restructured electric industry in New Hampshire.

The SEC rejected the CFP approach under the prior statute when it found in Groton Wind, that “RSA 162-H does not require the subcommittee to consider every possible alternative, including ones unavailable to the Applicant.” *Decision Granting Certificate of Site and Facility*, Docket No. 2010-01, p. 27 (May 6, 2011). *See also*, Laidlaw Berlin BioPower, *Decision Granting Certificate of Site and Facility*, Docket No. 2009-02, p. 37 (November 8, 2010). Subsequent to restructuring, the SEC considered alternatives in terms of whether the applicant conducted a reasonable site selection process. Of further guidance in this regard is the SEC’s decision in Granite Reliable Power, where the Subcommittee found that “the proposed site, its significant wind resources, its proximity to the transmission system and an already existing network of logging roads, coupled with the High Elevation Mitigation Settlement Agreement, render the proposed site the preferred location among the available alternatives for the construction of the proposed facility.” *Decision Granting Certificate of Site and Facility*, Docket No. 2008-04, p. 28 (July 15, 2009).

The Subcommittee’s practical analysis in these cases was confined to actual variations of the proposed facility that the applicant could construct. Similarly, the SEC expressly rejected consideration of alternative projects in both the Groton and Laidlaw cases, where intervenors

---

<sup>11</sup>The Presiding Officer issued an Order Denying Applicants’ Motion to Strike on April 24, 2017, which, among other things, declined to strike testimony about alternative routes. He concluded that it was premature to strike all such evidence because it might be relevant to factors to be considered or conditions to be imposed. While the decision not to strike testimony about alternative routes in the first instance may be an understandably cautious approach as a procedural matter, the Applicants continue to maintain that the “alternative routes” posited by other parties are not alternatives available to the Applicants, and are hence irrelevant to the Subcommittee’s findings.

argued that other renewable energy projects were more efficient or caused less impact than the proposed facility. See *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, pp. 26-27, 31 (May 6, 2011); see also *Laidlaw Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2009-02, pp. 37-38 (November 8, 2010). The lesson to be drawn from those cases is that an alternative is unavailable to the applicant if it is not something the applicant can implement, and comparisons to such imaginary options, for any purpose, are irrelevant.

## V. OPPOSITION

From the beginning, opposition to the Project appears to have been driven in large part by visceral reactions to the idea of constructing a transmission line and the inchoate fear that such a facility might impact views and, as a result, property values. Although the nature of the Project changed substantially since first announced, including undergrounding the facility along approximately one-third of the route, opposition to it has retained essentially the same anxious character. Furthermore, some conclusions drawn by opponents to the Project, such as potential impacts on tourism, appear to rely on intuition about what “must be” the case rather than the compelling evidence to the contrary.

Throughout this proceeding, it appears that many opponents began with an outcome in mind and searched for the rationale to support their initial assumptions, exhibiting a common tendency known as confirmation bias. They have challenged every conceivable aspect of the Application and the process, and the Subcommittee has expended more than sufficient time and resources considering their arguments.<sup>12</sup> As explained throughout the Applicants’ brief,

---

<sup>12</sup> For example, among these spurious claims is that transmission towers routinely collapse (*Post-Hearing Brief of the Deerfield Abutters*, Docket No. 2015-06, pp. 29-30), which, if it were the case, would suggest that no transmission line should ever be built, and that the temporary effects of construction are so serious and long lasting for businesses (see e.g., *Post Hearing Memorandum Filed By Municipal Groups 1 South*,

however, the opponents do not provide credible evidence that would establish 1) lack of financial, technical or managerial capability on the Applicants' part, 2) undue interference with the orderly development of the region, 3) unreasonable adverse effects, or 4) a failure to serve the public interest.

**A. Property Owners**

Eighty-six parties comprising property owners along the Project route, roughly 50 of whom are abutters, intervened in the proceeding. The bulk of the testimony from individuals expresses concern about potential impacts and states positions about the Project, which is comparable to public comment. The majority of property owners have provided little in the way of factual evidence beyond describing their particular physical circumstances. Such descriptions may be useful in directing the Subcommittee's attention to certain issues but they have not succeeded in challenging the preponderance of the evidence supplied by the Applicants in support of issuing a Certificate.

**B. Municipalities**

Twenty-three municipalities along the Project route intervened in the proceeding to oppose the Project. Common throughout the testimony filed by the municipalities are expressions of concern about potential impacts. There is very little by comparison in the way of objective evidence that the Project will unduly interfere with the orderly development of the region or have unreasonable adverse effects. Consequently, many of the municipalities merely state positions about what they imagine could be the impacts of the Project. For the most part, the municipalities offer the testimony of elected officials, who express their opposition to the Project but do not offer evidence demonstrating unreasonable adverse effects or undue

---

2, 3 South and 3 North, Docket No. 2015-06, p. 73), as to suggest that DOT should stop highway construction.

interference with the orderly development of the region. The municipalities do, however, jointly offer the testimony of a witness, Mr. Sansoucy, who professes expertise on any number of topics beyond his narrow and checkered experience valuing utility property for purposes of property taxes.<sup>13</sup> Among his more incredible trains of thought, he holds forth on questions of law, making the bald assertion that the Project does not serve the public interest because it is not needed and there are better alternatives, despite the Legislature’s explicit amendments to the statute discussed above.<sup>14</sup>

### **C. Non-Governmental Organizations**

Seven organizations, including SPNHF, Appalachian Mountain Club (“AMC”), Conservation Law Foundation (“CLF”), and several historic groups intervened in opposition to the Project. SPNHF and AMC submitted testimony from Messrs. Dodson, Kimball, and Garland critiquing the Applicants’ aesthetic witnesses and arguing for full burial of the Project. In addition, SPNHF filed testimony by Mr. Lobdell with respect to wetlands and AMC filed testimony by Dr. Publicover with respect to rare plants and natural communities. Among these organizations, SPNHF has taken a lead role in challenging the procedural decisions made by the Presiding Officer.

---

<sup>13</sup>The Federal Energy and Regulatory Commission previously found Mr. Sansoucy’s behavior in a valuation related case to be “unethical” and “improper professional conduct.” *FERC Order Approving Stipulation and Consent Agreement*, App. Ex. 434, p. 3; *see also Tr. Day 62/Afternoon Session*, p. 106-108. In addition, New Hampshire courts have similarly found Mr. Sansoucy’s expert opinions to be less credible than those offered by other utility valuation experts. *See Public Service of New Hampshire d/b/a Eversource Energy v. Town of Bow*, App. Ex. 437, p. 3, 10; *see also Tr. Day 62/Afternoon Session*, pp. 94-103. The New Hampshire Supreme Court recently upheld the decision reached by the trial court in this case. The Supreme Court reiterated the findings of the Superior Court noting that “the trial court found Kelly’s ‘testimony [to be] more credible than’ Sansoucy’s.” *Public Service Company of New Hampshire v. Town of Bow*, No. 2016-0668, p. 2 (January 11, 2018).

<sup>14</sup>The Joint Munis double down on Mr. Sansoucy’s absurd theories in their brief at pp. 133-136, going so far as to argue that the Certificate should be denied because the Applicants did not prepare a detailed revenue requirement and file a tariff, and thus did not prove that the Project is economically feasible. There is no such requirement anywhere in the law.

#### **D. Counsel for the Public**

CFP has a statutory role in the proceeding, pursuant to which it hired witnesses to testify on a number of topics. In theory, CFP plays an objective balancing role in SEC proceedings but its participation in this case has been indistinguishable from, and coordinated with, the parties opposing the Project. Two CFP witnesses urge that the Subcommittee deny issuance of a Certificate. Ms. O'Donnell concluded that the Project would have an unreasonable adverse effect on historic sites and TJ Boyle Associates concluded that the Project would have an unreasonable adverse effect on aesthetics. In Ms. O'Donnell's case, CFP has sponsored a report and testimony that is unlike any purported review of historic properties in any SEC case or under Section 106. As discussed below, CFP's expert review includes neither an assessment of eligibility of any of the historic resources listed in its report, nor an evaluation of the Project's effect on any historic site. It is untenable for CFP's expert to reach a conclusion of adverse effect (let alone unreasonable adverse effect) without having addressed either of these essential review requirements for historic resources. With respect to TJ Boyle Associates, their conclusions are not based in fact or supported by SEC precedent, their identification of 18,933 potential scenic resources is more a misguided academic exercise than a meaningful attempt to interpret the SEC rules, and their individual assessment of scenic resources focuses on individual viewpoints and fails to review potential visual effects from the resource as a whole.

Throughout its examination of intervenors in this proceeding, moreover, CFP failed to test intervenor witnesses in a manner that could be considered cross-examination. Rather, CFP appears to have made the strategic decision to confine itself to conducting friendly examination of intervenors, which it did repeatedly by putting witnesses in a position to add to or reinforce their testimony in opposition to the Project. Finally, CFP concludes its brief by disingenuously saying that it is not taking an "express position on the Subcommittee's ultimate decision."

*Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p. 171. The purpose of such a statement is not clear, especially when it could not be more transparent that CFP is advocating for a specific outcome, i.e., the denial of a Certificate.

## **VI. PROCEDURAL DUE PROCESS**

There can be no serious claim that the SEC has somehow failed to satisfy the requirements of due process as they might apply to opponents of the Project over the past two years. Pursuant to the Administrative Procedures Act, RSA Chapter 541-A, the fundamental requirements of due process in a contested case include an opportunity for an adjudicative proceeding after reasonable notice (RSA 541-A:31, III) and an opportunity to respond and present evidence and argument (RSA 541-A:31, IV).

Reasonable notice was provided consistent with RSA 162-H:10 in the form of public information sessions and public hearings in each of the five counties where the Project is proposed and with SEC rule Site 202.09. Furthermore, following acceptance of the Application on December 18, 2015,<sup>15</sup> the Presiding Officer issued a Procedural Order on December 22, 2015,

---

<sup>15</sup> In direct contradiction to the SEC's prior orders, some parties, such as Municipal Group 1 North and the Dummer-Stark-Northumberland Group, continue to argue that the Applicants have not complied with the requirements of Site 301.03(c)(6), which requires an applicant to provide "Evidence that the applicant has a current right, an option, or other legal basis to acquire the right, to construct, operate, and maintain the facility on, over, or under the site." The Committee, however, has already explicitly rejected this argument and concluded that the Application for a Certificate of Site and Facility "contains information identifying the Applicant's relationship to each section of the route" and that the Application "identifies those areas owned in fee, those areas to be leased, and those areas in which the Applicant claims a statutory authority to construct in a public road way pursuant to RSA 231:160." *Order Accepting Application*, Docket 2015-06, at 15 (December 18, 2016). The Subcommittee has further concluded on numerous occasions that Application contained sufficient information and any attempt to litigate property rights was improper. See, e.g., *Order on Lagaspence Motion to Postpone and Grafton County Commissioners' Motion to Continue*, Docket No. 2015-06, at 2 – 3 (April 7, 2017) (concluding that the Application was complete and it contained the necessary evidence demonstrating that the Applicant has the legal authority to use the site for the proposed facility and that adjudication of property rights between private parties is left for the courts); *Presiding Officer's Order on Motions to Compel*, Docket 2015-06, at p. 14-15 (September 22, 2016) (stating that "[t]he Subcommittee has already determined that the Application contained sufficient information to satisfy the application requirements of each state agency having jurisdiction under state or federal law to regulate any aspect of the construction or operation of the

which set forth the schedule for public information sessions required by RSA 162-H:10, I-a, for petitions to intervene, and for a prehearing conference for the purpose of addressing procedural issues. A schedule of public hearings pursuant to RSA 162-H:10, I-c was issued on February 3, 2016. In all cases, the required newspaper publication of notice was performed. Subsequently, four site inspections were held, pursuant to Site 201.13, in March, 2016. Three additional site inspections were held after the commencement of the adjudicative hearings, in July and October, 2017.

As for the opportunity to respond and present evidence, the SEC received over 160 petitions to intervene. Pursuant to RSA 541-A:32, III, it combined the intervenors into 23 groups. The Intervenors submitted approximately 1,130 written discovery requests and the Applicants provided 184,401 pages of responses. In addition, 21 days of initial technical sessions were conducted for Intervenor questioning of the Applicants' witnesses. Subsequently, testimony was filed by sixteen witnesses on behalf of CFP and the Intervenors submitted testimony from approximately 180 witnesses. The Applicants' witnesses were subject to 43 days of cross-examination by CFP, Intervenors and members of the Subcommittee, and the Subcommittee held 70 days of hearings altogether.

With respect to intervention in administrative proceedings, both the New Hampshire statutes and SEC rules grant broad discretion to the presiding officer to impose conditions upon intervenors' participation in SEC proceedings including, but not restricted to, limiting the issues pertaining to a particular intervenor, limiting the procedures in which a particular intervenor may participate, or combining intervenors. *See* RSA 541-A:32, III; Site 202.11(d). Pursuant to the SEC rules, the presiding officer may impose such conditions to the extent that they are not “so proposed facility.”). Any attempt to re-litigate this issue in the final briefs is improper and should not be considered.

extensive as to prevent the intervenor from protecting the interest which formed the basis of the intervention." RSA 541-A:32, IV.

Furthermore, RSA 541-A:33, IV provides that a party to a proceeding "may conduct cross-examination required for a full and true disclosure of the facts." The Presiding Officer addressed this standard in a Procedural Order, which, among other things, spoke to the propriety of so-called friendly cross and adopted a procedure "to ensure that the proceedings are not bogged down by unnecessary and inefficient friendly cross-examination." *Procedural Order*, Docket No. 2015-06, p. 3 (September 12, 2017). The Procedural Order is fully consistent with the requirements of due process. Judge Friendly determined, in *National Nutritional Foods Association v. Food and Drug Administration*, 504 F. 2d 761 (1974), that cross-examination necessary for a full and true disclosure of facts extended to parties that were adverse but that examination by parties that are not adverse may be curtailed. *Id.* at 793. In fact, Judge Friendly endorsed a process substantially similar to the process adopted in this case. *See also N. Plains Res. Council v. Bd. of Nat. Res. & Conservation*, 181 Mont. 500, 533-35 (1979) (Noting that cross-examination may be limited to witnesses of the opposing party or adverse party and that administrative bodies must be allowed, and encouraged, "to take steps to avoid repetitious or aimless cross-examination.") Ultimately, the Presiding Officer appropriately exercised his authority, pursuant to RSA 541-A:33, II, on a case-by-case basis throughout the adjudicative hearings with respect to the cross-examination of all parties' witnesses to "exclude irrelevant, immaterial or unduly repetitious evidence," erring, if at all, on the side of permitting rather than forbidding cross-examination.

More generally, both the New Hampshire Supreme Court and the New Hampshire Public Utilities Commission have recognized that due process, in the context of administrative

proceedings, "is a 'flexible' concept varying with the nature of the governmental and private interests that are implicated." *See Kearsarge Telephone Co.*, Order No. 24,802, Docket DT 07-027, p. 5 (November 2, 2007); *see also State v. Mwangi*, 161 N.H. 699,703 (2011) ("[t]he requirements of due process are flexible and call for such procedural protections as the particular situation demands."). "[W]here issues of fact are presented for resolution by an administrative agency, due process requires a meaningful opportunity to be heard." *Appeal of Londonderry Neighborhood Coalition*, 145 N.H. 201, 205 (2000). Clearly, the SEC has provided a meaningful opportunity here.

In *Mathews v. Eldridge*, the United States Supreme Court held that, when reviewing administrative procedures, courts will generally balance three factors:

[f]irst, the private interest that will be affected by the official action; second, the risk of an erroneous deprivation of such interest through the procedures used, and the probable value, if any, of additional or substitute procedural safeguards; and finally, the government's interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirement would entail.

424 U.S. 319, 334-35 (1976) (citations omitted); *see also Appeal of Office of Consumer Advocate*, 148 N.H. 134,138 (2002) (applying same standard in context of both New Hampshire and federal constitutions).

The essence of *Mathews v. Eldridge* and *Appeal of Office of Consumer Advocate* concerned whether an evidentiary hearing should be provided. In this case, 70 days of evidentiary hearings were conducted, by far the longest and most comprehensive SEC proceeding on record. Correspondingly, the procedural protections afforded intervenors through the SEC's Practice and Procedure Rules, Chapter Site 200, more than meet the demands of the

particular situation in terms of notice, discovery, motion practice, testimony, conduct of the hearings, and the briefing of arguments.

## PART C--ARGUMENT

### **I. The Applicants have the financial, technical and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate.**

#### **A. Financial Capability**

The Applicants have proved facts sufficient for the Subcommittee to find that the Applicants have the financial capability to construct and operate the Project in continuing compliance with the terms and conditions of a Certificate. The Applicants' financial capability is based on (1) the financial strength of NPT's parent, Eversource, and Eversource's experience financing, constructing, and operating transmission facilities in New England; (2) the contract NPT executed with Hydro Renewable Energy Inc. ("HRE"), i.e., the Transmission Service Agreement ("TSA") approved by the Federal Energy Regulatory Commission ("FERC"); and, (3) the financial strength of HRE's parent, Hydro-Québec ("HQ"). CFP agrees that the Applicants have provided sufficient evidence to demonstrate that they have adequate financial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate. *Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p. 9 (citing RSA 162-H:16, IV(a)).

Eversource is rated by the three major credit rating agencies. At the time of Mr. Auserè's Supplemental Testimony, filed on March 24, 2017, Standard and Poor's ("S&P") rated Eversource as A stable<sup>16</sup>; Moody's rated Eversource as Baa1 stable; and Fitch rated Eversource as BBB+ positive. Eversource anticipates utilizing internally generated cash and debt issuances to fund NPT's capital requirements. As a result of Eversource's strong credit ratings, it has ready access to capital markets. In addition, Eversource has had an annual construction program well in excess of the annual cash requirement of Northern Pass, and generates adequate cash

---

<sup>16</sup>In December of 2017, S&P raised Eversource's rating to A+ (Stable).

flow internally to meet its equity investor obligations in Northern Pass. *See Application*, App. Ex. 1, p. 51.

The TSA approved by FERC provides for a formula rate cost recovery that will allow NPT's revenue to track its cost of service. NPT's capital structure under the TSA will provide for strong cash flow credit metrics, allowing the company to achieve its investment grade credit rating target, while FERC's authorized return on equity will provide NPT an operating margin to withstand the business risk of unforeseen events.

During construction, Eversource will periodically make equity capital contributions to NPT, which is obligated under the TSA to use commercially reasonable efforts to maintain a capital structure of 50% equity and 50% debt. Once the Project commences operations, NPT will begin receiving revenue from HRE pursuant to the TSA for transmission service over the line. The formula rate calculates costs on a prospective basis and then trues up such projected costs to actual costs in order to permit NPT to recover its annual revenue requirements, including a return on investment plus associated income taxes, depreciation expense, operation and maintenance expenses, administrative and general expenses, municipal tax expense, and other expenses associated with the Northern Pass line. The revenues paid by HRE are guaranteed under the TSA by HQ. Finally, NPT and its construction contractors will carry adequate insurance to provide coverage against liability or damage resulting from the construction or operation of the Project.

The TSA requires HRE's parent, HQ to provide NPT a guaranty of HRE's current and future payment obligations. Once construction begins, the guaranty is required to cover the amount of NPT's incurred project costs plus earnings and projected decommissioning costs. HQ is Canada's largest electric utility and is one of the largest power generators and transmission

companies in North America, and has been selling power into the New England energy market for the past several decades. HQ is a crown corporation incorporated under the Hydro-Québec Act and is owned by the province of Québec. At the time of Mr. Auserè's Supplemental Testimony, filed on March 24, 2017, HQ's provincial credit ratings were A+ (positive),<sup>17</sup> Aa2 (Stable), and AA- (Stable) from S&P, Moody's, and Fitch ratings services, respectively. *Supplemental Pre-Filed Testimony of Michael J. Auserè*, App. Ex. 8, Appendix 1, Attachment J, p. 27. A parent guaranty from an entity with the financial strength and credit quality of HQ provides significant and meaningful financial assurance to NPT that it will have the financial capability to decommission Northern Pass, if required.

No party has offered testimony or evidence directly challenging the Applicants' financial capability to construct and operate the Project,<sup>18</sup> but a number of parties have questioned the TSA. SPNHF submitted the Supplemental Pre-Filed Testimony of Will Abbott, which, among other things, suggested that the TSA had expired. *See Supplemental Pre-Filed Testimony of Will Abbott*, SPNHF Ex. 2, p. 1. In addition, he suggested that the TSA "is not for the project that the Applicants are asking the SEC to approve." *Id.* at 2. Mr. Abbott relied in part on a letter that SPNHF itself sent to United States Senator Jeanne Shaheen. Pointing to differences between a prior iteration of the Project described in the TSA and the current proposed Project, Mr. Abbott suggests "there is no evidence that HQ has agreed to the project as proposed to the SEC." *Id.* at p. 3.

---

<sup>17</sup> In June of 2017, S&P raised HQ's rating to AA- (Stable).

<sup>18</sup> Mr. Sansoucy, on behalf of the Joint Munis, does not dispute the Applicants' financial capability but in that context imagines potential rate impacts on New Hampshire customers. He does not understand the Settlement Agreement approved by the PUC in Docket No. DE 15-264 or how the FERC-regulated TSA will work.

The record clearly shows, however, that the TSA between the Applicants and HQ remains in full force and effect.<sup>19</sup> *See Supplemental Pre-Filed Testimony of Michael J. Auserè*, App. Ex. 8, p. 4; *see also Tr. Day 3/Morning Session*, pp. 117-118. Specifically, Mr. Auserè testified “the TSA’s in full force and effect, and Hydro-Québec, through our frequent meetings with them, they understand the current configuration of the project, i.e., the 1090 megawatts as well as the cost associated with that project.” *Tr. Day 3/Morning Session*, p. 117. Mr. Abbott’s suggestion otherwise reflects a lack of understanding of the contractual relationship between the Applicants and HQ. Furthermore, Mr. Auserè explained on the record that the TSA will be amended to reflect housekeeping items and, if necessary, to accommodate the Massachusetts Request For Proposals. *See Tr. Day 3/Morning Session*, pp. 125-129.

The evidence clearly demonstrates that NPT currently has and will continue to have the financial capability to construct and operate the Project, which is consistent with the SEC’s decision in the Merrimack Valley Reliability Project (“MVRP”) docket that the applicants, including Eversource subsidiary PSNH, had “sufficient financial capacity to construct, operate and maintain the Project in compliance with the Certificate.” *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-05, p. 46 (October 4, 2016). In MVRP, the subcommittee found that the applicants were “financially stable and sound ... have the ability to obtain low interest rates on their debt ... have favorable credit ratings from leading rating agencies” and “ha[ve] substantial cash flows that secure[] their financial stability.” *Id.* at

---

<sup>19</sup> In their brief, the Dummer-Stark-Northumberland Group repeats the discredited claim about the TSA and makes other unsubstantiated claims, along with a so-called motion to dismiss, including that HQ must be a party to the proceeding for the Applicants to demonstrate financial capability and that PSNH ratepayers are at risk. The motion to dismiss is inapt and should be ignored inasmuch as the Subcommittee is poised to make a decision on the merits. As for the merits, the Dummer-Stark-Northumberland Group does not provide substantial credible evidence for any of its claims. Among other things, there is no legal or factual basis that would make HQ a mandatory party, nor is there any need to, and the PUC in Docket No. DE 15-459 fully addressed issues related to PSNH ratepayers.

46. These same conclusions can be made with respect to NPT's financial capabilities, resulting from the financial strength of both Eversource and HQ, as well as the FERC-approved TSA. In addition, the evidence shows that NPT has the financial capability to decommission the Project if needed, which is discussed in more detail below under Orderly Development, Section II. B.

### **B. Technical and Managerial Capability**

The Applicants have proved facts sufficient for the Subcommittee to find that the Applicants have the requisite technical and managerial capability.<sup>20</sup> The Project will be constructed and operated by a team with substantial experience constructing high voltage transmission lines in New England, the United States, and abroad. NPT, as owner, will be responsible for all major management decisions. The Applicants have engaged a number of companies to support the design, procurement, construction, and operation of the Project. *See Additional Information to Address Revised SEC Rules*, App. Ex. 2, p. 5.

---

<sup>20</sup> Site 301.13 provides that:

(b) In determining whether an applicant has the technical capability to construct and operate the proposed facility, the committee shall consider:

- (1) The applicant's experience in designing, constructing, and operating energy facilities similar to the proposed facility; and
- (2) The experience and expertise of any contractors or consultants engaged or to be engaged by the applicant to provide technical support for the construction and operation of the proposed facility, if known at the time.

(c) In determining whether an applicant has the managerial capability to construct and operate the proposed facility, the committee shall consider:

- (1) The applicant's experience in managing the construction and operation of energy facilities similar to the proposed facility; and
- (2) The experience and expertise of any contractors or consultants engaged or to be engaged by the applicant to provide managerial support for the construction and operation of the proposed facility, if known at the time.

Burns & McDonnell (“BMcD”) will be the owner’s engineer, responsible for overseeing the design and construction activities performed by other contractors. Burns & McDonnell is a company made up of more than 5,700 engineers, architects, construction professionals, scientists, consultants and entrepreneurs with offices across the country and throughout the world and in 2016 was ranked the number one engineering firm in the country serving the electrical power industry by *Engineering News-Record* (ENR).

The Project will be managed and constructed by Quanta, a recognized industry leader in the construction of transmission facilities. Quanta is a holding company consisting of a number of subsidiary companies that have independent expertise in various aspects of energy transmission projects and work together to ensure the efficient and effective utilization of their combined resources. Quanta is ranked 361 on the Fortune 500 list (2015) and has received top ranks from Engineering News-Record: #1 Overall Specialty Contractor; #1 Utility Specialty Contractor; and #1 Electrical Specialty Contractor. *See Northern Pass Transmission Underground Construction Work Plan Presentation to DOT*, App. Ex. 227, p. 4. Quanta describes itself as being the largest non-utility employer of qualified linemen, the largest underground contractor in North America, and ranking in the top 5 in horizontal directional drilling operations.<sup>21</sup> *Id.*

PAR Electric (“PAR”) has been contracted to serve as the general contractor for the Project and will be responsible for project management, the overall schedule of construction, project budgeting, and the management of other construction and supply vendors. PAR owns more than 5,000 pieces of specialized transmission line construction equipment, the largest fleet in America. They have constructed transmission lines ranging from 69 kV to 765 kV, and

---

<sup>21</sup> *See also Northern Pass Transmission Underground Construction Work Plan Presentation to DOT*, App. Ex. 227, p. 7 (listing some of Quanta’s major underground trench and HDD construction projects).

worked extensively in New England for Eversource constructing transmission and substation facilities ranging from 34.5kV to 345kV.

The Applicants have also retained ABB, an industry leader in HVDC systems, converters, and cables, to manage the engineering and construction of the underground HVDC cable and, in conjunction with MJ Electric, a Quanta subsidiary, the Franklin converter terminal.

Eversource Energy has extensive experience managing and operating transmission infrastructure. *See Application*, App. Ex. 1, p. 53. It operates New England's largest utility system serving more than 3.6 million electric and natural gas customers. Eversource owns and operates approximately 4,270 circuit miles of transmission lines and 578 transmission and distribution stations. PSNH and its predecessor companies have owned, operated and maintained transmission facilities in New Hampshire for over one hundred years.

Eversource Energy and its subsidiaries have extensive experience in planning, designing, constructing and operating electric transmission infrastructure projects. Eversource is the recipient of an Edison Award for outstanding development and construction of four critical projects. As of December 31, 2014, Eversource held transmission assets in excess of \$7.6 billion and has plans to invest an additional \$3.9 billion in new transmission infrastructure over the next four years. In addition, NPT has been authorized to commence business as a public utility.<sup>22</sup> Consequently, Eversource and NPT have the resources to use in-house and contract labor as needed for the installation, operation, maintenance, repair, and removal of the Project.

In addition to the Eversource management structure, as depicted on the NPT Construction Management Reporting Matrix, *Pre-Filed Testimony of Jeremy Fortier*, App. Ex. 4, Attachment

---

<sup>22</sup> *See infra*, Part D, § III, A (the PUC concluded that NPT has the necessary technical, managerial and financial expertise to operate as a public utility).

B,<sup>23</sup> the Eversource team will also include additional project managers, a cost analyst, contract administrator, and field inspectors for Quality Assurance/Quality Control, safety, and the environment. Quanta, its subsidiaries, and ABB, will have direct lines of communication at all significant levels of operation (safety, community relations, environmental compliance, outage coordination, materials management, project controls and construction coordination), which allows for fast information exchange and processing and ensures that daily decisions are made in a timely manner. Quanta will provide the coordination and reporting that ensures that the Project is meeting all standard and compliance requirements.

The Applicants have also entered into a comprehensive Project Labor Agreement (“PLA”) with the International Brotherhood of Electrical Workers’ (“IBEW”) Second District, Quanta, and ABB, Inc. *See* App. Ex. 452. The PLA ensures that a trained workforce will be used, including apprentice opportunities for the IBEW’s members and other construction trades, to build the Project.

No testimony has been submitted that directly challenges the technical or managerial capability of Eversource or its contractors. CFP’s final brief provides that “there is sufficient evidence for the Subcommittee to find that [the] Applicants have met their burden of demonstrating that they have adequate financial, technical, and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate. *Counsel for the Public Post-Hearing Brief*, Docket No. 2015-06, p., 9 (citing RSA 162-H:16, IV(a)). Indeed, CFP’s construction panel representatives from Dewberry testified that they were not offering any opinion about whether the Applicants have the technical

---

<sup>23</sup> The Construction Management Reporting Matrix was also submitted to the SEC on July 29, 2016 and referenced in Mr. Bowes’ pre-filed testimony dated February 26, 2016 (App. Ex. 9).

and managerial capability to construct, operate, and maintain the Project.<sup>24</sup> *See Tr. Day 51/Afternoon Session*, pp. 7-8, 35. Dewberry further testified that they did not assess the overhead portion of the Project for compliance with all National Electric Safety Code (“NESC”) requirements, nor did they assess the soundness of the overhead design. *See Tr. Day 51/Afternoon Session*, pp. 8-9. Dewberry has opined that the potential for construction-related impacts associated with a project of this nature is consistent with what they have seen in other projects. *See Tr. Day 51/Afternoon Session*, p. 35. Moreover, Dewberry has not concluded that any of the proposed impacts are “unreasonable” under RSA 162-H or the SEC rules. *See Tr. Day 51/Afternoon Session*, p. 34.

Mr. Bascom from ECE Consulting testified for CFP that the underground design is feasible, that he has not identified any technical issues that would prohibit the installation of the cable system, and that assuming the Applicants carefully manage the construction of the Project, it can be constructed safely as proposed. *See Tr. Day 51/Afternoon*, pp. 67-69. Moreover, Mr. Bascom’s analysis of the underground line concluded that the Project proposes “viable cable sizes” to meet the power transfer requirements, determined that “no damage to the cable would be anticipated” during installation, and that the “conduit size is anticipated to be of adequate size to accommodate the expected size of the power cables . . . provided that due diligence is used during the installation of the conduit system.” *Tr. Day 51/Afternoon*, pp. 73-75.

The CS-Group 1 North states, without providing any evidence to support its contention,<sup>25</sup> that the town dirt roads of Stewartstown and Clarksville will not be left in the same as, or better

---

<sup>24</sup> The Dewberry panel also testified that they had not reviewed RSA 162-H, the Committee’s administrative rules, or prior projects that have come before the SEC prior to drafting their report and testimony. *Tr. Day 51/Afternoon*, pp. 6-7.

<sup>25</sup> No party (including CFP) has provided any evidence on the subject of heat dissipation, other than the Applicants.

condition, than pre-project due to the heat from the buried cables under the roads.

Notwithstanding these unsupported allegations, the Applicants have provided substantial credible evidence that the underground cables will not have an adverse effect on the locally-maintained dirt roads.

ABB is responsible for managing the engineering and construction of the underground HVDC cable. ABB has over 140 years of experience and provides installation services for a range of High Voltage Direct Current (HVDC) and alternating current (AC) transmission line projects. *Additional Information to Address Revised SEC Rules*, App. Ex. 2, p. 7. ABB completed a *Cable Interaction with Soil Temperature Analysis* that concluded that the underground cable “will have a *negligible* impact on the surface temperature” and that “there will be no perceptible impact on surface or subsurface conditions relative to cable installation.” *See Supplemental Pre-Filed Testimony of Nathan Scott*, App. Ex. 88, Attachment A, p. 1, 5 (emphasis added); *see also Pre-Filed Testimony of Nathan Scott*, App. Ex. 13, p. 4 (the ABB study describes *negligible* impacts to surface freeze conditions that the addition of the head source of the cable system will have underneath travel roadways) (emphasis added).

During examination, Mr. Scott testified that the Applicants do not anticipate any thawing above the duct bank, and therefore, will not affect the integrity of the roads. *Tr. Day 6/Afternoon Session*, pp. 139–40. Also, Mr. Bowes testified based on his extensive experience that he had not seen any issues with road degradation due to underground transmission lines post-construction, including gravel roads. *Id.* at 140. Specifically, in Connecticut, Mr. Bowes testified that Eversource owns and operates a 345 kV alternating current (AC) underground transmission line where approximately 2,500 feet are located in a gravel road. In this particular location and after ten to twelve years, Mr. Bowes is unaware of any damage to the road due to

the underground cables. *Id.* at 140. Mr. Bowes further opined that the heating of the underground cable will not have an adverse impact on gravel roads and he based that opinion on the ABB study, his operating experience in New England, and the fact that AC cables are operated at about 20 degrees Celsius hotter than DC cables. Moreover, CFP’s own experts did not specifically opine that the high voltage transmission line underground portion of the Project would cause road damage on Tier 5 or 6 roads (*Tr. Day 51/Afternoon Session*, p. 142–143), and there is no other expert testimony in the record on this issue. However, to the extent there is any concern about this issue, the Applicants have proposed conditions to address it.<sup>26</sup>

The Joint Munis, in the context of addressing technical and managerial capability, discuss the Memorandums of Understanding (“MOUs”). In doing so, they fundamentally misrepresent the MOU process with host communities. As demonstrated through cross-examination of a number of host municipality witnesses, the Applicants made significant efforts to work with host communities to reach agreement on as many issues as possible. However, the Applicants met significant resistance from communities who refused to engage in such discussions. *See e.g., Tr. Day 66/Afternoon Session*, pp. 204–05 (Town of Deerfield’s Mr. Robertson testified that the Town refused to engage in MOU discussions because “the board of selectmen did not wish to be seen colluding or collaborating, for lack of better terms, with the Project” and stated that the Board “decided that it was not in our best interest to continue with a Memo of Understanding at that point in time” even though the MOU does not contain any requirement that the Town indicate its support of the Project); *Tr. Day 68/Morning session*, pp. 74-76; *see also* App. Ex.

---

<sup>26</sup>The following condition is contained within the DOT excavation permit and the Applicants would agree to the same condition as applicable to locally-maintained roads: “Any future surface distortion within the trench area, due to settlement or other causes attributable to the construction shall be corrected as required during construction and for a period of two (2) years following the acceptance of the project by others.” The Applicants would also agree to a condition that pertains to locally-maintained roads that “the Project agrees to assume such additional cost as a municipality may incur due to the maintenance, operation, renewal, or extension of said facility or appurtenances thereto within the locally-maintained road limits.”

192 (Town of Franconia declined to engage in any discussions with Northern Pass about pursuing a MOU).

Contrary to the Joint Muni’s claims that the proposed MOU does not meaningfully address construction concerns raised by the municipalities, the template MOU was meant to be a starting point for negotiations with each municipality. If a town had a specific request or issue, the Applicants would review and consider such a request. *See e.g.*, App Ex. 146 (the Applicants have committed to “work[ing] collaboratively with the Town [of Thornton] to minimize any impact that construction activities may have on traffic on Route 175 in the Town, specifically during the annual Blue Grass Festival and Blues Festival located at the Sugar Shack Campground in the Town.”); *see also Tr. Day 68/Morning Session*, at 83–90 (discussing a potential alternative for the Gale River crossing that would reduce and minimize potential impacts during construction in the Town of Franconia, which has been historically refused in the past by the Town). Indeed, the position that many towns have taken - to refuse further discussions with NPT regarding their concerns<sup>27</sup> - could come back to hurt them because, as Subcommittee Member Way pointed out, the failure of the Towns to engage in the MOU process requires the SEC to make specific decisions regarding potential impacts on a community that instead could have been directly addressed by the host community. *Tr. Day 69/Afternoon Session*, at 58–59.

The preponderance of the evidence<sup>28</sup> supports a determination that the Applicants have the technical and managerial capability to assure that the Northern Pass Project will be

---

<sup>27</sup> In fact, representatives from numerous communities acknowledged that they did not revise, edit, or redline the proposed draft MOU and send it back to the Applicants for their consideration. *See e.g.*, *Tr. Day 69/Afternoon Session*, at 103–04.

<sup>28</sup> Without providing any evidence, the Joint Munis’ final brief argues that the Applicants have not met their burden to demonstrate technical and managerial capability to construct and operate the Project. To

constructed and operated in continuing compliance with a Certificate of Site and Facility issued by this Subcommittee.

---

reach this conclusion, they falsely state the Applicants do not have the capability to perform adequate project outreach both before and during the proposed construction (which aside from statutorily-required public information sessions is not actually a specific requirement under RSA 162-H or the SEC rules). The preponderance of the evidence clearly shows the Applicants' commitment to outreach. *See e.g., Pre-Filed Testimony of Samuel Johnson*, App Ex. 11; *see also Supplemental Pre-Filed Testimony of Samuel Johnson*, App. Ex. 86 (describing the significant outreach efforts performed by the Applicants to date and committing to specific additional outreach measures prior to and during construction). In addition, the Applicants' municipal outreach summaries demonstrate the substantial outreach efforts that go far above and beyond what is required by the SEC or DOE process. *See e.g., Summary of Municipal Outreach: Stewartstown*, App Ex. 145 (holding 12 additional meetings with the town in addition to all public information sessions); *see also Summary of Municipal Outreach: Plymouth*, App Ex. 150(a), (holding eight additional meetings with the town to discuss route, Forward NH Fund, verify information about local land use, route alternatives, etc.); *see also Summary of Municipal Outreach: Concord*, App Ex. 153 (holding 15 additional meetings on top of public information sessions). The Joint Munis also argue that the Applicants did not provide an adequate survey for the underground portion of the Project. However, the Applicants are required to provide a certified survey report by a certified licensed land surveyor. *See DOT Recommended Approval with Conditions*, App. Ex. 107 (Condition 4); *see also* Part B, §IV, A.

**II. The site and facility will not unduly interfere with the orderly development of the region.**

The Applicants have proved facts sufficient for the Subcommittee to find that Project will not unduly interfere with the orderly development of the proceeding. As demonstrated by the substantial credible evidence described below, the Project will (1) be constructed and operated in accord with traditional patterns of land use, (2) create jobs, and (3) bolster the economy of the region through lower electric rates, higher GDP, and increased tax revenues.<sup>29</sup> Moreover, provisions have been made to mitigate the potential isolated effects on real estate values, as well as any potential limited impacts on tourism, and community services and infrastructure, that might occur during construction. The Applicants have provided a comprehensive plan for decommissioning, in the event such an undertaking is ever required, and demonstrated sufficient financial assurances for that eventuality. Finally, the Applicants rebut municipal views that the Project will interfere with orderly development and show that the Project is, in fact, not inconsistent with various master plans and zoning ordinances. Accordingly, the preponderance of the evidence supports the Applicants' position that the Project will not unduly interfere with the orderly development of the region.

The Applicants also counter certain arguments and/or misperceptions pursued by Intervenors during the cross-examination of Mr. Varney. For example, with respect to the Subcommittee's obligation pursuant to RSA 362-H:16, IV(c) to give "due consideration" to "the views of municipal and regional planning commissions and municipal governing bodies," it appears that some parties wrongly believe that such municipal views have some special weight

---

<sup>29</sup> The discussion of issues related to the economy of the region is extensive because the analyses undertaken by the expert witnesses for the Applicants and CFP are complex. The witnesses, however, do not dispute that there are significant benefits from the Project; they differ only on the level of the benefits. Accordingly, there is no basis for concluding that the Project will affect the economy in any significant negative way and it certainly will not unduly interfere with the development of the region.

or should be accorded some deference. All that the plain language of the statute requires of the Subcommittee is “due consideration” of municipal views, which may, and have, come in the form of testimony and public comments in this proceeding. Most important, as noted previously, the Legislature has expressly preempted local authority over the siting of energy facilities.

Just as the Subcommittee will assess the credibility of witnesses for the Applicants, Counsel for the Public, and other intervenors, the Subcommittee will assess the credibility of witnesses for municipalities who offer their views relative to orderly development. Similarly, to the extent a municipality submits a public comment relative to orderly development, the Subcommittee will give it the weight it is due, recognizing that the views were not made under oath and were not subject to cross examination, as it would with any witness. As for any documents submitted to the Subcommittee, such as master plans, they have no binding legal effect because they are preempted, do no more than express a municipal view, and should be given the consideration or weight they are due under the circumstances, which is very little given that the Project will be constructed predominately in existing rights-of-way and public highways.

With respect to the temporary impacts of construction, a number of intervenors create the misimpression that their business or residence will be affected for the entire two-year period that construction of the Project will take place, when the evidence demonstrates that any impacts will be short-lived, spread out over time, and mitigated by coordinating the timing and manner of the work. Consequently, such impacts do not rise to the level of unduly interfering with the orderly development of the region. Finally, such impacts will be addressed through extensive public outreach by the Project as part of MOUs separately agreed to with municipalities or as required by a condition to the Certificate, as well as the traffic management plans that the DOT will

approve and that the Subcommittee may address when considering whether the Project will have an unreasonable adverse effect on the public health and safety.

**A. Land Use, Employment and the Economy of the Region**

1. Land Use

The Applicants satisfy by substantial credible evidence the first of the three criteria the SEC considers in evaluating whether the Project will unduly interfere with the orderly development of the region, which concerns the extent to which the proposed project will affect land use in the region. Site 301.15(a). In furtherance of that criterion, Site 301.09(a) requires that an applicant address the potential effects on land use in the region and include in the application material the following information:

- (1) A description of the prevailing land uses in the affected communities; and*
- (2) A description of how the proposed facility is consistent with such land uses and identification of how the proposed facility is inconsistent with such land uses.*

As discussed below, the preponderance of the evidence shows that Project will not interfere with or adversely affect prevailing land uses.

The Applicants retained Robert W. Varney<sup>30</sup> and Normandeau Associates, Inc. (“Normandeau”) to assess the effects of the Project on land use as the rules require. He examined the existing land uses in all affected communities, and provided detailed existing land use descriptions for each community. As summarized in Mr. Varney’s pre-filed testimony, the prevailing land uses along the corridor include forest, agriculture, residential, commercial, industrial, transportation, utilities, historic, natural resources, conservation and recreation. The

---

<sup>30</sup> Mr. Varney is a former director of NH Office of State Planning and two NH regional planning commissions, as well as the former longtime DES Commissioner and a former Regional Administrator of US EPA Region 1. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 20, p. 1.

Project will not interfere with these uses. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 20, pp. 4-5; *see also Application*, App. Ex. 1, Appendix 41, p. 11.

In addition, Mr. Varney reviewed local, regional, state and federal long-range planning documents, and considered comments from the community and local and regional planners. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 20, p. 3-4. He also reviewed and considered the DOE's DEIS and comments received during the DOE scoping process, the DEIS comment period, and the pre-application Public Information Sessions, as well as each town's master plan and the regional plans for each of the four regional planning commissions in the Project area. *Id.* 3-4.<sup>31</sup>

**a. The Project is Fully Consistent with Prevailing Land Uses.**

In his pre-filed testimony, Mr. Varney addressed the various segments of the Project route to assess whether the Project will be consistent with prevailing land uses. Based on his comprehensive review, Mr. Varney determined the Project is consistent with the prevailing land uses in the communities along the Project route, and that the Project will have a minimal effect on land uses in the region. Most significantly, approximately 83% (160 miles) of the Project is located in existing transmission line and transportation corridors. *See Pre-Filed Testimony of Robert W. Varney*, App. Ex. 20, p. 4. Adding a transmission line in a ROW that already serves one or more existing transmission lines does not change the land use within the ROW or in the area of the transmission corridor. *Id.*

---

<sup>31</sup> The report detailing the scope of Mr. Varney's review and assessment is titled *Northern Pass Transmission Project, Review of Land Use and Local, Regional and State Planning, October 2015*, App. Ex. 1, Appendix 41. He updated this report in April 2017 to include additional information. App. Ex. 120, *Update to Appendix 41 –Review of Land Use and Local, Regional and State Planning, Northern Pass Transmission Project, October 2015*, App. Ex. 120. He also submitted reports titled *Review of Master Plans Northern Pass Transmission Project*, Working draft March 2017, App. Ex. 121, and *Review of Master Plans in Abutting Municipalities, Northern Pass Transmission Project Working Draft January 2017*, App. Ex. 123.

Sixty miles of the Northern Pass line will be placed underground along state and local highways. This includes approximately 8 miles of the Project in Pittsburg, Clarksville and Stewartstown, and the entire section of the route from Bethlehem to Bridgewater, in and around the White Mountain National Forest, Franconia Notch area, the Rocks Estate area, and along the Appalachian Trail. *Id.* at 5. The underground segments of the route will result in no permanent effect on land use; the use of roadways and abutting properties will not change. *Id.* Another 100 miles of the line will be placed in existing transmission corridors. The existing ROWs along the Project route contain several transmission and distribution lines constructed at different times, beginning in the early 1900s. *Id.* at 4. The use of these transmission corridors will not change, and NPT's use of the corridor will not change the land uses in the area. *Id.* There will be no widening of the ROW, except for a minor widening of the AC line in the southern section, and the tree clearing and construction within the ROW will have no effect on the adjacent ongoing land uses.

As Mr. Varney testified and as the SEC has affirmed in prior transmission cases, siting a new transmission line in already developed corridors is a sound planning principle. *Tr. Day 37/Morning Session*, p. 18; *see Order No. 21,268*, Docket No. DSF 93-128 (June 14, 1994) (stating that the "single important fact bearing" on the finding that the proposed transmission line would be compatible with land use patterns in the area is that the proposed line occupies or follows existing ROW); *Order 20,739*, Docket No. DSF 91-130 (February 2, 1993) (finding that siting the proposed transmission line in an existing corridor is the "single most important factor" in its orderly development analysis and "will be consistent with the established land use patterns in the area"). Northern Pass's use of existing corridors is fully consistent with prevailing land

uses, as these uses have coexisted with existing electric utility and transportation corridors as a part of the fabric of local and regional development.

The SEC has historically looked favorably on transmission projects that were to be constructed in exiting rights-of-way. In *New England Hydro-Transmission Corp (HQ Phase II)*, DSF 85-155, Order No. 18, 499 (December 8, 1986) the predecessor to the SEC concluded that “the single most important fact bearing” on the finding that the project did not unduly interfere with the orderly development of the region was “that the proposed transmission line occupies or follows existing utility transmission rights-of-way or utility-owned property for its entire length of 121 miles.” The Subcommittee in the 2017 *Merrimack Valley Reliability Project* decision over 30 years later reaffirmed this principle, noting that that project would be constructed “within the existing right-of-way that, for years, has been used to transmit electricity and is encumbered by associated structures and equipment. Construction of the Project within an already existing used right-of-way is consistent with the orderly development of the region.” *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-05, p. 58 (October 4, 2016); *see also Order 20,739*, Docket No. DSF 91-130 (concerning an approximately 17 mile long 115 kV transmission line from Tamworth to Conway in which the SEC’s predecessor entity under RSA 162-F concluded that on the issue of orderly development “the single most important factor is the selection of an existing, already occupied utility corridor” and that use of the corridor “will be consistent with the established land use patterns in the area;”); *Order No. 21,268*, Docket No. DSF 93-128 (in which the SEC made a nearly identical finding concerning an 8.2 mile 115 kV transmission line from Conway to Bartlett.)

The remaining 32-mile section of the route that is not located along existing transmission corridors traverses sparsely populated, forested land that is used principally for logging,

recreation and other energy facilities. Twenty-four miles of this northern section is within a working forest managed by a commercial forestry operation in Stewartstown, Millsfield and Dixville. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 20, p. 4. It is also the location of the Granite Reliable Wind Project, which includes 33 wind turbines about 410 feet in height and a new overhead transmission line, and is near the Pontook Hydroelectric facility. *Id.* at 4-5. The remaining eight miles of the northern section in Pittsburg, Clarksville and Stewartstown is sparsely populated, mostly forested land that will be leased by NPT. *Id.* at 5. All prevailing land uses along this segment of the Project will continue, with minimal effect from the Project.<sup>32</sup>

Although no CFP expert witness testified with respect to the Project's potential impact to prevailing land uses, CFP, in its Post-Hearing Brief, formulates a number of what it views as limitations in Mr. Varney's review and assessment of prevailing land uses. The Applicants have identified a number of mischaracterizations and overstatements by CFP regarding both Mr. Varney's work and the record. As detailed below, in certain cases CFP's recounting of the record omits important details. In others, CFP's criticisms result from its improperly expanding the definition of "prevailing land uses." In each instance, CFP's position with respect to land use represents a clear departure from SEC precedent on the issue.

- On page 16 of the brief CFP states that Mr. Varney "rejected municipal documents such as warrant articles because he did not consider them to be 'definitive' statements about their views since the Project design was still being changed." *Counsel for the Public's Post-Hearing Brief*, p. 16. CFP fails to appreciate that many Town Warrant Articles were voted on and adopted prior to the Project's current configuration being announced. Importantly, while the Towns of Easton, Sugar Hill, and Franconia passed warrant articles when the Project was configured to be overhead through the White Mountain National Forest, witnesses testifying on behalf of those towns testified that the current

---

<sup>32</sup> That Wagner Forest Management -- the manager of the land where 24 miles of the new ROW will be located -- supports the Project is strongly indicative that the use of that land will not be adversely affected. *Tr. Day 35/Afternoon Session*, p.57, 145.

underground configuration addressed the concerns voiced in the warrant articles.<sup>33</sup> This testimony directly supports Mr. Varney's position.

- On page 16 of the brief CFP states that “Mr. Varney’s analysis did not evaluate uses at important resources such as Big Dummer and Little Dummer Ponds.” *Counsel for the Public’s Post-Hearing Brief*, p. 16. In fact, Mr. Varney reviewed and analyzed a number of resources like Little and Big Dummer Ponds and testified that his review of these resources “was not intended to be a complete description of every single water body within miles of the line.” *Tr. Day 40/Morning Session*, p. 163. Rather, Mr. Varney’s review of these resources “was from a land use perspective on a before-and-after basis” and not from a tourism, aesthetics, or use and enjoyment perspective. *Id.* Thus, it is misleading for CFP to suggest Mr. Varney’s analysis is deficient for not considering uses at resources such as Big and Little Dummer Pond.
- CFP also suggests that Mr. Varney “did not study impacts of construction generally or impacts from traffic delays specifically.” *Counsel for the Public’s Post-Hearing Brief*, p. 16. However, Mr. Varney provided extensive testimony discussing impacts related to construction including impacts to businesses, traffic delays and ways to mitigate or avoid of such impacts. *See for example Tr. Day 40/Morning Session*, pp. 20-30.
- On page 17 of the brief, CFP states that “[e]ven though it was one of the three areas Mr. Varney considered, he performed no study or analysis or evaluation of the Project’s construction impacts to any community services or infrastructure.” *Counsel for the Public’s Post-Hearing Brief*, p. 17. Again, CFP selectively omits important testimony on this issue. As an example, Mr. Varney testified extensively with respect to the need “for coordination with towns on issues like water and sewer, and storm water culverts, or, in the more urban areas, there may be considerations associated with existing gas lines. There are roadways. There are access needs that homeowners and businesses have. And a whole host of issues that local communities are interested in, which oftentimes are addressed through MOUs with those communities.” *Tr. Day 40/Morning Session*, p. 32.

---

<sup>33</sup>With reference to the warrant article passed in the Town of Sugar Hill in response to a prior configuration of the Project, the Applicants asked Ms. Connors “[i]sn’t it true now that the Project has shifted from all overhead to all underground in Sugar Hill” that the listed aesthetics concerns “are no longer at issue?” Ms. Connors responded “[i]t has shifted. We have no issues with the underground, as I’ve stated.” *Tr. Day 69/Afternoon Session*, pp. 51-52. Mr. Thibault, testifying on behalf of the Town of Easton, was asked about a warrant article Easton passed in 2011 when the Project was configured overhead through Easton. Mr. Thibault acknowledged that the Project is now entirely underground through Easton. *See Tr. Day 65/Morning Session*, pp. 117-118. Finally, Mr. Meth, testifying on behalf of Franconia testified that Franconia passed a warrant article in 2012 opposing the then overhead configuration of the Project through Franconia. When asked whether the current underground configuration addresses the aesthetic concerns voiced in the warrant article, Mr. Meth responded that the Town has “different aesthetic concerns...that come along with a buried line...” *Tr. Day 68/Morning Session*, p. 97-98.

Mr. Varney further testified that in the event a town refuses to enter into an MOU with the Applicants, the Applicants “would continue to try to negotiate an MOU with them, and ... will try to work with local businesses and property owners along the route as well.” *Id.* at 35. This kind of coordination ensures that there will be no “adverse impact on current or future ongoing transportation and utility services and facilities along the right-of-way.” *Tr. Day 40/Morning Session*, pp. 31-32.

- On page 17 of the brief, CFP states that Mr. Varney “did not analyze any specific scenic area identified in any of the master plans to determine if the Project would adversely affect that scenic resource.” *Counsel for the Public’s Post-Hearing Brief*, p. 17. CFP also criticizes Mr. Varney’s review because it “did not evaluate or consider the aesthetic impact of the Project on land uses or environmental impacts on those land uses.” *Id.* As CFP is aware, the Project’s aesthetic and environmental impacts have been the subject of extensive discussion throughout this proceeding.
- On page 17 of the brief, CFP states that Mr. Varney “did not evaluate or consider the impact from construction on businesses along the route or in downtown Bethlehem, Franconia, Woodstock or Plymouth.” *Counsel for the Public’s Post-Hearing Brief*, Docket No. 2015-06, p. 17. However, Mr. Varney provided substantial detailed testimony in which he demonstrated his intimate familiarity with how construction could temporarily impact businesses. Mr. Varney also testified with respect to the Project’s outreach with businesses and ways the Project can work to avoid or mitigate temporary impacts during construction. *See Tr. Day 40/Morning Session*, pp. 104-107; *see also id.* at 148; *see also id.* at 153-158.
- On page 18 CFP states that Mr. Varney “did not consider impacts to second homeowners and vacation properties. He only looked at abutting land uses and not the areas and regions that were still impacted but not abutting the Project.” *Counsel for the Public’s Post-Hearing Brief*, p. 18. Again, CFP’s reference to second homes and vacation homes represents a stark departure from SEC precedent with respect to land use. In any case, Dr. Chalmers provided extensive testimony and analysis with respect to the Project’s impact on property values.

In concluding its discussion of land use, and with reference to what CFP sees as “deficiencies” with respect to Mr. Varney’s review of land use, CFP concludes that “Mr. Varney’s overall conclusion that the Project will not unduly interfere with orderly development of the region is so narrowly tailored as to be of limited value in informing the Subcommittee’s decision.” *Counsel for the Public’s Post-Hearing Brief*, p. 17. As noted above, CFP formulates

this position based on an unprecedented view of land use. Notably, it fails to consider Mr. Varney's actual conclusions with respect to land use. CFP also fails to consider prior SEC decisions with respect to land use and orderly development. Nevertheless, even if one were to adopt CFP's distorted view of land use, as discussed above, there is substantial credible evidence in the record to support Mr. Varney's overall conclusion that the Project will not unduly interfere with the orderly development of the region.

SPNHF's position with respect to land use and the orderly development of the region, as articulated throughout its Post-Hearing Memorandum, also exemplifies the distorted view of the rules shared by a number of parties in this proceeding. SPNHF formulates legal arguments based on its overbroad interpretation of the rules, without benefit of SEC precedent. By way of example, Site 102.07 defines "Affected Communities" as follows:

The proposed energy facility host municipalities and unincorporated places, municipalities and unincorporated places abutting the host municipalities and unincorporated places, and other municipalities and unincorporated places that are expected to be affected by the proposed facility, as indicated in studies included with the application submitted with respect to the proposed facility.

SPNHF argues that unincorporated places located beyond the 10-mile area of potential visual impact fall within this definition. While SPNHF offers no authority to substantiate its assertion, it nevertheless concludes that Mr. Varney's failure to consider these places for purposes of his land use assessment is "in violation of the rule." *Post-Hearing Memorandum of the Society for the Protection of New Hampshire Forest*, Docket No. 2015-06, p. 70.

SPNHF, like CFP, also argues that the rules require Mr. Varney to consider visual effects as part of his land use assessment. *Id.* at 68. SPNHF makes the bald assertion that "[o]ne simply cannot comply with Site 301.09(a) without analyzing the visual impacts to land use in all

affected communities.” *Id.* at 69. Again, SPNHF reached this conclusion based on its novel reading of the rules.

In addition, at page 66 of its Post-Hearing Memorandum, SPNHF argues that “Mr. Varney’s opinion with respect to siting transmission lines in transmission corridors is not supported by New Hampshire law.” *Id.* at 66. SPNHF then attempts to construct a legal argument that the siting of a transmission line within an already existing transmission corridor somehow results in a change in the use of the right-of-way, citing to municipal zoning law for authority. *Id.* at 66. Specifically, it relies on a number of New Hampshire Supreme Court cases in which the Court found generically that a challenged use was different from a prior use. *Id.* at 66-67. Not a single case, however, is relevant to this proceeding with respect to the siting of transmission lines and land use. Indeed, SPNHF does not, and cannot, offer any authority to challenge Mr. Varney’s conclusion – a conclusion that, as discussed above, is entirely consistent with SEC precedent.<sup>34</sup>

This illustrates the extreme approach SPNHF and other parties have taken, relying on overly-expansive interpretations of rules that do not lend themselves to such interpretations and that would render compliance with the rules a moving target. SPNHF’s various arguments with respect to the Applicants’ burden to demonstrate that the Project is consistent with prevailing

---

<sup>34</sup> The Joint Munis also contend that “the use of an existing right-of-way for sections of the Project does not automatically mean that there will be no interference or other impacts to the region.” *Post-Hearing Memorandum Filed By Municipal Groups 1 South, 2, 3 South and 3 North*, Docket No. 2015-06, p 28. To support this statement, the Joint Munis attempt to distinguish the present case from prior SEC cases where the SEC has rendered decisions consistent with Mr. Varney’s conclusion with respect to the Project’s impact on land use. However, the Joint Munis offer no evidence demonstrating that the Project is inconsistent with prevailing land uses. For example, at page 32 the Joint Munis state that “[t]here is evidence to sufficiently contradict Mr. Varney’s opinion that the development along the PNSH corridor near Loudon Road has not been impacted.” *Id.* at 32. However, the so-called evidence the Joint Munis rely on is the opinion of Heather Shank who conceded that there has been recent development in this area but opined that “the nature of that recent development has been impacted by the existing transmission line because it was not an ideal site.” *Id.* As Ms. Shank’s testimony shows, consistent with Mr. Varney’s analysis, development adjacent to the transmission corridor has continued despite the corridor’s existence.

land uses is telling. While SPNHF complains about what the rules require for purposes of assessing the Project's impact on land use, it offers no evidence that the Project is in fact inconsistent with prevailing land uses. Rather, SPNHF simply argues that "'affected communities,' is a broadly-defined term" extending far enough to encompass the Project's aesthetic impact on towns and unincorporated places beyond the 10-mile APVI required for assessing visual impact. *Id.* at 68; *see also id.* at 60.

None of the intervenor witnesses provide substantial credible evidence that the Project is inconsistent with prevailing land uses. Rather, the preponderance of the evidence substantiates Mr. Varney's opinion that the Project is consistent with prevailing land uses along the Project route.

**b. The Project Will Not Adversely Affect Existing Land Uses.**

Certain witnesses for municipalities and other intervenors assert that the Project will interfere with economic development and other uses along the ROW, even though it will be located along pre-existing transmission corridors. The City of Concord, for example, takes the position that the Project will be detrimental to future economic growth and development in Concord, even causing blight (*Pre-Filed Testimony of Heather Shank*, JT MUNI Ex. 133, pp. 7-8), will be "out of character" with the existing land uses along the existing corridor (*Pre-Filed Testimony of Gail Matson and Candace Bouchard*, JT MUNI Ex. 128, p. 7), or will create adverse scenic impacts. *Pre-Filed Testimony of Beth Fenstermacher*, JT MUNI Ex. 137, p. 9; *see Supplemental Pre-Filed Testimony of Beth Fenstermacher*, JT MUNI Ex. 138, p. 7-8. Testimony from Whitefield's Board of Selectmen and Planning Board also included claims that the Project would be a "turn off for development." *Pre-Filed Testimony of Wendy Hersom and Frank Lombardi*, JT MUNI Ex. 95, p. 11. Two witnesses for the Town of Pembroke state broadly that part of their orderly development concern relates to "impacts to the residential and commercial

properties that are adjacent to the proposed project.” *Pre-Filed Testimony of Stephanie N. Verdile*, JT MUNI Ex. 146, p. 2; *Pre-Filed Testimony of Justine M. Courtmanche*, JT MUNI Ex. 143, p. 1.

To respond to these claims, Mr. Varney examined other high voltage transmission corridors in New Hampshire, focusing on communities in which an overhead transmission line was constructed within an existing ROW and visible to the public. *Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 96, Attachment A. He examined (1) the Hydro-Québec Phase II (HQ Phase II) project completed in 1990, and (2) the existing PSNH corridor in which the Merrimack Valley Reliability Project (“MVRP”) received approval from the SEC to add a 345 kV line to the existing transmission ROW. *Id.* at Attachment A, pp. 5-9. In addition, Mr. Varney considered representative towns, including Bedford, Londonderry and the City of Concord, which have high voltage transmission lines visible to the public in certain locations and are along or near areas zoned for a wide range of uses. *Id.* at Attachment A, pp. 12-33. Furthermore, the City of Concord’s so-called Gateway Performance District (“GPD”) was examined to determine if the existing transmission lines have prevented development along the corridor in that area.<sup>35</sup> *Id.* at Attachment A, p. 33-34. After reviewing land use development, demographics, master plans, conservation and recreation areas, and other uses along and near these transmission corridors, Mr. Varney found no evidence to suggest that the presence of a new high voltage transmission line in an existing corridor would negatively impact a community’s economic development or growth. *See id.* In fact, these communities have continued to grow in

---

<sup>35</sup> The report detailing the findings, *Review of Land Use Development Along Transmission Corridors in Bedford, Londonderry, and Concord, NH* (“*Review of Land Use Development*”), is attached to Mr. Varney’s Supplemental Testimony submitted as App. Ex. 96.

population, tax base and income level since the construction of the transmission lines within existing corridors. *Id.* at 5.

Witnesses for the City of Concord focused largely on concerns about possible impacts on the GPD, an area “established to provide for well designed, large scale developments that ‘are expected to adhere to high standards for appearance in order to ensure that the gateways to the City are attractive and functional.’” *Pre-Filed Testimony of Gail Matson and Candace Bouchard*, JT MUNI Ex. 129, p. 7. The largest commercial property within the district is the Steeplegate Mall. According to Concord’s acting city planner, adding tall structures and a transmission line within a few hundred feet of the Mall’s main entrance “may exacerbate the Mall’s challenge to attract new tenants.” JT MUNI Ex. 139, Bates JT MUNI 006257 (City of Concord withdrawing the testimony of Carlos P. Baia, but adopting certain portions of Mr. Baia’s testimony into the pre-filed testimony of Heather Shank).

Although Ms. Shank presented nothing to quantify her concern, Mr. Varney re-examined his evaluation of the commercial and multi-family residential area near Loudon Road, where the Applicants propose to relocate existing structures and add a 345kV line within the existing PSNH corridor. *Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 96, Attachment A, p. 36. As detailed in his *Review of Land Use* report, there is clear evidence of growth and development near the existing ROW in this area, including commercial businesses and multifamily residential development, including one development that is currently under construction. *Id.* The actual experience with the existing transmission corridor directly undercuts the City’s position.

Several intervenors asserted that the Project will negatively affect conservation efforts and recreation uses. *E.g.*, *Supplemental Pre-Filed Testimony of Beth Fenstermacher*, JT MUNI

Ex. 138, pp. 6-10 (claiming the Project could cause a reduction in the number of cyclists and could be visible from preserved land); *Pre-Filed Testimony of Wendy Hersom and Frank Lombardi*, JT MUNI Ex. 95, pp. 10-11 (claiming the Project would adversely impact recreation and tourism development in Whitefield). The Normandeau report, however, identified numerous conservation and recreation uses along and near the three transmission corridors it evaluated. *Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 96, Attachment A, p. 20 (describing recently upgraded commercial recreational facility in Bedford that runs parallel to the existing HQ Phase II corridor); *see also id.* at 33-35 (discussing thriving recreation areas in Concord intersected by existing transmission corridor). As evident from Mr. Varney's report and testimony, communities along these corridors continue to increase the number of acres of conservation and recreation land near these corridors and have identified additional priority areas nearby for future conservation and recreation. *Id.* at 20, 33-35. The intervenors failed to back their conclusory assertions of adverse effects with objective evidence. Normandeau's report confirms their concerns lack merit.

**c. Northern Pass is Consistent With Master Plans and Zoning Ordinances.**

Many municipal intervenors assert that the Project will interfere with their town's master plan and zoning and subdivision regulations. A common assertion is that Northern Pass will interfere with the "rural character" of the town. *E.g., Pre-Filed Testimony of Stephanie N. Verdile*, JT MUNI Ex. 146, p. 2; *Supplemental Pre-Filed Testimony of Stephanie N. Verdile*, JT MUNI Ex. 147, pp. 6, 16; *Pre-Filed Testimony of Heather Shank*, JT MUNI Ex. 133, pp. 5-6; *Pre-Filed Testimony of Gail Matson and Candace Bouchard*, JT MUNI Ex. 128, p. 11.

Mr. Varney and Normandeau, however, fully refutes these claims. They reviewed over 70 local master plans and details the analysis in the Review of Land Use Development.

*Application*, App. Ex. 1, Appendix 41, p. 12; *see also* App. Ex. 121. Normandeau also reviewed and summarized the master plans of the communities abutting Project host communities.<sup>36</sup> *See Review of Master Plans in Abutting Municipalities and Unincorporated Places, Northern Pass Transmission Project, January 2017 Working Draft*, App. Ex. 123. Additionally, Normandeau reviewed the master plans of several communities with existing high voltage transmission lines to understand how they addressed those lines. *Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 96, Attachment A. Normandeau's review revealed that none of the local master plans discusses existing transmission lines or corridors as being inconsistent with local zoning or as presenting any particular challenges or barriers to the achievement of goals, objectives and recommendations in their master plans. In the towns with existing high voltage transmission lines, none of the master plans identified them as a problem or a barrier to future development, or indicated that they interfered with the town's rural character or any other planning consideration. *See Application*, App. Ex. 1, Appendix 41, Attachment A. To the contrary, many – including the Bedford, Londonderry, and Concord master plans - highlighted utility corridors as important to open space planning and identified these corridors as potential areas for increasing conservation and recreational opportunities. *Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 96, p. 6, and Attachment A, pp. 35-36.

Moreover, in all but four towns and two unincorporated places in the northern segment of the route, the Northern Pass line will be added to an existing transmission corridor, and in most

---

<sup>36</sup> In the Post-Hearing Memorandums filed by SPNHF and by Municipal Groups 1 South, 2, 3 South and 3 North, the Joint Municipal Group argues that the Applicants did not provide information regarding any of the other communities that are abutting and/or expected to be affected by the proposed Northern Pass high voltage transmission line. *See Post-Hearing Memorandum of the Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, p. 62; *see also Post-Hearing Memorandum filed by Municipal Groups 1 South., 2, 3 South and 3 North*, Docket No. 2015-06, p. 26. To the contrary, as explained above, Normandeau did review and summarize the master plans of the communities abutting Project host communities. *See Review of Master Plans in Abutting Municipalities and Unincorporated Places, Northern Pass Transmission Project, January 2017 Working Draft*, App. Ex. 123.

of the municipalities the corridor already includes two or more existing lines.<sup>37</sup> Some towns assert that adding a new line to an existing corridor is not consistent with the town master plan because of scenic impacts.<sup>38</sup> *E.g. Pre-Filed Testimony of Beth Fenstermacher*, JT MUNI Ex. 137, p. 9; *Supplemental Pre-Filed Testimony of Beth Fenstermacher*, JT MUNI Ex. 138, p. 7-8; *Supplemental Pre-Filed Testimony of Stephanie N. Verdile*, JT MUNI Ex. 147, p. 13-16. These assertions lack credibility, and, in any event, miss the mark. Such claims may have a place in the Subcommittee’s review of aesthetic impacts, and the towns have made such claims in that context. Placing a new line in an existing corridor, has long been recognized by the SEC, is a sound planning decision. *See e.g., Order No. 21,268*, Docket No. DSF 93-128; *Order 20,739*, Docket No. DSF 91-130.

#### **d. Conclusion.**

The comprehensive information required for the Application and submitted by the Applicants regarding land use in the affected communities demonstrates in the form of

---

<sup>37</sup>For the north section of the route where the line will be in a new ROW, three of the four towns (Pittsburg, Clarksville, and Stewartstown) have no zoning and two of those three have no master plan. *Application*, App. Ex. 1, Appendix 41, pp. 29-30.

<sup>38</sup>Both SPNHF and the Joint Munis argue that the SEC’s determination in the Portland Natural Gas Transmission System (“PNGTS”) docket with respect to orderly development supports their positions. *See Post-Hearing Memorandum Filed By Municipal Groups 1 South, 2, 3 South and 3 North*, Docket 2015-06, p. 36; *see also Post-Hearing Memorandum of the Society for the Protection of New Hampshire Forests*, Docket 2015-06, pp. 41-43. In that proceeding, the Committee found that “the location of the pipeline on the north side of the river conflicts with the master plan and the zoning ordinance of the Town of Shelburne which have attempted to preserve the rural charm of the area.” *Amended Application of Portland Natural Gas Transmission System*, Docket 1996-01, (July 16, 1997) p. 17. As Mr. Varney testified, however, the facts in that case are entirely different from the facts here. In the PNGTS docket the applicant had proposed to bury a pipeline in a new right-of-way through a forest in an undisturbed part of the Town on the north side of the river. *See Tr. Day 40/Morning Session*, p. 161. During the hearings, the Town proposed a specific design change that would have moved this particular segment of the pipeline to an already disturbed area on the south side of the river and locate it in an existing right-of-way. *Id.* This specific alternative was found to be feasible and had been carefully studied and analyzed as part of that SEC proceeding. *Id.* at 162. As Mr. Varney testified, in PNGTS “one of the key factors as that the project could have been located within an existing disturbed area, and the applicants were proposing to not use that existing disturbed area...” *Id.* Therefore, the SEC’s decision in PNGTS, that siting within existing right-of-ways does not interfere with the orderly development of the region, is entirely consistent with Mr. Varney’s conclusions with respect to land use and orderly development.

substantial credible evidence that the Project is fully consistent with prevailing land uses. Mr. Varney further noted that any temporary impacts to land use during construction of the Project will not be substantial or permanent. *Tr. Day 35/Afternoon Session*, pp. 9-13. He added that it is important to manage the construction work carefully and work with property owners and business owners along the route to minimize those temporary impacts (*Id.* at 10-11) -- and that they will be “carefully managed.” *Id.* at 12.<sup>39</sup> Because the preponderance of the evidence shows that the Project will have minimal impact on land use, it will not unduly interfere with the orderly development of the region.

## 2. Employment

The Applicants satisfy by substantial credible evidence the second criteria the SEC considers in evaluating whether the Project will unduly interfere with the orderly development of the region, which concerns the extent to which the siting, construction and operation of the proposed facility will affect employment. As set forth below, the Applicants have shown by a preponderance of the evidence that the Project will have a significant positive impact on employment. The Applicants retained London Economics International LLC (“LEI”), and specifically Ms. Julia Frayer, to provide an expert analysis of the employment benefits of the Project. *Pre-Filed Testimony of Julia Frayer*, App. Ex. 28.

Local economic benefits during the construction period accrue as a result of increased employment required to construct the Project. At the peak of construction, NPT is expected to create a total of 2,676 direct, indirect, and induced jobs in New Hampshire. *Pre-Filed Testimony of Julia Frayer*, App. Ex. 28, p. 33. The construction of the Project would create an estimated 1,369 total jobs on average per year in New Hampshire and 1,548 total jobs on average per year

---

<sup>39</sup>For additional discussion of these temporary construction impacts, see Section (d) iii and iv under Tourism below.

across other states in the New England region. *Pre-Filed Testimony of Julia Frayer*, App. Ex. 28, p. 41. In addition to, and as a result of, the increased employment, Northern Pass will spur economic growth and raise New England states' regional Gross Domestic Product ("GDP") by approximately \$263 million on average per year and about 42% of that economic growth (or \$111 million per annum) is located in New Hampshire. *Pre-Filed Testimony of Julia Frayer*, App. Ex. 28, p. 11. As a result, "these new construction workers, as well as associated spending on materials, will create an increase in the demand for other goods and services and therefore the direct spending by the Project will ripple through the whole economy, stimulating more activity." *Id.*

During the operating phase, as a result of reduced retail costs of electricity, the need to hire local labor for operations and maintenance of the Project, and Northern Pass's contribution of roughly \$200 million of economic development through the Forward NH Fund, as well as the \$7.5 million North Country Job Creation Fund, New Hampshire will see an estimated increase in State GDP by \$162 million per year during the first 11 years of the Project's operations. *Id.* at 11-12; *see also Application*, App. Ex. 1, Appendix 43, p. 78. In addition, the State will see an increase of over 1,100 total jobs on average per annum over this period. *Pre-Filed Testimony of Julia Frayer*, App. Ex. 28, p. 12; *see also Application*, App. Ex. 1, Appendix 43, p. 50.

CFP retained Kavet, Rockler & Associates, LLC ("KRA") to evaluate impacts on employment in New Hampshire as part of its broader economic impact analysis of the Project, discussed in detail below. In performing its economic analysis, KRA relied on detailed project expenditure data, including project development and construction costs, estimated property tax payment ranges, and expenditures associated with the offered Forward NH Fund, provided by the Applicants. *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B,

p. 1. KRA acknowledged in its report, Economic Impact Analysis and Review of the Proposed Northern Pass Transmission Project, that the values supplied by the Applicants “are consistent with values used by the Applicants’ consultants in preparing their analyses.” *Id.*

Overall, KRA concluded that LEI’s economic impact was well performed, but it asserted that some modelling errors led to overstating employment impacts during construction by approximately 20 percent. *Pre-Filed Testimony of Dr. Nicolas O. Rockler*, CFP Ex. 147, p. 3. However, KRA’s economic modelling suffered from a number of errors, which led it to understate the employment benefits of the project. Correcting for these model input errors served to measurably increase the estimated employment benefits.<sup>40</sup> Nevertheless, KRA concluded that “[t]he Project will undoubtedly generate significant employment and positive net economic impacts during the three-year construction and development phase.” *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 3. Consequently, there is no dispute that Northern Pass will generate significant employment in the State of New Hampshire.

### 3. Economy

The Applicants satisfy by substantial credible evidence the third of the three criteria the SEC considers in evaluating whether the Project will unduly interfere with the orderly development of the region, which concerns the extent to which the siting, construction and operation of the proposed facility will affect the economy. Below, the Applicants address the six elements that comprise the analysis of the effect of the Project on the economy of the region and demonstrate by a preponderance of the evidence that even under the most conservative assumptions the Project will have a significant positive impact on the economy. Because the

---

<sup>40</sup> This is discussed in more detail in the “Economic Effects on Communities and In-State Economic Activity” section below.

economic effects of the Project on the first two elements, affected communities and in-state economic activity, are so closely intertwined, they are combined for discussion purposes.

It is beyond question that Northern Pass will generate significant economic benefits for the State of New Hampshire and New England.<sup>41</sup> The sub-issues in dispute relate only to the magnitude of the economic benefits to New Hampshire and the region. Testimony and evidence submitted by experts for CFP tend to agree with the Applicants' approach but they quibble over the level of certainty regarding LEI's conclusions or the reliability of the modelling results.<sup>42</sup> For purposes of the Subcommittee's finding that the Project will not unduly interfere with the orderly development of the region, however, the critical point is the underlying agreement among the experts for the Applicants and CFP that significant benefits will accrue from the Project. Consequently, exploring the differing analyses relative to the capacity market may be intellectually stimulating but ultimately the analyses do not need to be finely reconciled because such a reconciliation is not outcome determinative for the Subcommittee's finding.

The testimony and evidence submitted by other parties in this proceeding contain methodological deficiencies or flaws in reasoning and/or application that make the resulting analyses unreliable and/or unsupportable. No party has offered evidence that refutes the significant economic impacts estimated to result from the Project on employment or the economy. Similarly, the analyses of Mr. Varney on land use, Dr. Shapiro on taxes, Dr. Chalmers

---

<sup>41</sup> See, e.g., *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 3 (noting “[t]he Project will undoubtedly generate significant employment and positive net economic impacts during the three year construction and development phase, however, long-term net benefits are uncertain.”).

<sup>42</sup> See, e.g., *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 2 (stating “[i]n general, the Applicants' economic impact analysis by LEI was well performed.”; see also *Pre-Filed Testimony of Samuel Newell and Jurgen Weiss*, CFP Ex. 142, p. 3 (noting “[w]e agree with LEI's overall premise but find that they did not address several important uncertainties that could reduce NPT's impacts – especially in the capacity market”).

on property values, and Mr. Nichols on tourism, show, by a preponderance of the evidence, that the Project will not unduly interfere with the orderly development of the region.

CFP also relied on the expert opinions of KRA to assess the local and regional economic impacts associated with the Project. KRA's assessment includes "(1) a general economic impact analysis of the construction, development and operation of the Project, including integration of energy market impacts; (2) potential property valuation effects; and (3) potential tourist industry impacts." *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, p. 2.

As discussed in greater detail in the respective sections below, KRA's economic impact assessment and accompanying testimony suffer from significant flaws in methodology, reasoning, and implementation that call their modelling into question and undermine their positions. On two separate occasions, KRA acknowledged mistakes that had significant impacts on the modelling of Project benefits.<sup>43</sup> On both occasions, KRA went back to revise its modelling to account for its errors and, in each case, correcting for these errors increased the estimated benefits.

In addition to the errors in its analysis, KRA's testimony here is directly contrary in two significant regards to positions it has taken elsewhere. First, KRA testified on three separate occasions on behalf of various wind farms in Vermont that without empirical studies it is virtually impossible to assign a meaningful adjustment for measuring tourism expenditures, yet in direct contradiction to their repeated testimony in Vermont, KRA does here what they said was impossible to do in Vermont. When pressed about this irreconcilable conflict, KRA took the

---

<sup>43</sup>See *Tr. Day 44/Morning Session*, pp. 136-138; see also *London Economics Rebuttal Report*, App. Ex. 102, pp. 48-49; see also *Tr. Day 45/Morning Session*, pp. 65-67 (Attorney Needleman asked "it appears that you have put in numbers that do not represent, even as you understand the material Expenditures, to be the right number, correct?" Dr. Rockler responded, "[b]ased on this line, I would agree with you."); see also *Counsel for the Public's Memorandum Regarding Correction Provided in Connection with KRA Testimony of 10/11/17*, Docket No. 2015-06 (November 17, 2017), CFP Ex. 148A.

surprising course of changing its prior testimony in those three Vermont cases to match the different opinion they are now offering in this docket. *Tr. Day 45/Morning Session*, pp. 116-122.

Second, KRA testified on behalf of Transmission Developers Inc. (“TDI”) in support of the New England Clean Energy Link (“NECPL”) that impacts due to underground construction in terms of traffic delays and impacts on local businesses were not even large enough to be included in its analysis. *See App. Ex. 301*, p. 17. Again, contrary to that prior opinion, KRA takes the opposite view here, now claiming that in this case such impacts will involve significant disruptions, despite similarities in project design and construction method. *See CFP. Ex. 146*, p. 70; *see also Tr. Day 45/Morning Session*, p. 109. The credibility of any witness, and the attendant vitality of their opinions, must be in serious doubt when they (1) offer such starkly different opinions from case to case and then (2) change those opinions to suit the circumstances of the moment.

**a. Economic Effects on Communities and In-State Economic Activity.**

The benefits to the economy of the region from Northern Pass are extensive as shown by Ms. Frayer’s analysis of the economic impacts of the Project, including environmental impacts. *See Pre-Filed Testimony of Julia Frayer*, App. Ex. 28; *see also Updated LEI Report*, App. Ex. 81. In addition to the employment benefits discussed above, Ms. Frayer focused on other categories of economic benefits associated with the Project: (i) wholesale and retail electricity market benefits, (ii) local economic impacts from construction and operations as measured by GDP, (iii) environmental impacts in the form of emissions reductions, and (iv) the insurance value of the Project in the face of system stress events. The issues are summarized briefly below and items (i) and (ii) are then addressed at greater length. As noted at the beginning of this finding, it should be remembered that the disputes focus on the level of the benefits. The

Applicants are confident in Ms. Frayer's analysis but, even if the Project did not provide the level of electricity market benefits she estimates, the Project would still not unduly interfere with the orderly development of the region.

*Wholesale and Retail Electricity Market Benefits*

Ms. Frayer found that wholesale electricity market benefits, which include energy market and capacity market savings, average \$602 million per year for New England, which translates to approximately \$62 million on average per year in wholesale electricity market benefits for New Hampshire. *See Updated Pre-Filed Testimony of Julia Frayer (March 17, 2017)*, App. Ex. 82, pp. 4-5.<sup>44</sup> In addition to annual energy market benefits of \$8.6 million for New Hampshire, LEI estimated the Project will create substantial capacity market benefits amounting to \$58.3 million nominally on average annually over the first 10 years of operation of the Project.<sup>45</sup>

LEI also measured the change in the total marginal costs of production, or production cost savings, for the entire ISO-NE system. As a result of NPT's operation and the projected energy flows, the average production cost savings are forecast to be \$389 million per year. *See Updated LEI Report*, App. Ex. 81, pp. 7, 24. Production costs decline as a result of NPT because the energy flows displace other, more expensive generation resources. Production cost savings are a function of energy flow volume on the NPT line, which remains constant over the modeling timeframe, and the marginal cost of the resources that are displaced increases moderately given rising fuel and carbon allowance prices. LEI's modeling shows total production costs savings of approximately \$2.9 billion in net present value terms in 2020 dollars. *See Updated LEI Report*,

---

<sup>44</sup>At the request of the Subcommittee, LEI recalculated Figures 1 and 10 from LEI's Updated Analysis of March 2017 in real dollars. This information was submitted as App. Ex. 180. In real dollars, wholesale market benefits amount to approximately \$42 million.

<sup>45</sup>*See Updated Pre-Filed Testimony of Julia Frayer (March 17, 2017)*, App. Ex. 82, p. 6.

App. Ex. 81, pp. 24-25. No other party modelled or otherwise analyzed the benefit that production cost savings will provide to the region and, consequently, New Hampshire.<sup>46</sup>

#### *Local Economic Impacts*

Local economic benefits during the operation of the Project occur as a result of reduced retail costs of electricity. Households will be able to save more or spend their highest disposable income on other goods or services, stimulating the economy. Similarly, firms and businesses that benefit from lower costs of electricity will be able to expand production, further benefiting the local economy. Northern Pass will also contribute, in total, a \$205.3 million economic development fund to the New Hampshire economy, which will be paid out in the first 20 years of the Project. Altogether, New Hampshire would see an estimated increase in State Gross Domestic Product (GDP) by \$162 million per year during the first 11 years of the Project. *See Pre-Filed Testimony of Julia Frayer*, App. Ex. 28, pp. 11-12; *see also Application*, App. Ex. 1, Appendix 43, p. 78.

#### *Environmental Impacts*

Finally, the energy flows over the Project will displace the production of older, less efficient generation, including fossil fuel-fired plants; therefore, the emissions of SO<sub>2</sub>, NO<sub>x</sub>, and CO<sub>2</sub> pollutants will decrease in New England, leading to over 3.2 million metric tons of avoided CO<sub>2</sub> emissions per year in New England. NO<sub>x</sub> emissions will decline by approximately 565 to 650 short tons per year over the study timeframe and SO<sub>2</sub> emissions will decrease by approximately 107 to 198 short tons per year. *See Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 141, p. 1. LEI estimated the incremental value to society of the avoided

---

<sup>46</sup>The Brattle Group testified to the relevance of production cost savings in the context of a state siting proceeding but explained that production cost savings are a "very meaningful economic indicator." *Tr. Day 53/Morning Session*, p. 42.

CO<sub>2</sub> emissions, using the social cost of carbon (“SCC”) forecast from the Interagency Working Group (“IWG”). *See Updated LEI Report*, App. Ex. 81, p. 25; *see also Tr. Day 13/Morning Session*, pp. 135-37. Ms. Frayer testified “the social cost of carbon is measuring society’s, or at least a particular maybe stakeholder portion, but society’s view on what the social value is to reducing carbon.” *Tr. Day 13/Morning Session*, p. 136. Under this approach, the Project will create approximately \$189 million in annual, incremental social benefits from CO<sub>2</sub> reductions for New England. *See Updated LEI Report*, App. Ex. 81, p. 25. This is equivalent to removing approximately 675,000 passenger vehicles from the road per year. *See id.* at p. 25, n.33.

The Brattle Group (“Brattle”), on behalf of CFP, analyzed the value of greenhouse gas (“GHG”) emission reductions from Northern Pass. *Pre-Filed Testimony of Samuel Newell and Jurgen Weiss*, CFP. Ex. 142, p. 1. It adopted LEI’s calculation of greenhouse gas emission reductions stating “[w]e generally accept as reasonable LEI’s estimate that NPT would reduce GHG emissions by approximately 3.3 million metric tons per year.”<sup>47</sup> *Brattle Revised Report Exhibit C (dated February 10, 2017)*, CFP Ex. 143, p. 12; *see also Tr. Day 52/Afternoon Session*, pp. 63-65.

Brattle also evaluated LEI’s methodology for valuing GHG emissions reductions. As explained in Brattle’s February 10, 2017 revised report (CFP. Ex. 143), “[t]he valuation of GHG benefits is a complex topic and we acknowledge that any quantification and allocation of assumed benefits to New Hampshire involves many assumptions and allows for the estimated of a large potential range of benefits, depending on those assumptions.” *Brattle Revised Report Exhibit C (dated February 10, 2017)*, CFP Ex. 143, p. 13. Nevertheless, Brattle concludes that “if New Hampshire is committed to long-term reductions in GHG emissions as per its Climate

---

<sup>47</sup> In its Updated Analysis, LEI’s updated analysis concluded that Northern Pass would reduce emissions by 3.2 million metric tons per year.

Action Plan, then any NPT-based GHG reductions claimed by New Hampshire would provide value as an avoided cost of achieving similar reductions through other means.” *Id.* at 13. Under this scenario, Brattle agrees that “LEI’s GHG benefits estimate is likely within the range ... of the potentially avoided cost of alternative GHG emissions reductions.” *Id.*

#### *Insurance Value*

Ms. Frayer also testified that a project such as Northern Pass can provide valuable “insurance” to consumers by mitigating some of the market price impacts of system stress events during summer and winter conditions, as its resource mix is not dependent on natural gas prices (or availability of gas pipeline capacity) and the summer peak for Québec is not correlated with that of New England. *Pre-Filed Testimony of Julia Frayer*, App. Ex. 28, pp. 22-24.

As an indicator of the potential insurance value of Northern Pass, Brattle testified that if New England experienced a weather event like a polar vortex every year, “it would add about \$5 million to the expected value of Northern Pass to New Hampshire.” *Tr. Day 52/Morning Session*, p. 62. This example demonstrates the significant benefit Northern Pass could provide in the future if New England continues to experience extreme weather events, as it has historically.

#### i. Local Economic Impacts

CFP also retained KRA to evaluate the potential economic impacts associated with the Project. KRA used the same REMI PI+ model used by the Applicants and relied on detailed project expenditure data, including project development and construction costs, estimated property tax payment ranges, and expenditures associated with the offered Forward NH Fund, provided by the Applicants. *See Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, p. 1. KRA concluded that “[t]he Project will undoubtedly generate significant employment and positive net economic impacts during the three-year construction and development phase, however, long-term net benefits are uncertain.” *Id.* at 3. As demonstrated below, KRA’s

economic impact assessment suffers from a number of modelling errors and methodological flaws that make KRA's findings fundamentally unreliable, especially with regard to its long-term forecasts of economic impact.

*KRA's long-term economic impact analysis is unreliable because modelling long-term economic impacts is inherently uncertain.*

KRA forecasted long-term economic impacts resulting from the Project out to the year 2060, roughly 30 years beyond the modelling timeframe analyzed by both LEI and Brattle. *See Pre-Filed Testimony of Thomas Kavet*, CFP. Ex. 146, pp. 75-76. Typical modelling horizons for the economic impacts of projects like Northern Pass are in the 10 to 20-year timeframe.<sup>48</sup> The timeframe of such analysis is routinely constrained in order to hedge against the risks of inherent modeling forecast error, a reality that KRA itself recognized in work performed on behalf of other transmission developers.<sup>49</sup>

In this case KRA found that ongoing negative impacts are likely, while in testimony submitted in support of the development of a comparable transmission line in Vermont, without analysis to support its conclusion, KRA assumed that benefits beyond the 10-year operation phase, while "more uncertain," are "likely to continue to be positive and of comparable magnitude, for an indefinite period of time." App. Ex. 301, p. 12. Through the course of cross-examination, KRA could not reconcile the difference in opinions between the two projects.<sup>50</sup>

---

<sup>48</sup> *See* App. Ex. 301, p. 12: In the economic impact assessment KRA performed for the New England Clean Power Link in Vermont, KRA modeled 10 years of the operations period in their study. As Mr. Kavet testified, "[w]e aggregated economic impacts associated with the Project into two relevant time periods: a construction phase between 2016 and 2018, and an initial 10 year operations period between 2019 and 2028. Although not presented in this analysis, economic impacts beyond 2028 are more uncertain, but likely to continue to be positive and of comparable magnitude, for an indefinite period of time."

<sup>49</sup> *Id.*

<sup>50</sup> Mr. Kavet first explained that the differences were due to the fact that there would be "virtually no Vermont facilities that were vulnerable to displacement." And went on to explain that "[t]he main thing,

Moreover, KRA acknowledges that its economic impact assessment is not, in fact, intended to serve as a forecast of likely impacts. In its report, KRA explains in the context of its aggregated economic impacts that “[t]he below illustration is not meant to be a forecast of likely impacts, but shows how the interaction of various elements in the economy that may be affected by the Project could respond over various time horizons.” When asked about this during the hearings, Mr. Kavet confirmed this position. *See Tr. Day 45/Morning Session*, pp. 25-26. Specifically, he explained that KRA’s analysis shows “the projected impact” based on the “assumptions that underlie” each impact category. *Tr. Day 45/Morning Session*, p. 26.

Given the inherent uncertainty in KRA’s long-term analysis in conjunction with KRA’s own admission that its analysis does not offer an opinion or conclusion about expected or likely impacts, KRA has presented no credible evidence to challenge LEI’s estimate of local economic impacts.

*KRA’s analysis suffers from mathematical and modelling errors and incorrect assumptions that result in underestimating projected benefits.*

KRA’s analysis suffers from a number of modelling errors and a relative lack of understanding about various aspects of the modelling that LEI performed. KRA asserts that LEI made “some model specification errors that resulted in LEI overstating employment impacts during construction by approximately 20%.” *See Pre-Filed Testimony of Dr. Nicolas O. Rockler*, CFP. Ex. 147, p. 3. In fact, the disparity is the result of KRA’s own misapplication of REMI model inputs and drawing improper conclusions about the methods of LEI’s analysis.

---

though, is it’s underground and underwater. So the biggest negative effects come from potential tourism, negative tourism impacts.” *Tr. Day 45/Morning Session*, pp. 22-23. However, when asked about his statement about Vermont displacements, Mr. Kavet conceded that his analysis looks at regional displacements, which would impact Vermont the same way they would impact New Hampshire. *Id.* at 23-24.

First, KRA mistakenly mismatched the “Compensation” inputs for the “Professional, Scientific, and Technical Service” sector among the New England states, assigning a zero input for New Hampshire despite the fact that the majority of construction activities will take place in New Hampshire. *See Tr. Day 44/Morning Session*, pp. 136-138; *see also London Economics Rebuttal Report*, App. Ex. 102, pp. 48-49. KRA testified that correcting for this error “served to raise the estimate of the economic impacts associated with construction slightly.” *Tr. Day 44/Morning Session*, p. 138. Numerically, correcting for this error increased KRA’s estimates for annual average jobs during the construction period from 1,050 jobs to 1,120 jobs and annual average Gross State Product from \$85 million per year to \$90 million per year. *Kavet Rockler Supplemental Report*, CFP Ex.148A, p. 76.

Having corrected for this initial data error, KRA testified that its remaining disagreement with LEI’s estimated benefits falls into three categories: “Labor, materials and compensation.” *Tr. Day 45/Morning Session*, p. 40. As discussed in more detail below, the record shows that for each category the difference in estimated benefits is the result of KRA’s misuse of model input data and/or a lack of understanding of LEI’s analysis.

Regarding materials expenditures, KRA criticized LEI for what KRA believed to be a double counting of materials expenditures associated with the construction of the Project. Specifically, KRA believed that “because LEI allowed REMI to utilize its own default material purchases, a significant additional set of expenditures were included in the LEI analysis that are both erroneous and irrelevant to transmission line construction. *Supplemental Pre-Filed Testimony of Thomas E. Kavet & Nicolas O. Rockler*, CFP Ex. 148, p. 14. In fact, KRA did not understand that LEI had revised its materials expenditure data prior to inputting into REMI to account for this exact issue. *See Tr. Day 45/Morning Session*, pp. 57-60; *see also London*

*Economics Rebuttal Report*, App. Ex. 102, pp. 54-55. Moreover, when pressed to explain its own model inputs for materials expenditures, KRA could not recall what data it used, or where it came from. *See Tr. Day 45/Morning Session*, pp. 65-67. Dr. Rockler also agreed that the consequence of inputting low materials expenditure data is that employment and GDP metrics also go down. *See Tr. Day 45/Morning Session*, p. 67.

On November 15, 2017, KRA submitted a memorandum revising its analysis to correct for the REMI input error discussed above.<sup>51</sup> As Dr. Rockler hypothesized during his testimony, correcting for this second REMI input error further increased KRA's estimate of employment and gross state product ("GSP") benefits. Numerically, correcting for this error further increased KRA's estimates for annual average jobs during the construction period from 1,120 jobs to 1,157 jobs and annual average Gross State Product from \$90 million per year to \$94 million per year. Therefore, in both instances where the Applicants uncovered errors in KRA's modelling, correcting for these errors served to increase estimated Project benefits.

Although KRA excuses these errors as immaterial, the Applicants do not share this position.<sup>52</sup> Correcting for these two errors increased KRA's estimate of employment benefits by in excess of 100 jobs and roughly \$10 million dollars in GSP annually.<sup>53</sup> This certainly cannot be discounted as an immaterial benefit. KRA's misuse of data in its modelling of the Project's benefits is disconcerting. But for the Applicants identifying these data entry errors, KRA's

---

<sup>51</sup>On the cover page of the memorandum, KRA Explains "[t]hese corrections are associated with a data entry error for REMI New Hampshire Expenditure inputs for purchases of ready-mix concrete used in the construction of transmission tower bases and associated infrastructure."

<sup>52</sup>*See Counsel for the Public's Memorandum Regarding Correction Provided in Connection with KRA Testimony of 10/11/17*, Docket No. 2015-06, p. 2 (November 17, 2017), CFP Ex. 148A (KRA stating that "the changes are minor, raising our construction period economic impact estimates slightly, and do not materially affect any of our broad findings or change any of our conclusions.")

<sup>53</sup>*See Counsel for the Public's Memorandum Regarding Correction Provided in Connection with KRA Testimony of 10/11/17*, Docket No. 2015-06, p. 6 (November 17, 2017), CFP Ex. 148A (correcting Tables 24 and 25 of its original report.)

analysis would further misrepresent the Project's benefits. KRA's carelessness in performing its modelling exposes systemic shortcomings in overall economic impact assessment for the Project.

KRA's final criticism of LEI's analysis is that the compensation rates LEI included as model inputs were "extraordinarily high." *Supplemental Pre-Filed Testimony of Thomas E. Kavet & Nicolas O. Rockler*, CFP Ex. 148, p. 12. KRA testified "I think there's something unrealistic about professional, legal, other employees, construction workers getting salaries that gets you into \$600 and \$700 an hour, yes." *Tr. Day 45/Morning Session*, p. 41. KRA's admission reveals that it understood LEI's compensation rates to represent employee salaries, an incorrect assumption. More perplexing, KRA continued to stand by this belief despite the fact that in her testimony, Ms. Frayer explained the differences between the compensation rates she used and the REMI categories discussed in KRA's report. Specifically, Ms. Frayer testified that "[t]he REMI categories are essentially looking at maybe what I would say is a typical salary paid to a worker in this particular industry category; whereas, our compensation rates are looking at what Northern Pass, in this instance, would be spending on services provided by workers within a typical industry category." *Tr. Day 13/Morning Session*, p. 81. Ms. Frayer further testified that "the REMI model is flexible" and can use either method. *Id.* Ultimately, at the time KRA submitted its pre-filed testimony and report, it fundamentally misunderstood LEI's use of compensation rates. KRA's criticism of LEI's use of "extraordinarily high" compensation rates is, therefore, simply wrong.

While professionals may have personal preferences in methods for economic modelling, differences in methodology are insignificant provided the resulting outputs are substantially similar. *See London Economics Rebuttal Report*, App. Ex. 102, p. 53 (Ms. Frayer explains that, in his assessment of compensation rates, Mr. Rockler "failed to acknowledge that using a

modified approach resulted in almost the same outputs.”) Indeed, Dr. Rockler testified that REMI is flexible and can accommodate differing approaches to perform the same analysis. *See Tr. Day 45/Morning Session*, p. 155. Due to its lack of understanding of LEI’s modelling on this subject, KRA has not, and cannot, substantiate its assertion that LEI’s compensation rates are high. Indeed, the evidence submitted by the Applicants and the testimony provided by Ms. Frayer clearly demonstrate that the compensation rates employed by LEI are consistent with LEI’s use of the REMI model.

*KRA’s modelling of electricity market impacts rests on flawed assumptions.*

KRA’s analysis of electricity market impacts is not based on objective considerations. Rather, it was included in the aggregate analysis of economic impacts despite the fact that, by its own admission, adopting Brattle Scenario 2 is arbitrary and unsupported by the evidence and testimony in this proceeding.<sup>54</sup> KRA’s analysis of electricity market effects accounts for a large percentage of the negative employment and GDP impacts in its aggregate analysis, yet KRA fails to provide any foundation for the reasonableness of its inputs. *See Tr. Day 45/Morning Session*, pp. 8-9. By KRA’s own analysis, and that of the Brattle Group for that matter, it is just as likely that Brattle Scenario 1 will materialize, which will result in substantially higher benefits by comparison.

KRA’s electricity market analysis also suffers due to its lack of understanding of electricity markets in general. Specifically, in its modelling of the economic impacts of electric generating plant retirements, KRA assumed that such impacts “persist[] indefinitely.” *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 75. This assumption is

---

<sup>54</sup> *See Pre-Filed Testimony of Thomas Kavet*, CFP. Ex. 146, Exhibit B, p. 50: “Without presuming any probability of occurrence, we assume the higher ... of the two midpoint scenarios provided by Brattle ... as a reasonable intermediate impact estimate for purposes of aggregate impact model presentation.”.

unrealistic because it assumes, in part, that plants displaced by NPT would have, but for NPT, remained in operation through the year 2060.<sup>55</sup> *See Tr. Day 45/Morning Session*, pp. 15-16. Given that most of the plants currently at risk of retirement are between 40 and 60 years old, adopting KRA's analysis would require one to assume these plants would continue operating when they are nearly 100 years old. This is a startling assumption given KRA's acknowledgement that the same plants are currently designated as "at risk" of retirement. *See Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 49. This fundamental misconception demonstrates KRA's lack of expertise working with electricity markets and its inability to properly model electricity market impacts. This, in addition to the inherent uncertainty involved in long-term economic modeling, makes KRA's analysis of electricity market impacts unrealistic, uncertain, and ultimately unsupportable.

ii. Wholesale Electricity Market Benefits

CFP retained Brattle to "assess the potential impact [of Northern Pass] on the New England wholesale energy and capacity markets, and resulting savings for New Hampshire electric customers." *Pre-Filed Testimony of Samuel Newell and Jurgen Weiss*, CFP. Ex. 142, p.

1. With regard to energy market benefits, Brattle "[a]dopt[ed] LEI's analysis ... since [they] found their methodology and results to be reasonable." *Brattle Supplemental Report Exhibit A*,

---

<sup>55</sup>Dr. Kavet agreed that it would be reasonable to conclude that the "at risk" plants identified in their report are the plants that their analysis assumes would retire in response to NPT. *Tr. Day 45/Morning Session*, pp. 15. Dr. Kavet further testified that while KRA "can't guess" which plants would retire, "the assumption is the older the plant or the less efficient it is or whatever, those would be going first." *Tr. Day 45/Morning Session*, pp. 15-16. Therefore, with respect to the narrow issue of whether existing plants will retire in response to NPT, KRA's testimony is in line with the market reality that the identified "at risk" plants would be the most likely to retire in response to NPT under KRA's analysis. In order for the economic impacts resulting from a plant retiring in response to NPT to "persist indefinitely" as KRA suggests, it is necessary that the analysis also assume that the same plant would have otherwise remained in operation for the same indefinite period of time. If, for example, a plant would have retired in 2030 regardless, then it is impossible and absolutely incorrect to assign any impact associated with that plant's retiring to NPT after 2030. Simply put, if the plant would have otherwise retired in 2030 in the Base Case, there can be no resulting impact beyond 2030 in the Project Case.

CFP Ex. 145, p. 39. Brattle explained that one of the reasons they were “comfortable adopting” LEI’s estimate is because it “could understate energy market impacts by not accounting for occasional extreme conditions” which would increase energy market benefits resulting from the Project. *See id.* at 40.

With regard to capacity market benefits, Brattle agreed with LEI’s overall premise but contends that there are a number of uncertainties that, if realized, could reduce NPT’s benefits. *See Pre-Filed Testimony of Samuel Newell and Jurgen Weiss*, CFP. Ex. 142, p. 3. To address these uncertainties Brattle constructed four separate scenarios when estimating prices in a world with NPT compared to a world without NPT, i.e., the base case. *Id.* at 4. Across its four scenarios, Brattle found that capacity market benefits resulting from Northern Pass range from \$26 million in Scenario 1 to \$0 million per years in Scenario 4, which is the scenario most closely resembling LEI’s Project Case. Brattle concluded that Northern Pass could provide New Hampshire customers with retail rate savings of 0 to 0.55 cents/kWh on average from 2020 to 2030, which would provide bill savings of \$0 to \$41 per residential customer. *Id.* at 6.

The New England Power Generators Association retained William Fowler to assess the capacity market benefits included in the pre-filed testimony of Ms. Julia Frayer and LEI’s accompanying report. Mr. Fowler contends that LEI’s estimates of wholesale market benefits are flawed which resulted in an overstatement of benefits. *See Pre-Filed Testimony of William Fowler*, NEPGA Ex. 1, p. 3. As discussed in more detail below, Mr. Fowler performed no analysis to support his positions and testified that his conclusions with respect to the Project are simply his own judgments.<sup>56</sup>

*The Project’s estimated wholesale energy market benefits are not in dispute.*

---

<sup>56</sup>*See infra*, note 62.

The Project's wholesale energy market benefits, estimated at \$9 million per year in 2020 dollars over an 11-year time period, are not in dispute. In its April 17, 2017 Supplemental Pre-Filed Testimony, Brattle stated: "As in our original report, we adopt LEI's analysis of energy market benefits since we find their methodology and results to be reasonable." *Supplemental Pre-Filed Testimony of Samuel Newell and Jurgen Weiss*, CFP Ex. 144, Exhibit A, p. 40; *Tr. Day 52/Afternoon Session*, p. 61. No other witness or party offered testimony on the Project's projected energy market benefits.

Brattle also testified that because LEI's analysis of energy market benefits did not include an accounting for "extreme weather conditions or common mode failure of resources" this "would make the energy analysis alone probably conservative." *Tr. Day 52/Afternoon Session*, p. 62. CFP underscores the significance of this potential benefit in his Post-Hearing Brief. At page 26, CFP notes that the Applicants "stressed the possible insurance value of the Project in extreme weather events" and explains that "Brattle acknowledged the benefit may increase the annual wholesale market savings slightly." *Counsel for the Public's Post-Hearing Brief*, p. 26. In fact, Brattle testified that, using LEI's illustrative example as a model, "as an order of magnitude way of thinking about this...if you have one of those every year ...it would add \$5 million a year to the benefits." *Tr. Day 53/Morning Session*, p. 76-77. Brattle went on to state that comparing this figure to their calculated \$30 million a year of benefits or LEI's \$50 million a year in benefits "that would be in that case significant." *Id.* at 77. Brattle had previously testified that it would increase their estimated benefits by 10%. *See Tr. Day 52/Morning Session*, p. 62. In any case, Brattle agrees that LEI's analysis is potentially conservative given the possibility of future extreme weather events.

In its Post-Hearing Brief, CFP downplays the relevance of LEI's estimate of production cost savings, saying that production cost savings "will not accrue to New Hampshire or its retail ratepayers because any savings have already been accounted for in the reduction in energy market savings." *Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p. 26.

While the two measures are not additive, Brattle testified on behalf of CFP about the relationship between production cost savings and energy market savings. *See Tr. Day 53/Morning Session*, pp. 43-45. Specifically, Brattle explained that energy market savings represent a benefit to consumers, while "production cost savings are really a measure of the savings to society." *Id.* at 43. In addition, Brattle characterized production cost savings as an indicator of long-term benefit. *Id.* at 41. Consequently, there is merit in separately recognizing the societal benefits represented by production cost savings.

*The Applicants' estimate of capacity market benefits correctly captures the dynamics of the forward capacity market.*

The Applicants have demonstrated by a preponderance of the evidence that the Project will generate significant capacity market benefits for New Hampshire and the region. Estimating capacity market benefits resulting from the introduction of any new capacity resource in the ISO-NE's forward capacity market requires careful consideration of two market requirements. The first requirement is that the project must qualify capacity to bid into the forward capacity auction. The second requirement is that the qualified capacity must clear in the forward capacity auction. LEI calculated the floor price for a capacity supply offer by HQP over NPT using ISO-NE's "New Generating Capacity Resource Model," which is the model ISO-NE makes publicly available to be used by import resources associated with a transmission line like Northern Pass.<sup>57</sup>

---

<sup>57</sup> While this model was available to Brattle, Brattle chose not to use it: "To estimate NPT's allowed offer prices, we use a similar Excel workbook to the one the Internal Market Monitor provides market

*See London Economics Rebuttal Report*, App. Ex. 102, p. 30. Based on her analysis, including sensitivity analyses, Ms. Frayer found the “results are significantly below the clearing price” of the last forward capacity auction and “more importantly below the forecast clearing price of any future FCA in LEI’s Project Case.” *Id.* at 31. As Ms. Frayer testified, her analysis “suggest[s] a lot of cushion ... between what the minimum offer price would be and what [LEI is] projecting capacity prices to be with [the] additional capacity.” *Tr. Day 15/Afternoon Session*, p. 75.

The comprehensive analysis performed by LEI establishes that the Project will both qualify and clear in the forward capacity auction and, therefore, will deliver substantial capacity market savings to New England and New Hampshire consumers. As Ms. Frayer testified, “[t]his project is a new supply source, very competitive, a type of project that even the ISO[-NE] has said they’re seeking, that they’re interested in having join their market. On all parameters that I’ve looked at, this project ... should qualify, first of all, and then should clear in the capacity market.” *Tr. Day 13/Morning Session*, p. 111. Indeed, Ms. Frayer testified “[b]ased on my research and analysis, I am highly confident” the Project will clear the capacity market. *Tr. Day 15/Afternoon Session*, p. 70.

Brattle was the only other party to analyze the capacity market benefits resulting from the Project.<sup>58</sup> Specifically, Brattle examined three different scenarios under which the Project might bid into the forward capacity auction.<sup>59</sup> Based on the results of its three scenarios, Dr. Newell

---

participants for justifying their offers for ETUs.” *Brattle Supplemental Report, Exhibit A*, CFP. Ex. 145, p. 15.

<sup>58</sup> Mr. William Fowler filed testimony critiquing the Applicants’ analysis of capacity market benefits but did not do any analysis to support his criticisms or to otherwise analyze the potential capacity market benefits of the Project. *See infra* note 62.

<sup>59</sup> *Supplemental Pre-Filed Testimony of Samuel Newell and Jurgen Weiss*, CFP Ex. 144, Exhibit A, p. 15: “We consider all of these variables in presenting the following plausible supply cases that the Internal Market Monitor might face: (1) Hydro-Québec has sufficient Existing surplus to serve New England year round, but the opportunity cost of that energy is uncertain; (2) Hydro-Québec only has sufficient capacity in the summer to serve New England, so capacity revenues must be shared with a third party that can

testified that the Project will have trouble clearing the capacity market “*unless its offer is based on existing generation.*” See *Tr. Day 53/Morning Session*, pp. 49-50 [emphasis supplied]. The Applicants have introduced evidence from the only entity that can speak authoritatively to this issue, Hydro-Québec Production (“HQP”), which demonstrates that the Project, as proposed, will only be supplied by existing generation.<sup>60</sup> Importantly, although this evidence had been previously provided to CFP during discovery, Brattle testified that up until then, they had never seen the letter and had not accounted for its substance. *Tr. Day 52/Afternoon Session*, pp. 102-103. Thus, based on Brattle’s analysis, the Project will clear in the forward capacity auction. Indeed, Dr. Newell testified that under the scenario where the Project is supplied by existing year round generation, the Project “would clear.” *Tr. Day 53/Morning Session*, p. 50. In addition, Dr. Newell testified that even under the second scenario, where capacity revenues must be shared with a third-party supplier, the Project would “clear and have the full benefit that we estimated or nearly full.” *Tr. Day 53/Morning Session*, p. 51. Although the Applicants disagree that this scenario is applicable, because it is not supported by the evidence, even this critique indicates the strong probability that the Project will clear.

The crux of Brattle’s remaining disagreement with Ms. Frayer involves the question of whether Northern Pass will qualify capacity in the forward capacity auction. In its Supplemental Report, Brattle states “LEI’s assumption that NPT capacity qualifies and clears in ISO-NE’s capacity market is possible but unsupported and perhaps optimistic.” *Supplemental Pre-Filed*

---

provide winter capacity; (3) Hydro-Québec must build new hydro generation to serve New England year-round.”

<sup>60</sup>During the cross-Examination of The Brattle Group, the Applicants introduced App. Ex. 128 which is a letter dated June 6, 2016 from Richard Cacchione, President and CEO of HQP, to Brian Mills, Senior Planning Advisor in the Office of Electricity Delivery and Energy Reliability at the United States Department of Energy. In this letter Mr. Cacchione Explains that “no new hydro is being developed to provide power for Northern Pass.” Mr. Cacchione also Explains that “Northern Pass is not the cause of the development of Canadian hydropower resources.” Brattle offered no evidence refuting the plain language of the letter, which states the Project will be supplied only by existing generation.

*Testimony of Samuel Newell and Jurgen Weiss*, CFP Ex. 144, p. 3. In addition, Brattle asserted that the Applicants had not presented evidence demonstrating that there would be capacity sufficient to meet the qualification criteria but LEI provided, in its Supplemental Report, the result of its extensive analysis demonstrating that HQP “has sufficient surplus energy and capacity to sell into New England, given all its other obligations.” *Tr. Day 15/Afternoon Session*, p. 184. Specifically, LEI found that “[i]n 2021, HQP has more than sufficient excess capacity not only to provide 1,000 MW over Northern Pass, but also to provide capacity over the Phase II and Highgate interfaces, without a need for additional generation beyond what currently exists or is already under construction.” *London Economics Rebuttal Report*, App. Ex. 102, p. 61. LEI’s thorough analysis concluded that “surplus capacity generation available for firm exports to neighboring jurisdictions will equal at least 1,527 MW from 2021 onward.” *Id.* at 30.

In contrast to LEI’s thorough analysis, Brattle’s own analysis of this issue is limited and unpersuasive. Specifically, in its Supplemental Report Brattle states that “[e]vidence from forward-looking supply-demand reports and other publicly-available information is inconclusive with respect to the availability of surplus capacity during the winter.” *Supplemental Pre-Filed Testimony of Samuel Newell and Jurgen Weiss*, CFP. Ex. 144, p. 10. Unlike LEI, Brattle did not perform a comprehensive assessment of available surplus capacity in Quèbec. Dr. Weiss testified “I don’t know what the right number is” with respect to HQP’s available surplus capacity. *Tr. Day 52/Afternoon Session*, p. 99. Thus, where Ms. Frayer testified that she is “highly confident” that the Project will clear in the forward capacity market based in part on her research showing HQP has at least 1,527 MW of existing surplus capacity during the winter peak period in Quèbec, Brattle did not do the analysis to be able to conclude one way or the other. Ultimately, Brattle’s analysis wilts in light of HQP’s statement, the robust assessment performed

by LEI, and Ms. Frayer's testimony that HQ has sufficient surplus capacity to qualify for the forward capacity auction.

NEPGA, through Mr. William Fowler, is the only other party to provide testimony with respect to the Project's capacity market benefits. Underscoring NEPGA's testimony in this proceeding, however, is the fact that as a low-cost, clean, and reliable source of electricity for New England, Northern Pass poses an economic risk to NEPGA's members, who are made up of electric generators in New England. Importantly, the Project's expected suppression of capacity market prices as estimated by LEI, while a benefit to New England customers, would reduce revenues of NEPGA's members. *See Tr. Day 61/Afternoon Session*, pp. 74-77. There is no doubt that the economic interests of NEPGA's members are the primary motivating factor for NEPGA's critiques and opposition here. Said simply, NEPGA is trying to do through this administrative proceeding what it cannot do to in the free market – compete with Northern Pass. This is perhaps most evident in the fact that, while Mr. Fowler's testimony is ripe with critique of LEI's analysis, he fails to mention the substantial electricity market benefits that Northern Pass would have on the region. As Mr. Fowler testified with respect to the scope of his testimony, "I was trying to answer the questions that have been asked of me and provide the testimony that my counsel asked me to put together." *Tr. Day 61/Afternoon Session*, p. 56.

NEPGA's real interest in this proceeding is further evidenced by the fact that certain core arguments it makes in support of denying the Application in its Post-Hearing Memorandum conflict with the sworn testimony provided by Mr. Fowler. Remarkably, on issues where Mr. Fowler's testimony tends to support LEI's analysis and its resulting conclusions, NEPGA ignores its own expert's testimony. For example, NEPGA argues that LEI's assuming a 40-year amortization schedule is unrealistic and that the Internal Market Monitor ("IMM") is more likely

to apply the 20-year amortization schedule it applies to *generation assets* is more realistic. *Post-Hearing Memorandum of the New England Power Generators Association, Inc.*, p. 17.

However, when asked about this exact issue during the direct-examination by Mr. Bruce Anderson, counsel to NEPGA, Mr. Fowler testified “I believe that the Market Monitor will strive to be responsive to what the Applicant’s plan is. So I think that if you’re going to go beyond, say the standard 20 years that’s in there for most generating assets, they would certainly be receptive of that.” *Tr. Day 61/Afternoon Session CONFIDENTIAL*, p. 6.

NEPGA’s argument with respect to the amortization conflicts with Brattle’s analysis as well. Brattle testified it did not believe the IMM should use a 20-year amortization schedule. *See Tr. Day 53/Morning Session*, p. 58. Brattle explained “the reason we picked 40 is because we think it’s more reasonable, probably more likely, that the Market Monitor would end up using that.” *Id.* Therefore, with respect to this issue, there is unanimous agreement among experts that a 40-year amortization schedule is reasonable and/or more likely with respect to the Project. NEPGA’s Post-Hearing Memorandum ignores this fact.

Furthermore, it appears that NEPGA, through its Post-Hearing Memorandum, is attempting to offer new evidence or argument that is not supported by the record. NEPGA states that the Applicants have “ignored the adverse economic impact of existing generating resource retirements in New Hampshire and/or Maine due to the HQP Capacity acquiring a Capacity Supply Obligation. *Post-Hearing Memorandum of the New England Power Generators Association, Inc.*, Docket No. 2015-06, p. 31. Importantly, neither NEPGA nor any other expert established that the Project would cause retirements at all, much less in New Hampshire or

Maine.<sup>61</sup> Therefore, NEPGA’s counsel appears to be presenting a hypothetical as fact and then criticizing LEI for not accounting for it in its analysis. To that point, LEI’s modeling found that of the 6,000 MW of resources identified by the ISO-NE as being at-risk of permanent retirement, approximately 500 MW of generation would retire in both the Base Case and Project Case and are therefore independent of Northern Pass. *See* App. Ex. 81, p. 17-18.

In contrast to both LEI and Brattle, Mr. Fowler did not model capacity market benefits nor did he perform any quantitative analysis to support his conclusions about the Project or his critique of LEI’s own extensive modelling and analysis. Mr. Fowler testified that in reaching his conclusions about the Project he relied on his own “judgments” and does not have quantitative analysis to support his conclusions.<sup>62</sup> The Applicants do not doubt that Mr. Fowler has intimate familiarity with the ISO-NE forward capacity market. However, without support, his judgments with respect to the Project amount to supposition. In contrast to the testimony and analysis prepared by LEI, Mr. Fowler’s conclusions cannot be tested. Thus, while Mr. Fowler’s testimony may be useful in guiding a policy discussion about the working of the ISO-NE forward capacity market, it is not useful in determining the magnitude of the benefits derived from the Project’s impact on the forward capacity market.

Mr. Fowler’s testimony also suffers from a number of procedural limitations. The relevant background on the issue is as follows. Mr. Fowler filed his pre-filed testimony on

---

<sup>61</sup>Mr. Fowler testified that some of the oldest and most inefficient plants are located in New Hampshire and Maine. *See Tr. Day 61/Afternoon Session*, p. 39. It is generally accepted that the older and more inefficient a plant, the more at risk it is of retirement; however, Mr. Fowler has offered no analysis or evidence suggesting (1) that the Project would cause retirements or (2) that any retirements would occur in New Hampshire or Maine.

<sup>62</sup>During the course of the Applicants’ cross-Examination of Mr. Fowler, the Applicants asked him whether he had performed any quantitative analysis in reaching his conclusions with respect to the Project’s impact on the forward capacity market. Mr. Fowler responded in the negative, confirming that he had not performed such analysis. *See, e.g., Tr. Day 61/Afternoon Session*, p. 32, 68, 72.

December 30, 2016, in which he discussed LEI's original report and pre-filed testimony. At the time Mr. Fowler filed his pre-filed testimony, he had not signed a confidentiality agreement with the Applicants and, therefore, only had access to redacted versions of LEI's materials. In February of 2017, the Applicants submitted LEI's "Update to the Electricity Market Impacts Associated with the Proposed Northern Pass Transmission Project" and revised the same report on March 17, 2017. The updated report addressed one of Mr. Fowler's core criticisms with respect to LEI's prior analysis<sup>63</sup> which was that the analysis did not use the most recent FERC-approved demand curves.<sup>64</sup> LEI then submitted Supplemental Testimony on April 17, 2017, in which LEI directly responded to a number of Mr. Fowler's critiques of its original analysis. Mr. Fowler, however, did not file supplemental testimony, and, Mr. Fowler did not become a party to a confidentiality agreement with the Applicants until May 24, 2017. Therefore, Mr. Fowler's pre-filed testimony relates only to LEI's initial redacted report and testimony and does not address anything that happened subsequent. *See Tr. Day 61/Afternoon Session*, p. 50.

Moreover, Mr. Fowler acknowledged that he did not review any of the materials submitted by the Brattle Group during this proceeding. In the context of Mr. Fowler's assessment of the MOPR, he was asked whether he was aware that Brattle had, under certain circumstances, determined that the Project would clear the minimum offer floor price. *Tr. Day 61/Afternoon Session*, p. 54. Surprisingly, Mr. Fowler responded that he had not read Brattle's testimony. *Id.* When asked why he did not read Brattle's testimony Mr. Fowler responded that he "wasn't directed by counsel to do that." *Id.* Counsel for the Applicants then asked Mr.

---

<sup>63</sup>During the cross-examination of Mr. Fowler, Mr. Fowler agreed that LEI's updated report accounts for the correct market design of the forward capacity market. *See Tr. Day 61, Afternoon Session*, p. 51.

<sup>64</sup>At the time LEI performed its original analysis LEI incorporated the correct demand curves into its analysis. Subsequently, a number of ISO-NE market developments prompted the request that LEI update its analysis to account for these market developments.

Fowler “I assume as an expert doing work, or as a professional doing work, part of what you try to do is gather all of the information around you that you think would be useful in forming your opinions.” *Id.* at 55. Mr. Fowler responded “Typically I do that. But I am a consultant and I do what my client directs me to do.” *Id.* Thus, the scope of Mr. Fowler’s assessment of this Project was artificially limited by NEPGA, which, in turn, precluded Mr. Fowler from considering information that, by his own admission, “could have been” useful in forming his opinion. *Tr. Day 61/Afternoon Session*, p. 56. At minimum, a review of Brattle’s analysis would have shown that based on its modelling, under certain circumstances, Brattle agrees with LEI that the Project will clear the forward capacity auction. *See Tr. Day 61/Afternoon Session*, p. 54.

While expert analysis can provide a high degree of confidence on this issue, the willingness of HQ to invest in the Project should also be considered a strong indicator of HQ’s confidence that the Project will clear. Dr. Weiss alluded to this important consideration stating that HQP “could shed some light” on the question of resource qualification. *Tr. Day 52/Afternoon Session*, p. 99. Consultants may disagree over model inputs and assumptions, but there should be no disagreement that HQ is a sophisticated investor and an experienced participant in the New England forward capacity market. Ultimately, it should be remembered that as a participant in a competitive marketplace HQ will be responsible for submitting its bid into the forward capacity auction. HQ’s bid will be approved if, after reviewing the various bid components, the IMM finds that it is reasonable.

Project critics also ignore the salient facts. HQ has bid capacity into each of the past five forward capacity auctions and has taken on a capacity supply obligation in each auction. In addition, HQ has made, and continues to make, a substantial investment in this Project both through the TSA and through its investment in interconnection facilities in Canada. While the

analyses performed by LEI and Brattle provide a high level of confidence that the Project will clear in the forward capacity auction, HQ's firm commitment to the Project indicates that HQ is confident that the Project will clear. As discussed above, the preponderance of the evidence demonstrates that the Project will clear in the forward capacity market and deliver substantial benefits to New Hampshire and New England ratepayers.

During the proceeding, the possibility was raised of imposing conditions that would either make the Certificate dependent on winning the Massachusetts Request for Proposals, or on clearing the forward capacity market auction, in order to assure the benefits from the Project.<sup>65</sup> In both cases, the conditions are unnecessary and likely counterproductive. With respect to the former, the benefits of the Project are not dependent on success in any particular bid situation but are driven by HRE's participation in the ISO-NE markets and the suppression effect on wholesale electricity market prices. As for the latter, the premise is problematic in two significant regards. First, from a pure timing perspective, the Applicants would not know whether the Project had cleared the FCA until a year or more after the Certificate had been issued, which would lead to a problematic and costly delay in the commencement of construction, especially since wholesale capacity market benefits from the Project do not rest on clearing the FCA in the first year. Even in the unlikely case the Project does not clear the FCA in year one, it would be more likely to clear in subsequent years.<sup>66</sup> Second, assuring the "robustness" of savings by imposing such a condition proceeds from the mistaken premise that the Subcommittee should be reviewing the economics of the Project as if it were a regulated

---

<sup>65</sup> See *Tr. of Hearing on the Motions*, p. 12 (April 6, 2017) (deliberations regarding Motion to Suspend Proceeding); see also *Tr. Day 16/Morning Session*, p. 19.

<sup>66</sup> In fact, Brattle testified that under their analysis the Project's larger capacity market benefits will actually accrue in later years. See *Tr. Day 53/Morning Session*, p. 51-52. Dr. Newell testified that under its scenario analysis, even under a scenario where the Project does not clear in the first forward capacity auction, "it would clear and set the price starting in probably FCA 17." *Id.* at 52.

energy facility subject to PUC-style cost-of-service regulation. Finally, even if one were to assume for the sake of argument that the Project did not clear the FCA, the economic effects on communities and in-state economic activity would still be overwhelmingly positive, and therefore the Project would not unduly interfere with the orderly development of the region.

**b. Tax Revenues.**

It is undisputed that the Project will provide significant tax benefits in the region. The Applicants retained Dr. Lisa Shapiro, Chief Economist at Gallagher, Callahan & Gartrell, P.C., to assess the effects of the Project on tax revenues to New Hampshire communities, who provided substantial credible evidence on this issue. See *Application*, App. Ex. 1, Appendix 44. Dr. Shapiro concluded that NPT will pay an estimated \$35 to \$40 million in new property taxes in the first full year of operation. *Pre-Filed Testimony of Dr. Lisa Shapiro*, App. Ex. 29, p. 2. Using straight-line depreciation over the first 20 years of the Project, she estimates over \$600 million in total New Hampshire property taxes for that period. *Application*, App. Ex. 1, Appendix 44, p. 15. This estimate is “a very conservative estimate of the tax benefits of the project.” *Tr. Day 23/Afternoon Session*, pp. 36-37. Specifically, Dr. Shapiro testified that “knowing that there’s five methods and approaches to value, I chose the most conservative so that I could have an opinion that the benefits would be at least this amount.” *Tr. Day 23/Afternoon Session*, p. 37. Thus, Dr. Shapiro’s estimate of property taxes represents a base amount or floor.

CFP argues that “[t]hese estimates, however, are subject to uncertainty” in part because there are multiple methods for valuing utility property for tax assessments. *Counsel for the Public Post-Hearing Brief*, p. 34. This conclusion ignores the fundamental purpose of Dr. Shapiro’s analysis, which was to provide the most conservative, and therefore, most certain, estimate of property tax payments the Towns can rely on. As Mr. Quinlan testified, the tax

pledge is “intended to define the minimum tax revenue that a town could count on ... we are providing tax certainty.” *Tr. Day 1/Afternoon Session*, pp. 55-56. CFP’s conclusion with respect to Dr. Shapiro’s tax estimates is categorically wrong.

The New Hampshire Supreme Court has repeatedly held that there is not one correct way to value utility infrastructure. *Appeal of Public Service Company of New Hampshire d/b/a Eversource Energy*, App. Ex. 435, p. 8 (holding “we have never held that a single valuation approach or specific combination of approaches is correct as a matter of law.”). If another valuation method were applied to the Project, then the property taxes paid by the Project would be higher and this aspect of the Project benefits would be even greater than Dr. Shapiro estimated. *See Tr. Day 23/Afternoon Session*, p. 99; *see also Supplemental Pre-Filed Testimony of Dr. Lisa Shapiro*, App. Ex. 103, p. 8.

Moreover, as set forth in Mr. Quinlan’s testimony, NPT has pledged that it would not seek abatements of tax assessments that are consistent with the straight line depreciation method commonly used for valuation of utility assets, and discussed above. *Supplemental Pre-Filed Testimony of William Quinlan*, App. Ex. 6, p. 8. Dr. Shapiro’s estimated tax revenues to host communities are based on this methodology and represent a reasonable approximation of the tax revenues that will inure to host communities once the Project is built.

NPT will pay approximately \$21 million to \$26 million in municipal and local education property taxes to thirty-one (31) communities from Pittsburg to Deerfield in the first year.<sup>67</sup> The impact of the addition of Northern Pass to the local tax base is substantial. The Northern Pass

---

<sup>67</sup>The amount of property taxes that a property owner pays in New Hampshire for any particular piece of property depends on a number of different factors including the fair market value of the property, the taxable status of the property, that value as a share of total property value in the community, amount of government spending on public services, other property values, and other sources of revenue. Since earnings for Northern Pass are based largely on the original cost of the Project, the estimated total Project costs are used to calculate the taxable value of Northern Pass in the first year of operation.

new taxable investment is estimated to be in the aggregate approximately 11 percent of the total local taxable base across the 31 host communities in the first full year of operation. *See Pre-Filed Testimony of Dr. Lisa Shapiro*, App. Ex. 28, p. 2. In certain towns, the impact of this benefit will be even more substantial. For example, in the Town of Stewartstown the local property tax base in year one would increase by 81 percent and Northern Pass would account for roughly 45 percent of the Town's tax base. *See Application*, App. Ex. 1, Appendix 44, Figure 6, p. 12. In fact, the assessed value of Northern Pass in Stewartstown would be just under \$70 million. *See Application*, App. Ex. 1, Appendix 44, Table 2, p. 6. The assessed value of Northern Pass is more than twice the value of the top 25 tax payers in the Town combined. *See Stewartstown Highest Taxpayers Based on Current Assessed Values*, App. Ex. 358. Mr. Allen Coates testified that this would be "a significant influx of money into the community of Stewartstown." *Tr. Day 49/Morning Session*, p. 153.

NPT will also pay an estimated \$10 million in new property taxes to the State for the utility education tax, which will be redistributed to communities throughout New Hampshire by the school aid formulas. *Application*, App. Ex. 1, Appendix 44, p. 14-15. This payment is an estimated 15 to 25 percent increase in that revenue source. *See Pre-Filed Testimony of Dr. Lisa Shapiro*, App. Ex. 28, p. 2. In addition, NPT will provide approximately \$4 million in tax revenue to the five counties from Coös to Rockingham, which will also indirectly benefit all of the communities within each county. *Id.*

KRA, on behalf of CFP, provided an analysis of the impact of property tax payments resulting from the Project. KRA found that "economic benefits from property tax payments will be much more substantial than operational expenditures, though they will decline each year and disappear entirely when the Project's taxable base is fully depreciated over an expected 40-year

period. *See Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 50. Dr. Shapiro, however, does not share KRA's conclusion that the Project's assessed value would decrease to zero after 40 years. As Dr. Shapiro testified, her analysis finds the Project's assessed value depreciating to roughly \$457 million, which amounts to approximately 30% of the Project's original cost. *Tr. Day 23/Morning Session*, p. 33-34. Dr. Shapiro testified that this is consistent with actual practice in other states utilizing the net book method of valuation and her understanding that there will always be a residual value to the Project. *Id.*

KRA modeled state, county, and town property tax revenues derived from the Project with 50% of the revenues used for increased government spending and 50% for debt retirement. *Id.* at 51. It found that, over the eleven years from 2020 to 2030, NPT payments of property taxes would increase Gross State Product ("GSP") by an average of \$19 million and create 249 jobs. *See Pre-Filed Testimony of Dr. Nicolas O. Rockler*, CFP Ex. 147, p. 5.

In its Post-Hearing Brief, CFP criticizes Dr. Shapiro's estimates of tax payments because they do not take into account an increase in municipal expenses due to the presence of the line." *Counsel for the Public Post-Hearing Brief*, Docket No. 2015-06, p. 34. No credible evidence has been offered suggesting that municipalities would face increased expenses as a result of the Project. To the contrary, Elizabeth Dragon, testifying on behalf the City of Franklin, emphasized that one of the core benefits of the Project is that it will provide substantial tax payments without increasing municipal expenses. As Ms. Dragon testified, "this is a project that isn't going to add more kids to the school. It isn't going to be a demand on police and fire. It's strictly going to be an increase in the tax base." *Tr. Day 41/Afternoon Session*, p. 73. Therefore, CFP's criticism of Dr. Shapiro's analysis is meritless. Perhaps more tellingly, KRA did not include an accounting for municipal expenses in its property tax analysis.

On behalf of Municipalities, Mr. Sansoucy concludes that the estimated property tax revenues associated with the Project were miscalculated. He believes that the Project should be assessed at fair market value and testified that, under this approach, municipalities “will get more taxes.” *Tr. Day 62/Afternoon Session*, p. 118. As discussed above, it is not disputed that alternative valuation methods would result in an increased tax benefit, and by extension increased Project benefits, for the towns along the Project route. Nevertheless, Mr. Sansoucy testified that he recognizes that the New Hampshire Supreme Court has “never held that a single valuation approach or specific combination of approaches is correct as a matter of law.” *Tr. Day 62/Afternoon Session*, pp. 114-15; *see also Appeal of Public Service Company of New Hampshire d/b/a Eversource Energy*, App. Ex. 435, p. 8; *see also supra* note 13).

A number of witnesses, testifying on behalf of host municipalities, have testified that the Towns will “see reductions in other forms of revenue as a result of the Project, such as a decrease in surrounding property values, increase in abatement requests, and decreases in tourism.” *Post-Hearing Memorandum Filed By Municipal Groups 1 South, 2, 3 South and 3 North*, Docket No. 2015-06, p. 80. However, with respect to tourism and property values respectively, the record does not support those opinions. Indeed, when asked whether the Town of Pembroke had done any analysis to show that extra tax revenue is likely to be offset by the reductions in property value Mr. Jodoin, testifying on behalf of Pembroke, replied “no ... it’s an opinion.” *Tr. Day 58/Afternoon Session*, p. 146. Every other witness testifying with respect to this issue provided similar, unsubstantiated testimony.

Mr. Sansoucy takes the position that the estimated tax revenues from the Project should actually be higher. Consequently, there is no dispute that property tax benefits from the Project will be significant. Both in terms of the increased revenues calculated by Dr. Shapiro, and the

resulting increased GSP and jobs calculated by Mr. Kavet, the preponderance of the evidence demonstrates that overall tax revenues positively affect the region on the order of hundreds of millions of dollars over the life of the assets.

**c. Real Estate Values.**

The Applicants have demonstrated by a preponderance of the evidence that the Project will have no discernible effect on real estate (or property) values, which is one of several factors that the SEC considers as part of its orderly development analysis. Although the SEC has established no specific criteria to assess real estate values,<sup>68</sup> it has in past proceedings reviewed the evidence on a case-by-case basis. *E.g.*, *Decision and Order in Merrimack Valley Reliability Project*, Docket No. 2015-05, pp. 52-56 (October 4, 2016) (accepting the applicant's expert's analysis that the Merrimack Valley Reliability Project would only have a minimal effect on specific property values along the project route); *New England Hydro-Transmission Corp (HQ Phase II), Findings of the Bulk Power Facility Site Evaluation Committee*, DSF-85-155, pp. 12-17 (September 16, 1986); *Decision and Order in Antrim*, Docket No. 2015-02, pp. 82-86 (March 17, 2017) (reviewing key points of a real estate values study conducted by the applicant's expert and weighing related testimony of intervenors to reach conclusion that the project would not have an unreasonable adverse effect on real estate values in the region).

The testimony of the Applicants' expert, Dr. James Chalmers, is based on an extensive study of both property values and marketing times in local and regional real estate markets. *Application*, App. Ex. 1, Appendix 46; *Pre-Filed Testimony of James Chalmers*, App. Ex. 30; *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104. As discussed below, none

---

<sup>68</sup>RSA 162-H:16,IV(b) does not mention this factor specifically. The 2015 SEC rules now require that the application include information on a project's effect on "real estate values in the affected communities." Site 301.09(b)(4). The criteria for decision-making by the SEC on orderly development do not include any reference to property values. Site 301.15.

of the other testimony presented in this case effectively challenges Dr. Chalmers' analysis and conclusions. Most opinions on this issue are from lay witnesses with a personal belief of a presumptive negative effect, while the testimony of those with some experience in real estate do not present credible support for a substantial effect on real estate values from the Northern Pass Project.

In his comprehensive study, Dr. Chalmers first analyzed the existing professional literature on the impact of high voltage transmission lines ("HVTL") on property values. He testified that past studies have produced a variety of results and that they provide insufficiently consistent results to allow specific conclusions to be applied in locations that have not been studied. The overarching conclusion he reaches about the existing professional literature on this subject is that one cannot presume that there will be an effect on property values and that location-specific analysis is required. *Application*, App. Ex. 1, Appendix 46, p. 16; *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, pp 19-20.

It is for this reason that Dr. Chalmers completed a New Hampshire-specific research initiative, and then applied that research to the Northern Pass Project. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, pp. 19-20. The research included case studies that analyzed individual residential sales of properties crossed or bordered by a HVTL and subdivision studies that analyzed the timing and pricing of lot sales in subdivisions where some lots are crossed or bordered by a HVTL and others are not. The Case Studies represented a broad spectrum of properties crossed by, or adjacent to, a HVTL corridor in New Hampshire. The Subdivision Studies analyzed the sale of unimproved lots before homes have been built. Further, Dr. Chalmers also looked at sale price to list price ratios and days on market for

residential sales for properties located at a range of distances from a HVTL corridor.

*Application*, App. Ex. 1, Appendix 46.

The New Hampshire research found sale price effects of a HVTL corridor only when three attributes of the property were present:

- there was very close proximity of the residence to the ROW;
- there was clear visibility of the HVTL; and
- the property was encumbered by the transmission line ROW.

*Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 3. Further, the research found that even where those three elements were present, some properties experienced a sales price effect and some did not. *Id.*

Dr. Chalmers then applied these findings to estimate the number of properties that might be expected to have sales price effects from the Northern Pass Project. He concluded that the only part of the route that might experience effects would be the overhead portion of the Project that is located in an existing transmission corridor. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 3. He expects no impacts along the underground route due to the absence of visibility concerns and no impacts along the new ROW in the North section of the route because of the absence of proximate residential development. *Id.* Upon examination of the portion of the route in the existing transmission corridor where there are already 1-3 transmission lines, Dr. Chalmers concluded that “11 or so” residential properties may experience a change in structure visibility, and only those properties would be expected to have an increased likelihood of a sale price effect. *Id.*; *see also Tr. Day 26/Afternoon Session*, p. 105. Dr. Chalmers did not offer that number as a definitive count of the number of properties that might be affected but as a

guide to the Subcommittee with respect to the order of magnitude of potential property value effects. *Tr. Day 25/Afternoon Session*, p. 44.

Unlike any of the intervenors' or CFP's testimony, the research conducted and the evidence presented by Dr. Chalmers demonstrates that there is no basis upon which to conclude that the Project will have a discernible adverse impact on property values -- or marketing times.<sup>69</sup> This conclusion may not be intuitive, but it is strongly supported by the empirical evidence in the record and the understanding that the behavior of real estate market participants is a function of the large number of considerations that influence different people in different ways. All other things being equal, a property without the HVTL influence would generally be preferred, but all other things are never equal. *Pre-Filed Testimony of James Chalmers*, App. Ex. 30, p. 11-13. Ultimately, the research indicates that if effects occur to residential properties, the critical variables are proximity of the residence to the ROW combined with clear visibility of the HVTL. *Application*, App. Ex. 1, Appendix 46, pp. 7-8. The evidence shows that the number of properties meeting these criteria as a result of the Northern Pass Project is small. Thus, Dr. Chalmers concluded that the Project will not have a discernible effect on local or regional real estate markets. *Pre-Filed Testimony of James Chalmers*, App. Ex. 30, pp. 8-10.

- i. The Published Literature Provides No Basis to Conclude that Northern Pass Will Cause Discernible Effects to Property Values

Although Dr. Chalmers based his conclusions with respect to the real estate impacts of Northern Pass on the New Hampshire-specific research, he also presented a summary of the existing published literature on studies assessing real estate market effects from transmission

---

<sup>69</sup> The research also indicated no systemic marketing time effect in New Hampshire markets from the presence of transmission lines. *Pre-Filed Testimony of James Chalmers*, App. Ex. 30, pp. 8-10; *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 15.

lines. His conclusions from a review of eleven of the most frequently cited studies on residential properties are that about half of the studies find an effect and the other half do not. *Application*, App. Ex. 1, Appendix 46, pp. 7-8. Where effects were found, they tended to be small, usually in the 1-6% range. Additionally, where they were found, they tended to decrease rapidly with distance from the HVTL, seldom extending beyond 500 feet from the HVTL. In the two studies where some effect was found, the effect was found to dissipate over time.<sup>70</sup>

There is no real challenge to Dr. Chalmers' assessment of the professional literature. Ms. Kleindienst for McKenna's Purchase suggests, however, that Dr. Chalmers' own report on a Montana transmission line project<sup>71</sup> contradicts his testimony in this case. But, as he stated in his supplemental testimony, the context for that study in Montana is entirely different from New Hampshire and Ms. Kleindienst misconstrues the findings of the Montana study. In fact, 174 of the 189 lots in the subdivisions at issue in the Montana study had no property value impact from a double circuit 500 kV transmission line on 185' structures. The 15 lots that were affected were those immediately adjacent to the ROW and are in no way analogous to developed residential condominium units such as those at McKenna's Purchase. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, pp. 10-11.<sup>7273</sup>

---

<sup>70</sup>The published literature on commercial/industrial property and vacant land is more limited, but findings of market value effects are generally limited to cases where the ROW easement constrains the way in which the property can be developed. *Id.*

<sup>71</sup>*High Voltage Transmission Lines and Montana Real Estate Values, Final Report*, CFP Ex. 377.

<sup>72</sup>Dr. Chalmers was also interviewed by NHPR with respect to his Montana research. In discussing the general absence of market value effects, he was clear that he could imagine a situation where there would be material effects, but he had never seen such a case. *Tr. Day 24/Afternoon Session*, pp. 90-92.

<sup>73</sup>Statistical analysis of sales at Aspen Valley Ranches, Montana was also reported by Dr. Chalmers, but again, the context is entirely different from New Hampshire.

ii. The Applicants' Expert's Research Methods are Sound

KRA on behalf of CFP, Mr. Sansoucy on behalf of several municipalities, and two real estate brokers make certain methodological criticisms of Dr. Chalmers' study. As demonstrated below, the criticisms are unfounded.

*The Case Study Method Used by the Applicants' Expert is Sound and Reliable*

Dr. Chalmers undertook several analytical approaches to gauge potential real estate value impacts, including case studies. While he acknowledges the value of statistical analysis, he emphasizes that the statistical approach has its drawbacks and, in any event, cannot be used unless there is a sufficiently large number of sales in reasonably defined market areas and timeframes. In the areas of New Hampshire where most of the Northern Pass line is planned, a sufficient number of transactions is not available. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, pp. 12-14. An alternative approach is to do a detailed case study of historical sales based on the facts of the sale, the facts of the property and its relationship to the HVTL, a retrospective appraisal based on comparable sales unaffected by HVTL, and interviews with participants in the transaction. In fact, this is precisely the approach followed by Mr. Stewart Lamprey in assessing possible property value effects of the proposed Phase II Hydro-Québec transmission line. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 14.

Mr. Sansoucy's testimony that it is "largely invalid and irrelevant" to do such an analysis is wrong on its face, and inconsistent with other aspects of his pre-filed and oral testimony. In an answer to a question on direct examination from Attorney Whitley he addresses this.

*Today we're discussing something that might be built tomorrow. That's a prospective approach. And in doing so, it's going to have an impact of some amount or none tomorrow, and our job is to view, assess and estimate what we believe that impact might*

*be tomorrow. Historical information is fine, it's anecdotal, but it does not address what we need to accomplish going forward.*

*Tr. Day 62/Afternoon Session*, p. 11. As a practical matter, comparison of actual past sales of properties potentially affected by HVTL with the sale of otherwise similar properties unaffected by HVTL – whether statistically, in a case study format, or in the simple paired sales format – is the only way in which HVTL impacts can be studied. Mr. Sansoucy’s criticism of retrospective analysis of property sales is difficult to understand and provides nothing of value to the Subcommittee in determining the implications of the Project on property values.

Ms. Menard on behalf of Deerfield abutters references studies that favor statistical analyses, suggesting she has a preference for statistical studies.<sup>74</sup> *Corrected Version of Pre-Filed Testimony of Jeanne Menard*, DFLD-ABTR Ex. 5, pp. 6-7. She provides no substantive analysis of the issue, however, and does not purport to be an expert in statistical analysis. Moreover, she provides a quote from another study indicating that “[p]rofessional real estate appraisal is the only appropriate way to assess impacts.” *Id.* at 7. It is precisely this approach upon which Dr. Chalmers’ case study method relies.

*The Applicants’ Expert Explicitly and Fully Addressed the Impact of HVTL  
Visibility on Real Estate Values*

The CFP economic experts who offered an opinion on property value impacts stated that Dr. Chalmers “[p]erhaps most importantly” failed to account for “visual property degradation,” (*Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, p. 6) and Mr. Sansoucy asserts that Dr. Chalmers failed to take visibility of the transmission structures and distance from the residences into account. *Pre-Filed Testimony of George E. Sansoucy*, SAN Ex. 1, p. 22. Even a cursory review of the Chalmers testimony and report demonstrates that these assertions

---

<sup>74</sup>One of the studies she cites involved a survey of appraisers. *Corrected Version of Pre-Filed Testimony of Jeanne Menard*, DFLD-ABTR Ex. 5, pp. 8-9.

are just wrong.<sup>75</sup> Dr. Chalmers addresses visibility and distance in all aspects of his assessment. In his pre-filed testimony, Dr. Chalmers acknowledges visibility as a factor in the literature review (*Pre-Filed Testimony of James Chalmers*, App. Ex. 30, p. 3), and the combination of visibility and distance are the focus of his case study and subdivision study conclusions. *Id.* at 6, 8. In his supplemental testimony, Dr. Chalmers points out that KRA's characterization of his conclusions as (1) being based on the literature and (2) implying that property proximity to the HVTL alone was responsible for market value effects was wrong on both counts. To the contrary, Dr. Chalmers stated that "it should be clear that visibility was an essential component of my research, that it is central to my opinions in this matter and that my opinions are based on the New Hampshire-specific research, not the literature." *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 3.

*There is No Validity to the Criticism that the Applicants Failed to Consider Potential Effects to the Second/Vacation Home Market*

The suggestion raised by two real estate brokers, Ms. Menard (*Corrected Version of Pre-Filed Testimony of Jeanne Menard*, DFLD-ABTR Ex. 5, p. 9) and Mr. Powell (*Pre-Filed Testimony of Peter W. Powell*, DWBA Ex. 10, p. 4), that the Applicants failed to address second (seasonal or vacation) home sales is based on two false assumptions. Most importantly, given the location of Corridors #1 and #2 and Study Area #3 from which the Case Study sales were selected, there is every reason to believe that these areas are a representative cross section of New Hampshire residential properties. This was reinforced by a comparison of owner addresses with property addresses, which indicated that many properties, particularly in the north, were seasonal or second homes. Further, whether a residence is "seasonal" or a "second" home is a characteristic of the owner not the property. A seasonal residence today may be a permanent

---

<sup>75</sup>Neither KRA nor Mr. Sansoucy has conducted studies of property value effects from HVTL. In contrast, Dr. Chalmers has extensive experience in undertaking and reviewing such studies.

residence tomorrow. *Tr. Day 24/Afternoon Session*, pp. 92-97. Further, Dr. Chalmers is not aware of any evidence suggesting that permanent residents are less sensitive to the view amenity than seasonal residents. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 4.

*The Property Value Effects on Multi-family Developments Have Been Fully Considered, and the Results Indicate No Price Effects*

Ms. Menard and Ms. Kleindienst correctly noted in their testimony that condominium sales were not considered in Dr. Chalmers' initial research but he subsequently performed a detailed study of sales of units at McKenna's Purchase to determine whether the existing three transmission lines in the adjacent ROW have influenced the sale price of the condominium units there. He describes his statistical, multiple regression analysis of all sales at this condominium development in his supplemental pre-filed testimony. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, pp. 8-11; *see also id.* at Attachment 4 and 5.

Contrary to Ms. Kleindienst's assertion that sale prices for the units would be affected in the range of 30-50%, Dr. Chalmers' research revealed that there has been no statistical correlation between sale price and distance from the line in the history of the condominium development. *Id.* at 10. The regression analysis showed that while there are price differences between the two design types and a premium for newer units, distance from the ROW has had no statistically significant effect on price. *Id.* at 9-10. From this assessment of past sales, and from the fact that Northern Pass will not affect proximity of units to the ROW or materially affect the visibility of the HVTL corridor, Dr. Chalmers concludes that the value of the units at McKenna's Purchase will be unaffected by the Project. *Id.* at 10. These results (which have not been meaningfully challenged by any intervenor) provide further evidence that real estate value effects of HVTL cannot be presumed. In fact, Ms. Kleindienst offered a notable concession that

severely undercuts her position: despite the high profile of the Northern Pass Project, and the fact that most buyers come from the local market (and thus, by implication, are fully aware of the Northern Pass Project), the average sale price of the McKenna's Purchase condominium units has been increasing. *Tr. Day 70/Morning Session*, p. 173; *see also id.* at 174.

Dr. Chalmers also did a spot check with the managers of two apartment complexes (one in Concord and another in Bedford) and a new elderly housing complex in Concord to learn whether the rent for units in view of, or closest to, the adjacent existing transmission corridor were discounted. Each manager stated that there were no such discounts. This result is consistent with the professional literature, which has never suggested a price effect on rental units due to proximity of a transmission line. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 12.

*Those few well founded questions that have been raised about certain case studies and subdivision studies have no material bearing on the conclusions in the Research Report, and the remaining criticisms are immaterial or wrong*

Two intervenors and the City of Concord's attorney raised questions about the validity of certain factual predicates to some of the case studies and subdivision studies in Dr. Chalmers' research report. The vast majority of these criticisms either have no material bearing on the issue at hand or are simply wrong.

In her cross examination of Dr. Chalmers and then in her own oral testimony, Ms. Menard identified a comparable sale in the appraisals accompanying three of the case studies (#33, #48 and #50) that cannot be judged independent of HVTL influence. *Tr. Day 24/Afternoon Session*, pp. 149-152; *Tr. Day 24/Afternoon Session*, pp. 152-161; *Tr. Day 65/Afternoon Session*, p. 121. Dr. Chalmers addressed the two questions that were presented to him when he testified, and he acknowledged that the comparable sales in question should not be considered. He

nevertheless confirmed that in each case the remaining comparable sales demonstrate that no material change in the opinion of value or in the conclusion of the case study is warranted. *Tr. Day 26/Afternoon Session*, pp. 101-102 (addressing Chairman Honigberg's questions).

Likewise, with respect to the third case study she subsequently discussed in her oral testimony, removal of the comparable sale she identifies would have no material effect on the value conclusion of the appraisal.

Ms. Menard also identified lot sales in two of the subdivision studies that she claims are not Fair Market Sales because they involve related parties – 6 lots in the Allenstown Subdivision and 3 lots in Canterbury. *Tr. Day 24/Afternoon Session*, pp. 111-118; *Tr. Day 65/Afternoon Session*, p. 143. As above, even assuming these sales are not considered, there is no change in the conclusions with respect to these particular subdivisions. The remaining lot sales that Ms. Menard does not question indicate no observable preference in price or timing to the “affected” relative to the “unaffected” lots, and the overall conclusions of the Subdivision Studies are not changed. *See Tr. Day 26/Afternoon Session*, pp. 101-102. She also identifies a sale in the Deerfield Subdivision that requires a corrected sale date and price due to a lot split. As above, once corrected, there is no change to the conclusions with respect to the Deerfield Subdivision Study or to the overall conclusions of the Subdivision Studies. *Id.*

Ten additional case studies were challenged on one factual basis or another and they are ill founded or immaterial.

- In two cases the interview evidence is questioned. With Case Study #50, Ms. Menard questioned the precise wording of the interview. Irrespective of her questions on the wording of the interview, the interview evidence is inconsistent with the appraisal evidence and is so noted. *Tr. Day 24/Afternoon Session*, pp. 142-149. Similarly, with Case Study #19, she questioned the inconsistency of the interview summary, the broker's recollection of the interview and the appraiser's site inspection. *Tr. Day 24/Afternoon Session*, pp.162-163. She fails to note that the correct factual information is recorded in the Case Study based on the appraiser's site inspection.

- Ms. Menard and Ms. Pacik challenged three case studies (#27, #44, and #47) for failure to identify Joint Use Agreements that allowed the property owner some use of the PSNH ROW as a leach field. This would not typically be discovered short of a title search and, in any event, would not materially affect market value. *Tr. Day 65/Afternoon Session*, pp. 113-114; *Tr. Day 25/Afternoon Session*, p.61 and *Tr. Day 25/Afternoon Session*, pp. 81-85.
- In two cases the gross liveable area (“GLA”) was in question. With respect to Case Study # 50, Ms. Menard questioned whether a 192 sq. ft. sunporch was heated. This would not be material one way or the other. *Tr. Day 24/Afternoon Session*, pp.142-147. With respect to Case Study #23 challenged by Mr. Powell, the reported GLA of 1,400 sq. ft. is correct and the appraisal appropriately accounts for the finished basement and the barn. *Tr. Day 59/Afternoon Session*, p.77.
- Ms. Menard criticized Case Study #42 for failure to account for the subdivision potential of the 50 acre lot. *Tr. Day 65/Afternoon Session*, pp. 137-138. This, too, is unfounded. Simply because a parcel can be subdivided does not mean that subdivision is the highest and best use. In this case the appraiser concluded it was not, which was borne out by the purchaser of the property who developed it as a single parcel.<sup>76</sup>
- Case Study #41 was criticized by Ms. Menard for using a comparable sale with substation influence. *Tr. Day 65/Afternoon Session*, pp. 122-123. The appraiser visited that property, photographed it and concluded that based on the distance and the fact that there was no visibility of the substation, it was an appropriate sale.
- Finally, Ms. Pacik pointed out an inconsistency in Case Study #46 between the Case Study Summary where the residence was referred to as a 1 ½ story house and the appraisal where it was referred to, correctly, as a 2 story house. *Tr. Day 25/Afternoon Session*, p. 78. Correction of this inconsistency is appropriate, but this has no effect on the Case Study or its conclusion.

---

<sup>76</sup> Although Ms. Menard had the opportunity to cross-examine Dr. Chalmers with respect to this issue, Ms. Menard chose not to and instead deferred discussion of this perceived issue until her own individual rebuttal testimony over the Applicants’ objection. *See Tr. Day 65/Afternoon Session*, p. 128. At the time of her testimony the Applicants objected to her testimony for two reasons. First, the Applicants objected because “in proceeding in this manner, Ms. Menard is depriving [D]r. Chalmers of the chance to react to her criticisms” and second, because “[D]r. Chalmers is not here to advise us about how to react to these criticisms.” *Tr. Day 65/Afternoon Session*, p. 119. Although the manner in which Ms. Menard presented this testimony deprived the Applicants of the opportunity to respond at the time, subsequent to Ms. Menard’s testimony, however, Dr. Chalmers did determine that the lot at issue in Case Study #42 had in fact been purchased and developed as a single property, i.e. not sub-divided. This refutes Ms. Menard’s lay opinion that the appraiser made an error in Case Study #42 by concluding that “although there is surplus acreage and road frontage, the position of the improvements make it financially unfeasible to remove and subdivide.” *See Tr. Day 65/Afternoon Session*, pp. 137-141.

All told, while a few of the alleged case study errors are well founded, the majority are not. In any event, the errors found have no effect on the conclusions reached in the research report.

iii. The Evidence on Real Estate Value Diminution Offered by Real Estate Brokers is Not Credible

Mr. Powell and Ms. Menard, both real estate brokers, testified about specific properties whose values, they testified, have already been affected by the proposed Northern Pass Project. They provided historical listing information about seven properties in all; Ms. Menard discusses two improved residential properties and one unimproved parcel in Deerfield (*Corrected Version of Pre-Filed Testimony of Jeanne Menard*, DFLD-ABTR Ex.5, pp.4-5) and Mr. Powell three residential properties and one unimproved land parcel in Lancaster (*Pre-Filed Testimony of Peter W. Powell*, DWBA Ex. 10, pp. 9-12). The two brokers testified that Northern Pass is the reason why these properties sold at a price that they believe was below market value. Notwithstanding their beliefs, their conclusions do not withstand scrutiny.

Dr. Chalmers examined each property carefully after they were presented as examples of diminished property value in these witnesses' pre-filed testimony, and provided a thorough assessment of each of the seven properties in his supplemental testimony. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, pp. 15-19. He found in each instance compelling factors indicating that the listing and sales price history is not an accurate indicator of any effect the proposed Northern Pass line might have had. A conclusion to this effect would require three findings: (1) the property sold below market, (2) some portion of the below market discount cannot be attributed to the existing HVTL, and (3) that portion of the below market discount not accounted for by the existing HVTL is attributable to Northern Pass. Across all seven examples, the support for finding #1 is weak or, in several cases non-existent, the support

for finding #2 is never even addressed or recognized and, therefore, the casual and unsupported conclusion with respect to Northern Pass effect has no basis in fact.

For the four Lancaster properties, Dr. Chalmers testified that the transactions may well reflect market prices. Even if it were concluded otherwise, Mr. Powell took no account of the impact of the existing transmission corridor and the fact that two of the four transactions were liquidations. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, pp. 18-19.

Similarly, for the three properties discussed in Ms. Menard's testimony, it is not clear that they sold below market and there is no accounting for the possible effects of the existing HVTL.<sup>77</sup>

The unimproved lot, he points out, was quickly subdivided into two lots on which an experienced developer built spec homes that promptly sold at what appears to be market value.

As Dr. Chalmers points out, that an experienced builder developed this parcel as he did belies the belief that the threat of the Project had any influence on the value of the land.

In addition to failing to consider the effect of the existing transmission line on property values, Mr. Powell took the unsupported position that the reduction in value, as identified in his testimony, was due solely to Northern Pass. *See Tr. Day 59/Afternoon Session*, pp. 104, 115, 118, 126. This is not supported by the evidence reviewed and discussed by Dr. Chalmers. *See Supplemental Pre-Filed Testimony of Dr. Chalmers*, App. Ex. 104, 17-18. As Dr. Chalmers discusses in his testimony, the market data supports the conclusion that the example properties provided by Mr. Powell sold within the appropriate range both when comparing sale price and price per acre. *Id.* Additionally, in several instances, Mr. Powell failed to consider that several of these transactions were unqualified sales or not sales reflecting fair market value. *See id.* at Attachment 8.1 to 8.4. Even after explaining that some of the parcels he relied on had other

---

<sup>77</sup>Ms. Menard herself, though, included in the property listing the possible positive attribute of access to trails in the HVTL ROW. *Tr. Day 66/Afternoon Session*, p. 68.

issues associated with them, such as damage due to rental, Mr. Powell still maintained, without any clear evidence, that the reduction in value was due to Northern Pass. *Tr. Day 59/Afternoon Session*, p. 126-127. Mr. Powell's conclusions are not supported by the market data and are not supported by the facts surrounding each of the properties in question. Mr. Powell's testimony provides no credible basis to conclude that Northern Pass has had or will have any effect on property values.

iv. The Municipalities' Assertion that Local Assessing Practices Demonstrate Property Value Effects is Wrong

Several municipal intervenors offered the testimony of Mr. Sansoucy on local tax assessment practices and how they might reflect on property value impacts from transmission lines. Mr. Sansoucy's testimony is entirely lacking in credible evidence on this issue, as the Applicants' rebuttal testimony makes plain.

Mr. Sansoucy posits that there are real estate value effects for properties that are (1) encumbered by a transmission line, (2) adjacent to a transmission line, or (3) even further away from a line (his so-called "tertiary properties"). Evidentiary support for these assertions – that rely entirely on municipal mass appraisal methods and are based purportedly on his review of hundreds of tax cards in five communities – is entirely lacking. Even for the assessments of encumbered properties – those for which easements had to be purchased and that lost that amount of useable land, and where you would expect an adjustment to value – less than half were adjusted due to the ROW. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 5. Moreover, Mr. Sansoucy provided no evidence at all of impacts to abutting or tertiary properties. In his supplemental testimony and in oral testimony on cross-examination, Mr. Sansoucy conceded that his original estimate of tax card adjustments for the one town that he

analyzed fully was grossly incorrect and overstated effects by millions of dollars. *Tr. Day 63/Morning Session*, p. 14. His original estimate of adjustments due to the existing ROW in the Town of Dunbarton was \$4.2 million, which he adjusted to \$1.6 million in his supplemental testimony. *Tr. Day 63/Morning Session*, p.14; *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 7. After extensive probing to understand the basis of this calculation, Mr. Sansoucy conceded that the number is “getting closer” to the assessors’ adjustments due to the existing transmission line. *Tr. Day 63/Morning Session*, p. 15. In fact, the cross-examination on this issue demonstrated that Mr. Sansoucy’s work is completely unreliable.<sup>78</sup>

Dr. Chalmers’ careful review of the Dunbarton tax cards shown in Attachment 2 to his Supplemental Pre-Filed Testimony found only \$280,566 of land value adjustments that could be attributed to HVTL or the ROW easement. *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 7.

With respect to the municipal tax assessment process, Mr. Sansoucy opined that adjustments for transmission ROWs will be more common in the future. On the specific question of why there are no adjustments to properties that are not encumbered by a transmission ROW, he had this exchange with Attorney Whitley:

*Q It's my understanding that your sense is that those cards may not have indicated that, but in the future that's going to be a more common occurrence?*

*A I believe so. Yes. That's correct.*

---

<sup>78</sup> During the Subcommittee’s questioning of Mr. Sansoucy, with respect to Sansoucy Exhibit 39, Mr. Way asked “when I hear the words that one data set is questionable, I’m trying to get a sense of how much of it is questionable, whether the table is even useful. Do you have anything to offer?” *Tr. Day 63/Morning Session*, p. 56. In response, Mr. Sansoucy suggested that the Subcommittee could “discount it 25 to 40 percent.” *Id.* at 57. Mr. Way asked “[s]o you’re saying as we look at Exhibit 39 at the end of it, we discount it by 20 to 40 percent.” *Id.* Mr. Sansoucy replied “[t]wenty to 40 percent depending on the size of the community.” *Id.*

*Tr. Day 62/Afternoon Session*, p. 18. That is his full explanation – a belief based on no empirical evidence that the system will change in the future to adjust property assessments.<sup>79</sup>

Consequently, Mr. Sansoucy has offered no credible basis for any opinion in his affirmative or rebuttal testimony, on potential property value impacts from the Northern Pass Project.

v. KRA Offers a Computational Exercise that Has No Relevance to the Property Value Implications of the Project

KRA on behalf of CFP suggested that the property value effects of the Project could be evaluated by presuming a certain diminution factor for properties with visibility (based on viewshed models) and distance from the line. The KRA economists “contend that it is worth framing this discussion by estimating how much property will have a view of a line.” *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 56. From that KRA indicates that it can “estimate hypothetical loss (or gain)” (emphases added) and that KRA can then “frame potential impact ranges,” to allow the SEC to see how much loss is at risk.” *Id.* While it is difficult to understand precisely what the KRA consultants are purporting to report, their computational exercise is not presented as the basis of an opinion on whether HVTL generally, or Northern Pass specifically, are likely to have an effect on real estate values. Rather, they apply an assumed effect to certain visibility area and distance variables.<sup>80</sup> Any part of their testimony proper that purports to be an opinion of property value impact, then, should be disregarded.

---

<sup>79</sup>He also testified that he has “no factual basis” to support his statement that there will also be real estate value impacts along the underground portion with obviously no visual impact. *Tr. Day 62/Afternoon Session*, p. 43.

<sup>80</sup>This approach suffers the same infirmities as KRA’s similar method for estimating economic impacts to the tourism industry. Their method is end oriented, and the assumptions on the area of visual impact are faulty.

In addition, KRA's sole reliance on a New Zealand study is misleading at best. As Dr. Chalmers testified, the overarching conclusion of the professional literature is that the results are insufficiently consistent or robust to be applied to unstudied locations. Moreover, the New Zealand study, by its authors own acknowledgment, is "highly unlikely" to apply to other areas outside of that country.<sup>81</sup> *Supplemental Pre-Filed Testimony of James Chalmers*, App. Ex. 104, p. 20. Notwithstanding that statement in the New Zealand study, KRA's asserted that it relied on a study that is "most relevant to the affected New Hampshire area." *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, p. 6; *see also Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 59. This underscores the absence of any merit to its conclusions on this issue. Further, the New Zealand study is of the property value effect of existing HVTL, which is not the issue in this case. The issue in the Northern Pass case is the potential incremental real estate value effects of adding a new line principally located along existing corridors.

KRA's economists conclude their discussion of this issue in their report by saying "It is clearly difficult to estimate property valuation losses with a high degree of precision...[and] this analysis cannot be considered determinative." *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 62. The Applicants agree that KRA's analysis cannot be considered determinative on this issue, but Dr. Chalmers' analysis on the other hand provides substantial evidence demonstrating that the Project would not have a discernible effect on

---

<sup>81</sup> This is especially true given that the New Zealand study is of a transmission line that is not located in a ROW. As seen on p. 1 of the summary of this report by the reports' author. *Supplemental Pre-filed Testimony of James Chalmers*, App. Ex. 104, Attachment 9 (noting that "[t]he New Zealand situation is somewhat unique in that the HVOTL's transcend over the top of housing and are not over an easement or right of way adjacent to the property, as is the case in the United States and Canada.") This factual backdrop has no resemblance whatsoever to the transmission ROWs in New Hampshire.

property values or marketing times in local or regional real estate markets. *See Pre-Filed Testimony of Jim Chalmers*, App. Ex. 30, p. 14.

vi. The Testimony of Certain Abutting and Non-abutting Property Owners Presents No Evidence of Market Value Effects

Dr. Chalmers' conclusions were challenged by certain individual intervenors claiming that their own property's value would be affected substantially. Those claims, however, are not supported by any evidence other than their stated personal view or unsupported third hand references from brokers. *See, e.g., Pre-Filed Testimony of Jo Anne Bradbury, DFLD-ABTR Ex. 2*, p. 2 ("Northern Pass will destroy the economic value of my home"); *see also Pre-Filed Testimony of Thomas and Madelyn Foulkes, AD-N-ABTR Ex. 16*, p. 6 ("The experts underestimate the cost to property values..."); *Pre-Filed Testimony of Elisha Gray, AD-N-ABTR Ex. 41*, p. 1 (referring to unsubstantiated statements from two brokers "that the shadow of Northern Pass adversely affects the value of our property."); *Pre-Filed Testimony of Elmer and Claire Lupton, DWBA Ex. 9*, p. 1 (NPT would make their property unmarketable, and, if sold, it would be at an extremely deep discount); *Pre-Filed Testimony of Eric M. Olson, DN-A Ex. 12*, p. 3 ("We believe that the loss in potential value to our Dummer home and properties would be well in excess of \$5 million if the Northern Pass project is built."); and *Pre-filed Testimony of David Van Houten, DWBA Ex. 8*, p. 1 ("I am concerned that the presence of an industrial-scale transmission line on my land would lower the real estate value.")

These conclusions are not supported by any study or empirical evidence. Rather, they represent existing property owners' evaluation of a change in the external environment of their property which they see, in many cases, as being substantial. But the market value question is whether their property, offered in the market after the Project is constructed, would sell for less than in the absence of the Project. Unlike these personalized, non-expert views, Dr. Chalmers'

conclusion is based on market research. While their concern is understandable, the testimony of the property owners does not constitute evidence of actual market impact.

vii. Conclusion

The preponderance of the evidence supports Dr. Chalmers' findings. Only one expert witness, the Applicants' expert, has studied comprehensively the issue of Northern Pass's potential effect on real estate values. Dr. Chalmers' study methods and his analysis are sound. His conclusions are reasonable and his testimony credible. He has identified the conditions under which property value effects are more likely to occur, and he acknowledges that property owners intuit an impact based on genuinely held feelings on what is valuable to them about their property and its surroundings. Based on his extensive market-based study, however, he strongly disagrees with any suggestion that market value impacts will be substantial.

Based on Dr. Chalmers' thorough, multi-pronged analysis of existing HVTL and their effects in New Hampshire real estate markets and applying the conclusions derived from that analysis, the Applicants have provided substantial credible evidence that the Project will have no discernible effect on property values or marketing times in local or regional real estate markets. *Pre-Filed Testimony of James Chalmers*, App. Ex. 30, p. 14. As a consequence, there is as well no basis for a finding that the Project will unduly interfere with the orderly development of the region. Nevertheless, the Applicants have proposed, as a condition to the Certificate, a Guarantee Program "designed to ensure that that owners of those properties identified as most likely to see property value impacts do not incur an economic loss in the event of a sale within 5 years after construction begins." *William Quinlan Supplemental Pre-Filed Testimony*, App. Ex. 6, p. 9.

**d. Tourism.**

The Applicants have demonstrated by a preponderance of the evidence that the Project will not affect tourism in any measurable way. They retained Mitch Nichols of Nichols Tourism Group (“NTG”) who provided an assessment of the tourism industry in New Hampshire in relation to the Project (*See Application*, App. Ex. 1, Appendix 45) which led to his conclusion that the Project “will not affect regional travel demand or have a measurable effect on New Hampshire’s tourism industry.” *Pre-Filed Testimony of Mitch Nichols*, App. Ex. 31, p. 1. Mr. Nichols’ conclusion that the “presence of transmission lines does not impact regional travel demand,” was drawn from his extensive experience assisting destinations in strategically planning ways to enhance the tourism experience<sup>82</sup> and expanding the market in order to maximize economic returns. *Pre-Filed Testimony of Mitch Nichols*, App. Ex. 31, p. 4. His conclusion is built on and reinforced by numerous sources, including an extensive literature search, data from Plymouth State University, listening sessions in New Hampshire, data from the Bureau of Labor Statistics, and an electronic survey. *Application*, App. Ex. 1, Appendix 45, pp. 5-6.

The findings noted in other sections of the NTG report, and Mr. Nichols’ experience, support the conclusion that a visitor’s decision on where to travel is consistently driven by a destination’s collective mix of key attributes that, in the aggregate, influence a visitor’s choice. *Application*, App. Ex. 1, Appendix 45, pp. 5-6. Mr. Nichols researched relevant published literature from around the world related to transmission line development and impacts to the tourism industry and he found that there are no studies that show a quantifiable impact of

---

<sup>82</sup>As noted by Mr. Nichols, while NTG’s conclusions are based, in part, on past experience, which would not qualify as an empirical metric, the NTG report ultimately relies on five different metrics to reach an overall conclusion. These metrics expressly incorporate empirical data into the conclusions reached. *Tr. Day 22/Morning Session*, p. 150-151.

transmission line development on the tourism industry. The findings by the DOE in the Final EIS provide further support for Mr. Nichols' conclusions.<sup>83</sup>

The data from Plymouth State University's Institute for New Hampshire Studies and other sources on New Hampshire's tourism industry provides context with respect to New Hampshire tourists. This information includes who the State's tourism visitors are, where they come from, where they go while in the State, what activities and experiences they undertake and what level of expenditures they provide to the State. *Application*, App. Ex. 1, Appendix 45, p. 5. Among other things, the data shows that "most of the visitors who choose New Hampshire as a destination travel from other New England states – almost 75 percent of all travelers come from this region. Travel to New Hampshire is largely driven by its proximity and the diversity of things to do in the state." *Application*, App. Ex. 1, Appendix 45, p. 13. Neither proximity nor the diversity of things to do would be affected by the Project.

With assistance from the New Hampshire Travel Council, listening sessions were arranged for participants to provide input and express their views on tourism issues in general, and any potential relationship between tourism and Northern Pass. Participants indicated that the key factors influencing performance in New Hampshire's tourism industry included factors such as the economy, weather, the range of available activities, and value for money. *Application*, App. Ex. 1, Appendix 45, p. 17. Large infrastructure projects, like power lines, were not noted as a relevant factor in past tourism performance. *Id.* Some respondents expressed concerns over the State losing its image as a beautiful state but no one offered an empirical basis to support

---

<sup>83</sup> *Final EIS*, App. Ex. 205, S-24 (finding that "[n]o studies have been completed documenting the potential impacts of transmission lines on tourism," but that "impacts to tourism appear to be more affected by macroeconomic factors such as the stability of the national economy and gasoline prices more than site-specific changes.")

such a concern. *Id.* Nevertheless, Mr. Nichols considered that concern in the broader context of his own experience and research.<sup>84</sup>

In CFP's Post-Hearing Brief it complains that the listening sessions conducted by Mr. Nichols, among other things,<sup>85</sup> "did not represent a broad cross-section of tourist related businesses or a broad cross section of different geographic locations through the 192-mile route." *Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p. 47. CFP's criticism ignores Mr. Nichols testimony with respect to how participants were selected for each listening session. *See supra note 86.* What is more confounding is that, with respect to information KRA gained from attending the listening sessions organized by CFP, KRA testified "I think we got a lot more negative feedback. And it could have been that people who were motivated to come to these things are more oppositional than supportive. So I'm not saying this is a random sample of ... opinion. *Tr. Day 45/Morning Session*, p. 143. By CFP's experts' own admission, unlike the

---

<sup>84</sup>During his testimony Mr. Nichols acknowledged that in his experience and research he encountered a range of different perspectives relating to the impact of transmission lines on tourism including the concerns voiced by respondents during the listening sessions. The fundamental purpose of holding the listening sessions was to hear different and new perspectives on the issue. While certain concerns raised by the respondents mirrored those concerns Mr. Nichols had heard before relating to transmission lines and tourism, "no one provided any specific foundation or empirical support for those concerns." *Tr. Day 21/Morning Session*, pp. 37-40. Therefore, it is improper to state, as CFP does in his Post-Hearing Brief, that Mr. Nichols "dismissed" these concerns because they provided no empirical support for this position. *Counsel for the Public's Post-Hearing Brief*, p. 48.

<sup>85</sup>CFP also suggests that one problem with the way these listening sessions were conducted is that participants were not selected by Mr. Nichols himself but were selected by the New Hampshire Travel Council. *Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p. 45. However, CFP fails to articulate why this is a problem. Moreover, when asked whether he knew how participants were selected Mr. Nichols testified "[y]es. I sat with both representatives of the Travel Council and the Hotel and Restaurant Association. We explained our goals here and that we were looking for senior representatives in various geographic areas of the state and in various thematic sectors of the visitor industry who could provide us insights in terms of thoughts, concerns, about the industry overall, and about the Northern Pass Project and that's how we've framed it, and they've helped us identify potential individuals that we might contact to see if they'd be willing to sit down and discuss their thoughts with us." *Tr. Day 21/Morning Session*, p. 129. Mr. Nichols further testified that the Travel Council provided him and the Project with a mix of individuals that they would suggest would be appropriate persons to offer insight. *Id.* at 130

Applicants, CFP took no precautions to ensure a representative sample of opinion at its listening sessions.

Using data from the Bureau of Labor Statistics, Mr. Nichols analyzed whether there is evidence of actual business contraction in the tourism industry from existing large electric transmission lines build in New Hampshire and Maine. *Application*, App. Ex. 1, Appendix 45, p. 19-22. Looking at the Hydro-Québec Phase II line in New Hampshire, and the Maine Power Reliability Project in Maine, Mr. Nichols found that the development of both of these transmission projects “did not cause a reduction in the number of tourism-related establishments and jobs” and that “tourism industry establishments and employees continued to expand and grow” during and after construction. *Application*, App. Ex. 1, Appendix 45, p. 22. In fact, despite five years of construction for the Maine Reliability Project, Maine had its most successful year ever. *Tr. Day 22/Morning Session*, p. 151. Significantly, the data demonstrates that the “recreational segment was the fastest growing segment.” *Id.* at 152. While Mr. Nichols acknowledged that there is no way to know if there would have been an increase in growth without the Project, he testified that despite a “significant transmission line project going on for multiple years, the state maintained and significantly expanded its health and vibrancy in its tourism industry.” *Id.* at 153.

Finally, Mr. Nichols conducted a survey seeking to better understand the attitudes of prospective New Hampshire visitors towards the state and the factors driving their travel decisions. The results of the survey further reinforce the conclusion that “key visitor decision factors include the range of products and experiences offered by a destination, its value for the money, the range of recreational amenities and access to a diverse mix of dining and shopping options.” *Pre-Filed Testimony of Mitch Nichols*, App. Ex. 31, p. 4. This finding is further

strengthened by the conclusions of the Final EIS noting that it is “macro-economic and market factors that [drive] visitor decisions.” *Tr. Day 22/Morning Session*, p. 24; *see also Final EIS*, App. Ex. 205, p. S-24.

On behalf of CFP, KRA looked at potential tourism industry impacts and, relying on the findings of three reports as well as conversations with two local tourism experts, claimed that the Project “could have a measurable negative tourism impact in New Hampshire, especially in the great North Woods region.” *Pre-Filed Testimony of Dr. Nicolas O. Rockler*, CFP Ex. 147, p. 8. KRA conceded that “it is difficult to quantify potential negative tourism impacts from the Project” but nonetheless constructed a range of theoretical impacts derived from estimates of current direct tourism spending in the region and the assumed degree to which the transmission line visibility may affect the region. *Id.* KRA maintains, after selecting the midpoint of a range drawn from thin air, that the Project could result in a loss of direct tourism spending of approximately \$10 million per year and a loss of GSP of more than \$13 million and nearly 190 jobs over the 11-year period from 2020 to 2030. *Id.* at 8-9. KRA concludes however that even this hypothetical effect is a “teeny tiny percentage” change in tourism activity in the affected areas. *Tr. Day 45/Afternoon Session*, pp. 17-18.

AMC submitted the opinion of Chris Thayer, a longtime employee without professional experience evaluating regional travel demand or the effect of transmission lines on the tourism industry. He was, however, an early and vocal opponent to the Project. *Tr. Day 62/Morning Session*, pp. 91-93. Mr. Thayer’s opinion is not an objective assessment of the Project’s potential impact on regional tourism demand but a surmise that the Project’s visual impact will deter visitors from enjoying New Hampshire’s landscape and recreational opportunities. As

discussed in more detail below, this is a narrative with which both Mr. Nichols and KRA do not agree.<sup>86</sup>

Despite the fact that the Project will be underground through the White Mountain National Forest and will not be visible from any of AMC's huts, lodges, shelters or campsites,<sup>87</sup> Mr. Thayer asserts that the Project will have an unreasonable adverse effect.<sup>88</sup> *Pre-Filed Testimony of Chris Thayer*, NGO 102, p. 4. He opines that the main driver for tourism in New Hampshire is the aesthetic quality of the landscape and that a typical viewer expects to experience a pristine, natural landscape.. *See Pre-Filed Testimony of Chris Thayer*, NGO 102, p. 11 and p. 6.

No party has provided empirical evidence to refute Mr. Nichols' assessment that Northern Pass "will not affect regional travel demand or have a measurable effect on New Hampshire's tourism industry." *See Pre-Filed Testimony of Mitch Nichols*, App. Ex. 31, p. 1. Hypothetical estimates of various levels of impact and anecdotal information regarding personal experiences have been offered, but there is no credible evidence of a measurable effect, only presumptions.

- i. KRA's Ultimate Conclusion is Reasonable but its Impact Scenarios Should Not Be Confused With Credible Evidence

KRA ultimately concludes that the potential impact to tourism within the affected areas in New Hampshire is a "teeny tiny percentage."<sup>89</sup> *Tr. Day 45/Afternoon Session*, p. 17. Mr.

---

<sup>86</sup> *See infra* Part C, § II, A, 3, d, i.

<sup>87</sup> *Tr. Day 62/Morning Session*, p. 103.

<sup>88</sup> Mr. Thayer offered this testimony as lay opinion only. Notably, the legal standard he references is not the correct applicable legal standard here.

<sup>89</sup> Despite this finding by his own experts, CFP argues in his Post-Hearing Brief that he has "provided evidence that the Project would likely have a negative impact on tourism." *Counsel for the Public's Post-*

Kavet testified to a potential impact of “15 hundredths of one percent. 000.15 percent change in tourism activity in the affected areas.” *Id.* at 17-18. He explained “[s]o you won’t see it, when you see the state of New Hampshire tourism hit a new record high ... It will keep going up. It’s not going to be something, you know, where you’re getting some decline in tourism. It’s a small part of it. It’s a small change.”<sup>90</sup> *Id.* at 18. Fundamentally, KRA found that tourism will continue to grow in New Hampshire regardless of whether NPT is built, but that NPT may decrease this growth by a very small amount. *See Tr. Day 45/Afternoon Session*, p. 16. The Applicants agree that the Project will have no material impact on tourism but KRA’s lead up to its conclusion has troublesome aspects.

KRA’s testimony proceeds from the following unsupported premise: “Although it is difficult to quantify potential negative tourism impacts from the proposed Project, they are unlikely to be nonexistent.” *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 63. Mr. Kavet testified that tourism impacts resulting from a transmission line being built are “virtually impossible to measure.” *Tr. Day 45/Morning Session*, p. 80. This position is consistent with the conclusions KRA previously reached in economic impact analyses it performed in support of three separate wind farm developers in Vermont where KRA concluded “[t]here have been no empirical studies that measure regional tourism expenditures before and after a wind farm development with valid control regions. Without such data, it is

---

*Hearing Brief*, Docket No. 2015-06, p. 45. As noted below, KRA’s testimony certainly does not support this.

<sup>90</sup> In its Post-Hearing Memorandum, SPNHF relies on the findings of KRA to support SPNHF’s conclusion that “the testimony from the Forest Society, Counsel for the Public, and other Intervenors demonstrates the proposed Project would seriously setback (sic) New Hampshire’s unique brand of outdoor-based, recreational tourism ... a setback (sic) from which it may never fully recover.” *Post-Hearing Memorandum of the Society for the Protection of New Hampshire Forests*, Docket 2015-06, p. 106. SPNHF also argues that KRA “concluded that there could be a measurable negative impact on New Hampshire tourism.” *Id.* at 118. It is clear that Counsel for the Public’s experts do not share this conclusion.

*impossible* to assign and quantify a meaningful adjustment metric for tourism expenditures.” *Tr. Day 45/Morning Session*, pp. 117-18 (emphasis added); *see also Economic Analysis Associated with the Sheffield Wind Farm Proposed by UPC Vermont Wind*, App. Ex. 315, p. 17; *see also Regional Economic Impact Analysis for the Proposed Deerfield Wind Project*, App. Ex. 316, p. 30; *see also Regional Economic Impact Analysis for the Proposed Kingdom Community Wind Project*, App. Ex. 317, p. 8. Despite having found to the contrary on three separate occasions, KRA found in this case that it could estimate impacts to tourism notwithstanding a lack of empirical studies to support its findings. Remarkably, Mr. Kavet testified that he was “changing the testimony” that KRA had provided in the three wind farm cases in Vermont. *Tr. Day 45/Morning Session*, p. 110. Testimony based on such a philosophical about-face deserves no weight.

As part of its thought experiment to arrive at its estimates of annual losses in tourism spending and GSP, KRA “constructed several alternative possible impact ranges based on estimates of current direct tourism spending and the degree to which transmission line visibility may affect each region.” *Supplemental Pre-Filed Testimony of Thomas E. Kavet & Nicolas O. Rockler*, CFP Ex. 148, p. 65; *see also Tr. Day 45/Morning Session*, p. 91. KRA professes that its 3% to 15% range is based on two components: “limited relevant data and local expert opinion.” *Tr. Day 45/Morning Session*, p. 71; *see also Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 65.

KRA used data on tourism spending from Plymouth State University’s Tourism Satellite Accounts and then “used the viewshed analyses done by T.J. Boyle to calculate the percentage of land that would have visibility of the Project.” *Tr. Day 45/Morning Session*, p. 91. Using the viewshed analysis as the area of potential impact for tourism, KRA then calculated losses in each

of the seven tourism regions by applying estimated impacts of 3, 5, 10 and 15 percent. *Tr. Day 45/Morning Session*, p. 92. Mr. Kavet testified that this is “the first time this methodology has actually been used anywhere, as far as [he] know[s].” *Tr. Day 45/Morning Session*, p. 92. Thus, KRA manufactured this methodology specifically for purposes of creating hypothetical impact ranges for this Project. Moreover, part of KRA’s assessment of tourism rested on KRA’s assumption that “[t]ourism losses could be much greater than this viewshed-limited approach if visitors encounter the transmission line multiple times as they travel throughout the region.” *Supplemental Pre-Filed Testimony of Thomas E. Kavet*, CFP Ex. 148, p. 66. When asked what he based this statement on Dr. Kavet replied “common sense, I think.” *Tr. Day 45/Afternoon Session*, p. 56. By KRA’s own admission, there is no basis to support this assumption.

Not one of the studies KRA relied on in forming its opinion, however, was based on empirical data or quantitative analysis. *See Tr. Day 44/Afternoon Session*, p. 93. Moreover, in two out of three of the studies KRA relied on, the state and federal agencies with reviewing authority did not find the conclusions reached or the methodology employed to be tenable.<sup>91</sup>

With regard to the second component of KRA’s exercise, local expert opinion, KRA relied on the opinions of Mark Okrant and Alice Desouza. *Supplemental Pre-Filed Testimony of Thomas E. Kavet & Nicolas O. Rockler*, CFP Ex. 148, p. 65. However, neither Mr. Okrant nor Ms. Desouza provided any quantitative support for their opinions. *Tr. Day 45/Morning Session*, pp. 86-88. In fact, KRA did not even inquire into or ask for data underlying the estimate ranges

---

<sup>91</sup> The first report, the 2009 Scotland Study, the Report of Public Inquiry, which is the Scottish Government’s review of that proposed project, the Report found that they “[d]o not have the evidential basis to quantify the potential adverse impact of the proposed 400 kV overhead line on tourism along the proposed line.” *Chapter 16: Tourism, Recreation, and Economic Impact*, App. Ex. 305, p. 16-22; *see also Tr. Day 45/Morning Session*, p. 75. The second report, the Delaware Gap National Recreation Area, the Final Environmental Impact Statement found “[t]here is uncertainty as to how visitors would respond to the introduction of a double circuit 500-kV line with towers twice the height of those currently Existing in the area” and found “it is unlikely that the adverse impacts of any of the action alternative on socioeconomics would reach a level of significance.” *See App. Ex. 308*, p. 573.

these two individuals provided. *Tr. Day 45/Morning Session*, p. 90. Despite the absence of quantitative support, KRA relied on the estimates as the basis for its estimates of potential impacts to tourism. *See Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 65; *see also Tr. Day 45/Morning Session*, p. 71. Tellingly, Mr. Okrant himself expressed a preference for quantitative support for such conclusions.<sup>92</sup>

Finally, KRA criticizes Mr. Nichols' conclusion that in his 20 plus years of experience working in the tourism industry, he has not experienced any concerns about the impacts of transmission lines on tourism. *See App. Ex. 1, Appendix 45*, p. 5. KRA conjectures that "the absence of discussion regarding the development of high voltage transmission lines in areas of high scenic value is not because they would not impact tourism visitation, but because such areas would never consider allowing this type of development."<sup>93</sup> *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 28. Dr. Kavet testified that it is his understanding that transmission lines do not go through scenic areas. *See Tr. Day 45/Morning Session*, p. 100. Yet, one of the three reports that KRA relied on relates to a proposed 500 kV transmission line through the Delaware Water Gap National Recreation Area, a resource that Mr.

---

<sup>92</sup> *See Email from Mark Okrant*, App. Ex. 127: In an e-mail to Counsel for the Public, Dr. Rockler and Mr. Kavet, in which Mr. Okrant provides his review of Mr. Nichols' report, Mr. Okrant Explained that he "would want quantitative support for the statement about the transmission line's impact on visitor behavior."

<sup>93</sup> During the cross-examination of KRA the Applicants introduced App. Ex. 312 which is a compilation of images and related materials showing transmission lines visible in and from scenic tourist destinations throughout the country. For each separate location the Applicants asked KRA whether the resource depicted is a scenic tourist destination. In each case KRA responded that it was, or at least appeared to be. *See Tr. Day 45/Morning Session*, pp. 100-107. When confronted with this evidence, KRA walked its conclusion back a bit testifying "[a]re there any scenic locations that have high-voltage transmission lines running through them now? Yes." *Tr. Day 45/Morning Session*, p. 107. Yet, despite irrefutable evidence demonstrating the contrary to be true, KRA maintained that "there are many areas that would not consider allowing that type of development." *Id.* at 108. Subsequently, during the Subcommittee's questioning of KRA, Mr. Oldenburg also questioned KRA regarding the presence of transmission lines and related facilities in and around prominent tourist destination such as Niagara Falls. *See Tr. Day 45/Morning Session*, pp. 133-136. Again, KRA agreed the resource was a scenic tourist destination.

Kavet testified is a scenic tourist destination. *See Tr. Day 45/Morning Session*, p. 103; *see also* App. Ex. 312. Mr. Kavet further testified that he was aware that this line was permitted, agreed it was sited in a scenic tourist destination and noted that KRA “[c]ited that report as one we looked at.” *Tr. Day 45/Morning Session*, p. 103. It is unclear how KRA could on the one hand rely on a report related to the construction of a 500 kV transmission line through a scenic tourist destination, and on the other hand testify that such destinations would never consider the siting of a transmission line.

- ii. TJ Boyle’s visibility maps are an unreliable basis for estimating effects on tourism.

KRA’s reliance on T.J. Boyle’s visibility maps is misplaced because viewshed maps indicate “theoretical visibility” and are simply used as a starting point to help assess actual visibility by identifying sites where field verification should be performed. KRA, however, relied on the TJ Boyle viewshed maps as if they represented *actual* visibility and not simply *theoretical* visibility, which indicates a resulting overestimation of the effects of tourism.

KRA did not do an independent assessment; it simply assumed that the TJ Boyle viewshed maps it received indicated where structures would *actually* be visible. *Tr. Day 45/Morning Session*, pp. 32-34 (estimating property value impacts based on viewshed analysis provided by TJ Boyle and stating that they did not perform any additional analysis and that the “level of visibility” was “answered by Boyle directly”). All three TJ Boyle witnesses testified that they did not recall providing viewshed maps to KRA nor did they have any recollection about having conversations with KRA explaining the maps or about the usefulness and limitations of the viewshed maps.<sup>94</sup> *Tr. Day 46/Afternoon Session*, pp. 128-131.

---

<sup>94</sup>Mr. Palmer also noted that the viewshed maps used by KRA only accounted for forest cover (at a “very conservative” height estimate of 45 feet), and did not account for forested wetlands or other kinds of

Moreover, KRA “didn’t do any assessment to determine whether areas of supposed impact ... actually have tourism destinations or tourism-related businesses in those areas.” *Tr. Day 45/Morning Session*, p. 93. Therefore, KRA assumed a uniform impact to tourism spending within the entire viewshed without doing any work to determine whether areas within the viewshed are actual tourist destinations. Second, KRA’s analysis gave no consideration of “areas that have existing visibility of a line versus areas that will have new visibility of the line.” *Tr. Day 45/Morning Session*, p. 95. In addition, Mr. Kavet testified that KRA’s analysis “assumes there’s an impact even if there’s not actual visibility of the Project.” *Tr. Day 45/Morning Session*, p. 96. Finally, to the extent that KRA relied on T.J. Boyle’s visibility maps, such reliance is misplaced and likely resulted in an over-estimate of potential impact to tourism.

Finally, TJ Boyle confirmed that the vegetative maps provided to the SEC as part of CFP Ex. 139 were actually done for the DOE’s analysis of Alternative 2, which depict both proposed *and* existing structures; the vegetative maps are not for the proposed Project, which was considered as Alternative 7. *Tr. Day 46/Afternoon Session*, pp. 132-133. Alternative 2 was primarily overhead (except for the 8 mile underground sections in the North Country) and did not contain the additional 52 miles of underground through the WMNF.<sup>95</sup> Therefore, for the underground portion of the Project, TJ Boyle’s vegetative maps indicate visibility where the Project will be underground. Such a fundamental error renders the maps useless. To the extent that KRA relied upon the vegetative maps that assess Alternative 2 to determine potential impacts to tourism, their reliance is misplaced and their resulting conclusions are objectively

---

vegetative cover. *Tr. Day 47/Morning Session*, p. 11. On day two of the examination of TJ Boyle, Mr. Palmer stated that “I believe that we have found a spreadsheet that was provided them [sic] that gave the area of visibility.” *Tr. Day 47/Morning Session*, p. 10.

<sup>95</sup> See *Final EIS*, App Ex. 205, pp. S-10 to S-11, S-15 (describing differences between Alternative 2 and Alternative 7).

wrong. As admitted by TJ Boyle, the submission of these maps could result in “some misrepresentation to the public.” *Tr. Day 46/Afternoon Session*, p. 142.<sup>96</sup>

- iii. KRA’s analysis of tourism impacts in the underground section of the Project is unsubstantiated and not credible.

KRA’s analysis of the impacts to tourism in the underground section of the Project stands in striking contrast to testimony it has offered when testifying on behalf of transmission developers in other jurisdictions. Here, where KRA is opposing a project developer, they testify that “underground construction activities could have significant disruptive impacts on tourism.” *Pre-Filed Testimony of Thomas Kavet dated 12/30/16*, CFP Ex. 146, Exhibit B, p. 70; *see also Tr. Day 45/Morning Session*, p. 109. Elsewhere, when supporting a project developer (in that case the NECPL project on behalf of Transmission Developers International (“TDI-NE”)), Mr. Kavet testified that “[t]he primary negative externalities considered in this economic analysis were possible traffic delays and potential negative impacts on local businesses that could be affected by traffic issues during underground construction work.” *Pre-Filed Testimony of Thomas Kavet on Behalf of Champlain, VT, LLC*, App. Ex. 301, p. 17. Mr. Kavet then went on to testify that “[t]hese were not considered large enough to include as model inputs, based on TDI-NE’s other testimony in this case indicating that such negative externalities would be minimal and temporary, with local business access maintained during construction periods and minor detours planned where necessary to keep traffic flowing.”<sup>97</sup> *Id.* at 17-18.

In this proceeding, Mr. Kavet testified that Northern Pass and NECPL propose to “build segments of roughly comparable length in state roads.” *Tr. Day 45/Morning Session*, p. 114. He

---

<sup>96</sup>Indeed, TJ Boyle decided not to re-run the vegetative maps for submission to the SEC and admitted that it did not provide an accurate map depicting the vegetative maps for the underground ports.

<sup>97</sup>*See supra* Part C, VIII, A, d, i. As discussed earlier, KRA’s opinions seem to change based not on the facts, but based on who they represent and the outcome they seek to support.

also testified that both are located in “states where tourism is important.” *Id.* at 114-15. The evidence and testimony submitted in this proceeding provides no support for KRA’s testimony that the impacts of NECPL will be “negligible” on the one hand, while testifying that NPT will have “significant disruptive impacts on tourism.”<sup>98</sup> *Pre-Filed Testimony of Thomas Kavet, CFP.* Ex. 146, Exhibit B, p. 70; *see also Tr. Day 45/Morning Session*, p. 109.

Notably, Ms. Lynn Farrington testified that “delays will be intermittent, temporary and minimal to the travelling public, and therefore we concluded that it would also be temporary to visitors and vacationers.” *Tr. Day 12/Afternoon Session*, p. 110. Ms. Farrington concluded that “the Project, will work to minimize impacts not only on the travelling public, but in turn on vacationers and tourists.” *Tr. Day 12/Afternoon Session*, p. 110. The discrepancy between

---

<sup>98</sup>In his pre-filed testimony in support of the NECPL, Mr. Kavet testified that he formed his position about impacts to tourism “based on TDI-NE’s other testimony in this case indicating that such negative Externalities would be minimal and temporary, with local business access maintained during construction periods and minor detours planned where necessary to keep traffic flowing.” *Pre-Filed Testimony of Thomas Kavet on Behalf of Champlain, VT, LLC*, App. Ex. 301, p. 17. In the pre-filed testimony of Alan Wironen relating to traffic impacts associated with NECPL, Mr. Wironen testified that “TDI-NEW will ensure each residence and business along the route will have access during the construction. Work along narrow municipal roads may require the roads be restricted to one lane and closed to all but local traffic. In Alburgh, Benson and Ludlow, properties will be reachable following alternate routes, or detours.” *Pre-Filed Testimony of Alan Wironen on Behalf of Champlain VT, LLC*, App. Ex. 314, p. 9.

By comparison, Mr. William Quinlan has testified that the Project is committed to all business owners to ensure continuous access to their places of business during construction, “timely communication, a 24-hour call-in number and on-line feedback, in person meetings, as needed, consideration of community events and other local activities as well as working with local chambers and other groups to promote continued commerce throughout construction. *Supplemental Pre-Filed Testimony of William Quinlan*, App. Ex. 6, pp. 8-9.

In addition, Ms. Lynn Farrington testified that it is her opinion “that the traffic management components of the Project will provide appropriate mitigation of the temporary impacts to traffic to ensure there will be no unreasonable adverse effects on public safety along the public highways and local streets.” *Supplemental Pre-Filed Testimony of Lynn Farrington*, App. Ex. 91, p. 5. Ms. Farrington also testified that it is her opinion, based on her evaluation of lane closures, “impacts to the travelling public will be limited and will be considered acceptable by New Hampshire DOT.” *Tr. Day 12/Afternoon Session*, p. 108, *see also Supplemental Pre-Filed Testimony of Lynn Farrington*, App. Ex. 91, pp. 3-4.

Finally, Ms. Farrington testified that, with respect to proposed detours in the North Country, “the proposed detour routes and preferred routes are Expected to have a minimal impact.” *Tr. Day 12/Afternoon Session*, pp. 108-09; *see also Supplemental Pre-Filed Testimony of Lynn Farrington*, App. Ex. 91, p. 4.

KRA's analysis in support of NECPL and the analysis it performed for CFP cannot be reconciled, reinforcing the credibility issues previously discussed.

- iv. Testimony regarding the impact of traffic delays on tourism is not supported by evidence.

Several intervenors raised concern that traffic delays would affect tourism, particularly in the North Country. However, no empirical evidence was offered in support of this testimony, and testimony and evidence submitted by the Applicants clearly refutes this position. The Final EIS similarly raises no concern with traffic delays associated with construction affecting tourism in the region. The only effect noted in the Final EIS associated with construction is the potential for temporary closure to recreational sites during the construction phase.<sup>99</sup> While Mr. Nichols noted that traffic delays could be a factor considered by prospective visitors, based on his experience and research, visitors are “still going to come to the region because of the great offerings that the region provides.” *Tr. Day 22/Afternoon Session*, p. 31. Several examples were provided by various intervenors of tourist events in New Hampshire that currently create tremendous traffic delays, including the races at Loudon, leaf viewing, and the Deerfield fair.<sup>100</sup> These examples further support Mr. Nichols' overall conclusion that a visitor's travel decision is based on larger factors and the Project will not have an effect on regional travel demand and will not deter people from continuing to come to the State. Mr. Nichols testified that despite the influx of traffic to these events, visitors continue to “come year after year because the experience

---

<sup>99</sup> In fact the Final EIS notes that construction impacts would likely be less for underground cable in a roadway corridor as opposed to installation of a cable in a transmission route “because recreation resources near roadways already Experience some level of disturbance.” *Final EIS, Recreation Technical Report*, App. Ex. 205, p. 4.

<sup>100</sup> *Tr. Day 21/Morning Session*, p. 57 (Noting the Loudon Speedway as a tourist attraction); *see also* App. Ex. 187 (Newspaper Article noting the traffic congestion associated with races at the Speedway); *see also Tr. Day 22/Afternoon Session*, p. 15 (Society for the Protection of New Hampshire Forests noting leaf peeping as a tourist attraction for the state); *see also Tr. Day 22/Morning Session*, p. 52 (Ms. Bradbury noting that “roughly 100,000 people” attend the Deerfield Fair in the fall); *see also* App. Ex. 188 (Boston Globe article referring to the Extensive crowds and the traffic associated with the annual Deerfield Fair).

is great and that is a much more prominent piece of their trip decision than traffic congestion or delays.” *Tr. Day 22/Afternoon Session*, p. 31.

- v. The preponderance of the evidence demonstrates that the Project will not have a measurable impact on tourism.

The Final EIS indicates that there have been no studies performed that document a measurable effect on tourism associated with the presence of a high voltage transmission line.<sup>101</sup> To that point, Mr. Nichols’ experience supports the conclusion that there is no measurable effect. In several instances, Mr. Nichols has worked in high tourism areas, noted for their natural and aesthetic value, which have been in close proximity to high voltage transmission lines. In his experience, the presence of these lines has had no measurable effect on tourism at these highly scenic locations.<sup>102</sup> While some individuals may view the presence of the lines as a negative, it does not deter visitation to places of scenic beauty like Estes Park.<sup>103</sup> The substantial credible evidence reviewed and compiled by Mr. Nichols and included as part of the record in this proceeding demonstrates by a preponderance of the evidence that the regional tourism economy will not be affected by the construction of the Project in New Hampshire.

#### **e. Community Services and Infrastructure**

The Applicants have provided substantial credible evidence that the Project will coordinate closely with municipalities during construction, resulting in minimal impact on

---

<sup>101</sup> *Final EIS, Vol. 1*, App. Ex. 205, pp. 2-61.

<sup>102</sup> *Tr. Day 22/Morning Session*, p. 112 (Mr. Nichols noting, “it’s not just looking here. It’s in our Experience that there are other very beautiful areas, the couple of Examples we’ve talked about so far, with Estes Park and the Rocky Mountain National Park, the scenic byway I discussed in northern Washington State, people still come because it’s an absolutely beautiful setting that they’re enjoying.”)

<sup>103</sup> *Tr. Day 22/Morning Session*, p. 100. While Ms. Weathersby noted 1 review in which the power lines visible from the North Cascades Highway are mentioned, as later noted by the Applicants, the North Cascades Highway is “still considered the number one thing to do in the North Cascades Park” and over 98 percent of the reviews “were Excellent or very good.” *Tr. Day 22/Afternoon Session*, p. 143.

community services and infrastructure, which include police, fire and ambulance services, other utilities, such as, water, sewer, gas, and communications, and public highways. In addition, operation of the Project will not impose added costs on towns or impact the economy of the region.

Construction of the underground portions of the Project will be subject to DOT oversight for state highways and as determined by the SEC for local highways, and will be performed in the same responsible manner as all highway projects undertaken by states and municipalities in terms of traffic control and restoration of the highways, and subject to the same requirements as the installation of all underground utilities as required by the PUC through the DigSafe Program. Furthermore, the Applicants have entered into memoranda of understanding with a number of municipalities.

Although a number of municipalities have refused to entertain a memorandum of understanding with the Applicants, some municipalities have indicated that they would be willing to have such discussions after a Certificate is granted. For example, during the cross-examination of Ms. Margaret Connors on behalf of the Town of Sugar Hill, Mr. Needleman asked her “[d]o you understand that one of the things that Northern Pass hoped to accomplish in an MOU discussion would have been to get the Town’s input on construction timing and to understand whether there was a way to time the Project to accommodate concerns?” *Tr. Day 69/Afternoon Session*, p. 44. In response, Ms. Connors testified “[w]e don’t want to give any indication that we are supportive when we’re 100 percent against the Project as proposed.” *Id.* at 44-45. On redirect, Ms. Fillmore asked Ms. Connors whether “[i]f the Project were approved over your objection, would the Town be willing to talk with Northern Pass about construction conditions at that time?” *Id.* at 61. Ms. Connors replied that the Town would be willing. *Id.*

Should the Applicants be granted a Certificate, the Applicants remain committed to working with Towns like Sugar Hill and all other host municipalities. The Applicants will work in good faith with these Towns, within the confines of any Certificate that may be issued, to address any concerns they may have. *See Tr. Day 40/Morning Session*, pp. 34-35. Additionally, the Applicants have begun the process and will continue to meet with key town officials including fire chiefs, ambulance services, and police to address concerns associated with access and construction activity. *Tr. Day 10/Afternoon Session*, pp. 64-65.

Once the Project commences commercial operation, it will not place any new demands on local or regional services or facilities. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 20, pp. 7-8. In that regard, the DOT has conditioned approval of the Project on the construction of the proposed facility under all existing utilities and drainage structures. *See NHDOT Recommended Approval with Permit Conditions*, App. Ex. 107. The Project must be placed a minimum distance apart from existing infrastructure in compliance with standard code requirements. *Id.* at 5. Accordingly, there will be no permanent negative impacts on community services and infrastructure from the construction of the Project.

Various municipalities and individual intervenors along the underground portions of the route have raised concerns about potential temporary impacts during construction stemming from traffic disruptions. For example, during the cross-examination of the Applicants' Construction Panel, concerns were raised that traffic delays would result in longer response times for emergency personnel. *See Tr. Day 7/Afternoon Session*, p. 166; *see also Tr. Day 9/Morning Session*, p. 120. Individual intervenors also asserted that because the roadways are narrow, it will be difficult to perform construction while also maintaining an open lane for emergency personnel. *Tr. Day 8/Afternoon Session*, pp. 86-87. As explained below, potential traffic

impacts will be thoroughly addressed and minimized. Most critically, the DOT will exercise its authority to review and approve traffic management plans, and it will monitor and enforce such plans for state highways and the SEC will determine who will do the same for local highways.<sup>104</sup>

In addition, prior to construction, the Project will meet with local officials, business owners, and residents within each community to establish protocols and plans to avoid and mitigate disruptions to the extent practicable. Items that will be addressed in such meetings will relate to hours of construction, use of roads, traffic management, handling of emergency situations, and communications with town residents and officials, etc. *Pre-Filed Testimony of Samuel Johnson*, App. Ex. 11, pp. 13-14. Managing traffic during construction is necessary to minimize traffic delays, maintain motorist and worker safety, complete roadwork in a timely manner, and maintain access for businesses and residents. Traffic considerations and control will follow the “Guidelines for Implementation of the Work Zone Safety and 1 Mobility Policy NHDOT Policy #601.0. A” for the development of a Traffic Management Plan. *Id.* at 14.

The Applicants will also work with road agents within towns on how to improve local roads to allow for use either as potential detour routes or for purposes of constructing the Project. *Tr. Day 8/Afternoon Session*, pp. 88-91. Any roads necessary for detours during construction will be improved to meet all DOT standards for the applicable class of road, ensuring the ability of emergency personnel to safely and efficiently access locations along the Project route. Traffic control plans will be provided to local officials that address concerns regarding access to ensure

---

<sup>104</sup> CFP, in discussing the short term effect of construction activities, sets forth a list of information related to the DOT’s ongoing exercise of its authority, that CFP mistakenly concludes is needed before the Subcommittee can find that the Project will not unduly interfere with the orderly development of the region. CFP Brief, p. 63. This misunderstanding of the role of the DOT in the SEC’s integrated review of energy facilities is discussed in Part B, Section IV, A.

that emergency personnel are aware of construction activities, and emergency vehicles will be given the right-of-way at any traffic stops.<sup>105</sup>

Through the course of the hearings there have been repeated discussions of the potential for road closures within the 52-mile underground section of the Project extending from Bethlehem to Bridgewater. A number of the discussions appeared to conflate lane closures with road closures. The Applicants' construction panel provided extensive testimony explaining that, with the exception of the potential for a single road closure of short duration in Plymouth, there are no planned road closures for the remainder of the 52-mile consecutive underground section. *See Tr. Day 42/Afternoon Session*, p. 11; *see also Tr. Day 42/Afternoon Session*, p. 118.

Nevertheless, some witnesses claim that road closures will impact community services and the travelling public. For example, Dr. McLaren described potential impacts in Easton on public health and safety. *See e.g., Tr. Day 64/Afternoon Session*, p. 33. In the first place, there are no road closures proposed in Easton but, more to the point, the Applicants have made clear their commitment to working with local officials within each community to establish protocols with respect to emergency services in order to avoid and mitigate any impact. *See Tr. Day 42/Afternoon Session*, p. 34; *see also Tr. Day 43/Afternoon Session*, p. 84. Similarly, Ms. Margaret Connors, on behalf of Sugar Hill, testified extensively with regard to the impact that road closures would have. When asked whether she was aware that the Project was not proposing any road closures in Sugar Hill Ms. Connors said it was her understanding that there might have to be some road closures. *Tr. Day 69/Afternoon Session*, p 53. Parties may mistakenly believe or contend that construction of the Project will necessitate additional road closures. But, as discussed previously, the evidence and testimony demonstrates by a preponderance of the

---

<sup>105</sup> *See also infra*, Part C, § III, E, 11.

evidence that the Project will not impact community services and infrastructure in any way that will unduly interfere with the economy of the region.

**B. Decommissioning**

The Applicants provided a decommissioning plan to meet the requirements of Site 301.08(c)(2), which is further described under Public Health and Safety, Section III, E, 3. *See Final Decommissioning Plan*, App. Ex. 33. In addition, as discussed in Section I. A, the Applicants meet the financial assurances requirements of Site 301.08(d)(2)(b) through, among other things, the TSA between NPT and HRE. Specifically, the TSA requires 1) that HRE pay for all costs incurred by NPT to decommission Northern Pass and 2) that HQ guaranty HRE's payment obligations.

The combination of the TSA and the HQ guaranty provides financial assurance equivalent to the forms listed by Site 301.08(d)(2)(b), in particular, it is equivalent to an unconditional payment guaranty executed by a parent company of the facility owner. The fact that the guaranty is provided by HQ, rather than NPT's ultimate parent Eversource, causes the strength of the financial assurance to NPT to exceed the assurance required by the SEC regulations. Although Eversource is the highest S&P-rated company among shareholder-owned utilities in the United States, HQ holds an even higher credit rating.

While the TSA provides financial assurances for decommissioning of the Project, there is a remote but theoretically possible scenario where HRE may not be obligated to pay for the costs incurred by NPT to decommission the Project. In the unlikely circumstance where NPT defaulted on its obligations under the TSA, the TSA does not require HRE to pay for the costs of decommissioning. Although the Applicants believe this circumstance to be exceedingly remote,

the Applicants nevertheless appreciate the need for financial assurances in all scenarios.<sup>106</sup> For that reason, Eversource has agreed to a parent guaranty to cover the costs of decommissioning in the event that NPT defaults under the TSA.

In its brief, CFP argues that financial assurance may be provided as one of four narrowly defined instruments and suggests “that the Subcommittee adopt a condition requiring that Eversource provide the necessary financial assurances to fund the decommissioning of the Project.” *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 67. Later, however, CFP says that the Subcommittee should deem it necessary that financial assurance for the decommissioning plan be provided “before issuing any site certificate.” *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 157. Clearly, the two proposals are mutually exclusive and the latter is unworkable in that the Subcommittee would either have to make a decision as to what constitutes sufficient assurance prior to issuing its decision on the Certificate and/or the Applicants would have to provide assurances without knowing what the Subcommittee had decided was sufficient.

No evidence was offered directly refuting the Applicants’ financial or technical capability to decommission the Project. During cross examination Mr. Auseré agreed that in a limited number of scenarios HRE and HQ would not be responsible for decommissioning costs. *Tr. Day 3/Morning Session*, p. 7. In order to address this remote scenario, Mr. Auseré testified that the Applicants would “be willing to accept as a condition to the certificate that Eversource would guarantee that those funds are there for the decommissioning.” *Tr. Day 3/Afternoon Session*, p. 185.

---

<sup>106</sup> For NPT to default under the TSA it would require that the Commercial Operation Date (“COD”) of the line be delayed for 5 years or subsequently the line be taken offline for 5 years, in both cases as a result of a failure to follow good utility practice, or that NPT fails to use commercially reasonable efforts to maintain a 50/50 capital structure.

The Applicants' decommissioning plan is a thorough and comprehensive engineering review of the activities required to decommission the overhead transmission line, remove the underground transmission cable, remove the transition stations, remove the converter terminal, recycle materials, remove any hazardous materials, and restore rights-of-way. See further description of the plan under Public Health and Safety, Section IX, E(4). As for financial assurances, the Applicants have shown by a preponderance of the evidence that the TSA would provide sufficient assurances in the case of a default by HRE and the parent guarantee proposed by Eversource would provide sufficient assurances in the case of a default by NPT.

See PART E, Applicants' Proposed Condition No. 34.

**C. Views of Municipal and Regional Planning Commissions and Municipal Governing Bodies**

Pursuant to RSA 162-H:16, IV(b), the Subcommittee, in making a finding relative to orderly development, must give "due consideration" to municipal views, some of which may have been provided in the form of testimony and some of which may have been provided in the form of public comments. The Applicants, however, are not required by the statute to consider or defer to municipal views. Despite repeated efforts by municipal parties to create an impression to the contrary when examining Mr. Varney, the Applicants are simply required, by Site 301.09, to include in an application information regarding the effects of the Project on the orderly development of the region, including the views of municipal bodies if they have been expressed in writing.<sup>107</sup>

---

<sup>107</sup> SPNHF and the Joint Munis contend in their briefs that the Applicants have not met their burden of proof because they did not include master plans for each municipality in the Application. *Post-Hearing Memorandum of The Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, p.60; see also *Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, p. 59. As noted above, Mr. Varney provided information about municipal views and master plans. SPNHF and the Joint Munis appear to be making an argument about completeness, which the Subcommittee has long put to rest, and trying to transform a ministerial requirement (that was addressed)

The Subcommittee is not required to defer to the views of municipalities, in other words, the Legislature did not elevate municipal views to a level that would afford them some special weight or deference. The reference to due consideration does not undo the Legislature's clear preemption of local regulation of electric transmission lines. To the contrary, it reinforces preemption by clarifying that local concerns will be part of the SEC's comprehensive review and that the SEC will protect the "public health and safety" of the residents of the various towns with respect to the siting of power plants and transmission lines falling under the statute." *Public Service Company of New Hampshire v. Town of Hampton*, 120 N.H. 68, 71 (1980). Consequently, due consideration of municipal views is subject to the same procedural due process analysis applied to the views of all other parties, including, for instance, whether the views were expressed under oath and subject to cross-examination, and whether the witness was credible.

As part of his research to render an opinion on orderly development of the region, Mr. Varney reviewed the plans from each of the regional planning commissions in the project area and other regional planning documents such as local river corridor management plans, and statewide plans that involve different aspects of land use, environment, and energy and transportation infrastructure. In addition, he identified a number of towns that passed a warrant article concerning Northern Pass, or took other action urging the town to not cooperate with the Project's development. Mr. Varney noted, however, that such actions did not amend any town's master plan or regional development plans and he concluded that the Project would not affect the

---

into a substantive evidentiary issue. In the latter regard, the Applicants have proved sufficient facts for the Subcommittee to find that the Project will not unduly interfere with the orderly development of the region. Furthermore, municipalities have made their views known to the Subcommittee by providing copies of their master plans.

implementation of local, regional and statewide plans, or unduly interfere with the orderly development of the region.

The local, regional and statewide long-range plans present vision statements and goals for the orderly development of the region, and they include recommendations and action strategies to implement the goals. The goals, objectives and recommendations in the regional plans are summarized and assessed in Mr. Varney's report. He concluded that the Project will not interfere with the implementation of local, regional and state-wide plans. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 20, pp. 6-7.

Fifteen municipalities that were granted intervention in this proceeding were combined into five groups on a geographic basis and submitted testimony opposing the Project. In addition, various municipalities submitted public comments along the way. Throughout the proceeding, the intervening municipalities worked together and expressed their views to the Subcommittee through counsel and otherwise. With respect to this consideration under the SEC rules, it simply reiterates the statutory requirement that the SEC *consider* municipal views. It is not a substantive criterion concerning, for example, the extent to which the Project will affect land use, but more of a process requirement that is fulfilled by the manner in which the Subcommittee conducts its deliberations. Municipal views and/or evidence carry no greater weight than the views and/or evidence of any party, and municipal views certainly do not alter the fact that the Legislature has preempted any power of municipalities over electric transmission lines.

**III. 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.**

As noted previously, the SEC has observed that all human activity has effects. As a logical consequence, the Legislature adopted a standard that disqualifies the siting of an energy facility only in the event that the effects it causes are *unreasonably* adverse. While logical, the use of unreasonableness as a standard can create a concern about the subjective application of judgment. To address this concern, the SEC adopted rules that, first, instruct applicants about the type of information to file and, second, set forth what the SEC should consider when determining whether effects are unreasonable. SEC precedent and the SEC's rules seek to channel, or place bounds around, the exercise of judgment in order that applicants and intervenors alike can reasonably anticipate administrative or judicial outcomes. In other words, the exercise of judgment must be well reasoned and not simply reflect a personal predilection or policy leaning.

As described in each section below, the Applicants have proved sufficient facts for the Subcommittee to find that the Project will not have unreasonable adverse effects on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety. Whether effects are unreasonable “depends on the assessment of the environment in which the facility will be located, an assessment of statutory or regulatory constraints or prohibitions against certain impacts, and a determination whether the proposed facility exceeds those constraints or prohibitions.” Docket No. DSF 85-155, P. 18 (October 8, 1986). In every instance, the Applicants have provided substantial credible evidence and proved by a preponderance of the evidence that the Project will not have unreasonable adverse effects.

## A. Aesthetics

As explained in detail below, the Applicants prove sufficient facts for the Subcommittee to find that the Project will not have an unreasonable adverse effect on aesthetics. As the SEC considers this issue, it must focus on the criteria in Site 301.14, which require the Subcommittee to consider the visual effects of the Project on the viewshed in the region as a whole (rather than focus only on individual resources). The seven criteria are: (1) the existing character of the area of potential effect; (2) the significance of affected scenic resources and their distance from the proposed facility; (3) the extent, nature, and duration of public uses of affected scenic resources; (4) the scope and scale of the change in the landscape visible from affected scenic resources; (5) the evaluation of the overall daytime and nighttime visual impacts of the facility; (6) the extent to which the proposed facility would be a dominant and prominent feature within a natural or cultural landscape of high scenic quality or as viewed from scenic resources of high value or sensitivity; and (7) the effectiveness of the measures proposed by the applicant to avoid, minimize, or mitigate unreasonable adverse effects on aesthetics, and the extent to which such measures represent best practical measures.

The criteria focus on the “*area of potential effect*” and “*change in the landscape,*” speak in terms of “*scenic resources*” in the plural, and require an evaluation of “*the overall daytime and nighttime visual impacts of the facility.*” Site 301.14 (emphasis added). The central feature of the new rules continues to be the notion that the Subcommittee must evaluate potential aesthetic effects from a holistic perspective, that is, placing the proposed facility in the larger context of the region, or its area of potential visual impact. In order to assist the Subcommittee’s review, the rules require that an applicant provide an assessment of individual scenic resources within the viewshed area (Site 301.05(b)(5)), so the Subcommittee can appreciate the relationship of the individual parts to the whole area of potential visual effect. In reaching an ultimate conclusion,

therefore, the Subcommittee can look at the totality of the regional viewshed and potential aesthetic effects to determine whether the effects are unreasonably adverse. This broad-based, holistic approach is clear from prior SEC decisions and from the language of the new rules.<sup>108</sup>

Furthermore, the SEC set the marker for determining whether a project has an unreasonable adverse effect on aesthetics in the first Antrim Wind case. There the SEC found (1) that the proposed facility would have a significant effect on areas of significant value for their viewshed and the surrounding region, (2) that the proposed structures were out of scale and out of context with the region and not designed to work with the geographic setting, and therefore, would overwhelm the landscape, and (3) that the proposed facility would have a particularly profound impact on scenic resources. The substantial credible evidence provided by the Applicants here shows that the effects of the Project do not rise to the excessive level that led to denial of the Certificate in the first Antrim Wind case. Specifically, the Project does not have widespread significant negative effects on areas of significant value for the region, the structures do not overwhelm the landscape, and the Project does not have particularly profound impacts on multiple scenic resources.

---

<sup>108</sup> See, *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, p. 121 (March 17, 2017) (the Subcommittee finding that “the Project will not have an unreasonable adverse effect on aesthetics of the region”); see also *Decision Issuing Certificate of Site and Facility with Conditions*, Docket No. 2006-01, p. 27 (June 28, 2007) (in which “the Committee considers the effects on the viewshed in the region.”); see also *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2008-04, p. 43 (July 15, 2009) (holding that “the Project will not have unreasonable adverse effects on the aesthetics of the area.”); see also *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 51 (May 6, 2011) (holding that “the turbines will not have an unreasonable adverse effect on the aesthetics of the region.”); see also, *Decision and Order Denying Application for Certificate of Site and Facility*, Docket No. 2012-01, p. 51 (September 25, 2013) (the Subcommittee concluding that the project would have an “unreasonable adverse effect on the aesthetics of the region.”); see also *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-05, p. 65 (October 4, 2016) (the Committee holding that “the Project will not have an unreasonable adverse effect on the aesthetics of the region.”)

CFP and Intervenors make numerous unfounded attacks on the Applicants' assessment of aesthetic effects and their application of the new rules. The Applicants refute each attack on the professional methodology and the interpretations of the rules but it is important to keep in mind the core dispute, which is limited to the effect of the Project on approximately two dozen scenic resources.<sup>109</sup> A thorough review of those resources clearly shows by a preponderance of the evidence that the effects will not be unreasonably adverse and that any potential effect of any significance can be successfully mitigated through a wide array of available measures.

1. Background

The Applicants engaged Terrence DeWan and Jessica Kimball of Terrence J. DeWan & Associates (“TJD&A”) to complete a visual impact assessment (“VIA”) for the Project consistent with generally accepted professional standards. *See Application* App. Ex. 1, Appendix 17. Mr. DeWan and Ms. Kimball’s pre-filed testimony and supplemental pre-filed testimony describe the significant experience of the firm in conducting VIAs on projects of this nature and scale throughout the Northeast. *See Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 16; *see also Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92. For example, TJD&A recently completed a VIA on the 437-mile long Maine Power Reliability Project (“MPRP”) for Central Maine Power and has conducted dozens of other visual assessments for transmission lines, wind energy developments, mining operations, and other large-scale infrastructure projects. Mr. DeWan’s and Ms. Kimball’s

---

<sup>109</sup> CFP’s experts mistakenly assert that the Project will have an unreasonable adverse effect approximately two dozen resources as identified in in Table 21 of their *Review of the Northern Pass Transmission Line, Visual Impact Assessment*.

experience make them well-qualified to undertake the role of assessing potential visual impacts for the Project, as required by Site 301.05(a).<sup>110</sup>

At the time the October 19, 2015 Application was filed, Mr. DeWan and Ms. Kimball had spent more than 18 months assessing and working on the Project, during which time they visited over 200 sites and conducted detailed assessments on over 70 individual scenic resources. *See Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 16, pp. 2-3.

Subsequently, on February 26, 2016, the Applicants submitted Additional Information to Address Revised SEC Rules Effective as of December 16, 2015, in order to conform the VIA requirements to the readopted SEC rules pertaining to VIAs. *See Additional Information to Address Revised SEC Rules*, App. Ex. 2. The February 26, 2016 filing contained new information pertaining to viewshed analyses, expanded the study area of potential visual impacts out to 10 miles, identified and assessed multiple new scenic resources within the expanded area of potential visual impact, included several new photosimulations of private property and to reflect “leaf off” conditions, revised certain photosimulations to meet the specific requirements of the new rules,<sup>111</sup> and provided additional information about measures considered and taken by the Applicants to avoid, minimize, and mitigate potential adverse effects to aesthetics.

---

<sup>110</sup>Site 301.05(a) requires that each application for a certificate of site and facility “include a visual impact assessment of the proposed energy facility, prepared in a manner consistent with generally accepted professional standards by a professional trained or having experience in visual impact assessment procedures, regarding the effects of, and plans for avoiding, minimizing, or mitigating potential adverse effects of, the proposed facility on aesthetics.” AMC faults TJD&A for not being a licensed landscape architect in New Hampshire. AMC, however, fails to cite to any SEC provision that would require a VIA to be performed by a licensed landscape architect (notwithstanding the fact that Mr. DeWan is a licensed landscape architect in Maine). The rules simply require that a “professional trained or having experience in visual impact assessment procedures” produce the VIA—Mr. DeWan without question meets this standard. *See App. Ex. 16, Attachment A* (resume of Mr. DeWan citing a selection of prior visual impact assessments and scenic inventories completed by TJD&A).

<sup>111</sup>On September 29, 2016, the Applicants submitted another round of updated photosimulations to reflect the currently proposed height of HVDC structures. App. Ex. 71.

Finally, the Applicants submitted a Supplemental Report to the NPT VIA in April, 2017, Applicants' Exhibit 93, to clarify certain portions of the October, 2015 VIA filing, to provide additional information that was not available at the time of the October, 2015 VIA filing, and to provide additional assessments following the review of reports and testimony from other parties.<sup>112</sup>

In addition to reviewing potential effects on specific scenic resources, TJD&A assessed the Project based on a regional scale (i.e., subareas) and as a whole. TJD&A concluded that the Project would not have an unreasonable adverse effect on each of the identified six subareas and that the Project as a whole would not have an unreasonable adverse effect on aesthetics. In total, the Applicants' evidence provides the basis for the SEC to conclude by a preponderance of the evidence, that the Project will not have an unreasonable adverse effect on aesthetics. *See, e.g., Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 16, p. 3; *Application*, App. Ex. 1, Appendix 17, pp. C-1 to C-5.

Counsel for the Public retained TJ Boyle Associates, LLC ("TJ Boyle") to review the NPT VIA and to conduct a review of the Project in order to provide an opinion as to whether the Project will result in an unreasonable adverse effect on aesthetics. TJ Boyle was also retained by DOE in 2013 to conduct an analysis of potential visual effects from the Project, as well as for several other potential alternatives. TJ Boyle prepared and submitted a Draft Technical Report and a Final Technical Report (a.k.a. a visual impact assessment) assessing the Project. As a result of that work, TJ Boyle concluded that the Project as a whole would have an average scenic impact of 1.41 (very low to low), with a net change of 0.03, in comparison to the existing PSNH lines. *Visual Impact Assessment, A Technical Report of the Northern Pass Transmission Line*

---

<sup>112</sup> For purposes of this brief, the initial October, 2015 filing, supplemental February, 2016 filing, and April, 2017 filing will be referred to hereinafter collectively as the "NPT VIA."

*Project – Final Environmental Impact Statement*, App. Ex. 205, at 272; *Tr. Day 46/Afternoon*, at 10–12. Moreover, TJ Boyle’s underlying work concluded that the Project’s average scenic impact is very low to low for the northern section, central section and southern section and is low to moderate in the White Mountain National Forest. *See Final EIS Existing Conditions vs. Proposed Conditions Summary*, App. Ex. 322; *Final EIS*, Volume 1, App. Ex. 205, at p. 4-104; 4-192; 4-322; 4-416; *Final EIS VIA*, at 272; *see also Tr. Day 46/Afternoon*, at 13–18. Notably, the net change for the Project as compared to existing conditions for each section is minimal. *See Final EIS Existing Conditions vs. Proposed Conditions Summary*, App. Ex. 322; *Final EIS*, Volume 1, App. Ex. 205, at p. 4-104; 4-192; 4-322; 4-416 (finding that the net change in average scenic impact for the proposed Project from existing conditions ranges from 0.01 to 0.30). While TJ Boyle maintains that the work they did for DOE and for CFP is different, it appears to be a difference without a distinction, other than that in this proceeding it is misreading the SEC’s rules.

In this proceeding, TJ Boyle, however, maintains that it did not conduct a visual impact assessment that comports with or follows the SEC’s rules.<sup>113</sup> Indeed, TJ Boyle does not have any prior experience undertaking a professional effort to apply the SEC rules.<sup>114</sup> In addition, the TJ Boyle team conceded that they did not review and assess any of the other projects that have

---

<sup>113</sup> Mr. Owens, in referring to the SEC rules, stated that “we didn’t actually create the VIA so we weren’t limited to those rules.” Mr. Buscher further stated that he was “clear” that their methodology was only conducted at an “initial level”, that their work was an “initial methodology”, and that they did not complete the “next level of reviewing of analyzing th[eir] list of resources” in compliance with the SEC rules. *Tr. Day 46/Morning Session*, pp. 62–63; *see also, Tr. Day 46/Afternoon Session*, p. 45 (asserting that TJ Boyle did not do an evaluation that comports with the SEC rules to determine if all of the 7,417 resources on their so-called winnowed down list meet the definition of a scenic resource under the SEC rules); *see also Tr. Day 46/Morning Session*, p. 11 (stating on direct exam that TJ Boyle’s review of the NPT VIA was not a visual impact assessment and that they “weren’t specifically held by [the SEC] rules”).

<sup>114</sup> *Tr. Day 46/Afternoon Session*, pp. 30-32.

come before the SEC<sup>115</sup> or the SEC's findings, such as MVRP and Antrim Wind. As a consequence, they did not familiarize themselves with how the rules had been previously interpreted by other visual impact assessors and how they had been enforced by the SEC. When pressed, Mr. Buscher opined that there would be "limited advantage" to considering how the SEC made its decisions.<sup>116</sup> As a consequence, TJ Boyle made multiple mistakes and adopted interpretations of the rules that were inconsistent with prior SEC decisions and impractical. With regard to TJ Boyle's technical review of the NPT VIA, they mistakenly assert that the NPT VIA does not provide all the information required by Site 301.05. TJ Boyle also reached different conclusions about particular scenic resources and concluded that the Project will result in unreasonable adverse impacts as currently proposed. Their review of particular scenic resources, however, does not comport with generally accepted professional standards.

SPNHF and AMC retained Dodson and Flinker, Inc. ("D&F") to "analyze the aesthetic impacts" of the Project. *Pre-Filed Testimony of Harry Dodson*, SPNF Ex. 62, p. 3. Mr. Dodson testified that he did not have experience in New Hampshire, did not have experience analyzing transmission lines, and did not have experience assessing avoidance, minimization, and mitigation efforts for such projects.<sup>117</sup> D&F nonetheless concluded that the proposed project will have an unreasonable adverse effect on aesthetics. The D&F VIA was also hobbled by a lack of familiarity with how prior visual assessors and the SEC had interpreted and applied the rules. *Tr. Day 55/Afternoon Session*, pp. 10-11. Regarding this point, Mr. Dodson admitted that he had not reviewed any VIAs submitted to the SEC and had not reviewed the SEC's prior decisions. *Id.*

---

<sup>115</sup> Mr. Buscher testified that he had limited familiarity with the Antrim project and was a witness with a limited role in that proceeding, but that he did not review all of the photosimulations prepared by the Applicant and Counsel for the Public and he did not consider the SEC's deliberations and decision with respect to the Antrim docket. *Tr. Day 47/Morning Session*, pp. 56-57, 63.

<sup>116</sup> *Tr. Day 46/Afternoon Session*, pp. 97-101; *see also Tr. Day 47/Morning Session*, pp. 69-71.

<sup>117</sup> *Tr. Day 55/Afternoon Session*, pp. 10-11, 94-95.

Despite its lack of familiarity with the SEC's rules and decisions, D&F concluded that "[b]urial of the project offers the only means of significantly reducing the project's unreasonable adverse aesthetic impact."<sup>118</sup> *Pre-Filed Testimony of Harry Dodson*, SPNF Ex. 62, p. 10. Mr. Dodson did not, however, assess the viability of such a project, nor did he consider whether his suggested efforts constituted "best practical measures" for avoidance, minimization, and mitigation measures, as required by Site 301.14(a)(7). *Tr. Day 55/Afternoon Session*, p. 94-99. Mr. Dodson also stated that he was not retained to conduct a full review and analysis of potential mitigation for the Project and he only made general statements regarding the Applicants' proposed avoidance, minimization, and mitigation efforts. *Tr. Day 55/Afternoon Session*, p. 102-04, 131; *see also Visual Impact Assessment*, SPNF Ex. 69, p. 88. Moreover, the methodology employed by D&F is entirely untenable<sup>119</sup> and does not contain a factual basis for its conclusions.

AMC does not own any lodges, huts, shelters, or campsites where the Project will be visible. *Tr. Day 62/Morning Session*, p. 103.<sup>120</sup> In addition, AMC submitted lay testimony on visual effects from Dr. Kimball and Mr. Garland, which generally relies on the findings of D&F. While AMC mistakenly asserts that an additional 82 resources should have been reviewed,<sup>121</sup> the Applicants Supplement to the NPT VIA makes clear that (1) the Applicants have assessed all of the resources that AMC claimed were missed and (2) the resources identified by AMC would not

---

<sup>118</sup> Since the inception of the Project, SPHNF has consistently argued burial is the only means to reduce the Project's effects on aesthetics.

<sup>119</sup> D&F's report and conclusions are unreliable and unreproducible. *See* SPNF Ex. 264 (admitting that: D&F did not create an Aesthetic Quality Evaluation Chart to support their conclusions until four months after their initial report and pre-field testimony was submitted; that D&F did not produce contemporaneous field notes as a matter of course; and that they essentially relied on only their own observations when making conclusions about the extent or nature of use of a specific resource without conducting any additional research).

<sup>120</sup> In addition, the only hiking trail that are strictly maintained by AMC that may have a view of the Project are on the northern end of the Franconia range. *Tr. Day 62/Morning Session*, p. 176-77.

<sup>121</sup> On direct examination of AMC, however, Mr. Kimball, reduced the number of scenic resources that AMC alleges the Applicants did not assess to 50. *Tr. Day 62/Morning Session*, p. 69.

qualify as a scenic resource under the SEC rules.<sup>122</sup> Further, AMC’s witnesses testified that they are not “VIA experts”, that they have never testified as an expert on aesthetics, and that they do not have experience conducting formal visual impact assessments, preparing photosimulations, or using rating systems. *Tr. Day 62/Morning Session*, pp. 111-14.

The City of Concord submitted the pre-filed testimony of Beth Fenstermacher to “address the City of Concord’s concerns about the proposed Northern pass project relative to aesthetics, which includes the visual impacts that the proposed project will have on adjacent properties.” *Pre-Filed Testimony of Beth Fenstermacher*, JT MUNI Ex. 137. The City of Concord did not provide a VIA following generally accepted professional standards by a professional trained or having experience in visual impact assessment procedures. Ms. Fenstermacher testified on cross-examination that the work she completed was not meant to be a visual impact assessment to comply with the SEC rules, that she has not worked on prior VIAs and that she has not done visual impact assessments before. *Tr. Day 60/Afternoon Session*, p. 91, 104. The City’s witness does not offer an opinion on whether the Project will have an unreasonable adverse effect on aesthetics.<sup>123</sup> Indeed, Ms. Fenstermacher’s review was focused on “non-scenic resources or

---

<sup>122</sup> *Project VIA Supplemental Report*, 4.17.17, App. Ex. 93, p. 19-24

<sup>123</sup> Ms. Fenstermacher essentially looked at project maps and drove around roads that intersected or paralleled the right-of-way to assess potential impacts from tree cutting and from construction of the new transmission structures—an approach that has never been taken before and does not comply with the SEC rules. *Tr. Day 60/Afternoon Session*, pp. 104-07. To the extent this exercise provides any useful information, it is significant that prior to filing her testimony and report, Ms. Fenstermacher did not consider the difference between “tree removal” and “tree trimming,” her analysis did not account for that difference, and that she simply assumed that all impacts to vegetation as depicted on the Project maps would be subject to “tree clearing.” *Id.* at 110-15. Importantly, during testimony of the Applicants’ construction panel, Messrs. Bowes, Johnson, and Bradstreet testified that there was a significant difference between tree removal and tree trimming that must be accounted for when assessing potential impacts to private properties. *Tr. Day 7/Afternoon Session*, pp. 17-24. Moreover, Ms. Fenstermacher’s subjective opinions about whether the Project will have a low, medium, or high impact are not subject to confirmation and provide very little helpful information to the SEC because there are essentially no standards or guidelines that she follows to make that determination. *Tr. Day 60/Afternoon Session*, pp. 109-10 (agreeing that there is no further description about her rating system and to recreate Ms.

things that [a]re not covered by the SEC rules,” and in essence, appears to be a general review and comment on potential impacts to private and commercial properties. *Tr. Day 60 PM*, p. 104. Even the visibility analysis completed by Chesapeake Conservancy and submitted by Ms. Fenstermacher did not assess visibility of the Project from scenic resources nor did it determine whether sites she evaluated were publicly accessible in the City of Concord. Given these deficiencies, her analysis should be given minimal weight and essentially treated as a public comment when considering whether the Project will have an unreasonable adverse impact on aesthetics.<sup>124</sup>

The Joint Muni’s Post-Hearing Memorandum makes unfounded assertions about potential adverse impacts without providing a scintilla of evidence to support their position. Their brief argues that the Project will have unreasonable adverse effects at a number of scenic resources—without specifically identifying those resources—and simply provides three examples in Bethlehem (Presidential Range Trail Scenic Byway, River Heritage Trail Scenic

---

Fenstermacher’s work, one would have to speak directly to Ms. Fenstermacher); *see also Tr. Day 60/Afternoon Session*, pp. 114-15 (Ms. Fenstermacher conceded that she would have to “revisit” her conclusions at locations where she did not account for the difference between tree trimming and tree clearing and that her analysis did not account for any post-construction landscaping). Lastly, Ms. Fenstermacher argues that there may be impacts to commercial properties. On cross-examination, however, she conceded that she had only talked to owners of one commercial property (Sabbow), that there is nothing in the record as to whether 43 property owners share Ms. Fenstermacher’s conclusions about potential visual impacts to the properties, and that she did not consider that the existing lines in the corridor were built in 1929, 1951, and 1966 and businesses have Expanded and continued to operate in the area. *Tr. Day 60/Afternoon Session*, pp. 133-39.

<sup>124</sup> Ms. Fenstermacher only spoke with four residential property owners in the City about the Project. *Tr. Day 60/Afternoon Session*, p. 117. However, based upon public records, out of the 46 residential properties that were determined to have a potential for a “high” impact by Ms. Fenstermacher, only three property owners intervene and eight provided comments to the SEC. To the extent Ms. Fenstermacher concluded that 46 residential properties would have a high impact, it is reasonable to assume that the reasonable person would reach out to the SEC in some fashion if they were concerned about impacts to their own property. *Tr. Day 60/Afternoon Session*, p. 119-20. Moreover, some of the properties that were given a “high” impact by Ms. Fenstermacher were built and purchased after the Project was announced. *Tr. Day 60/Afternoon Session*, p. 121-24, 126.

Byway, and Baker Pond) and the Deerfield Historic Center.<sup>125</sup> Their arguments are merely conclusory, are not supported by the evidence in the record, and aside from a brief reference to TJ Boyle and D&F, are not offered by an expert witness trained in the professional assessment of aesthetic effects.

## 2. Discussion

Northern Pass is the third application for a Certificate of Site and Facility to complete final adjudicative hearings before the Committee following the adoption of the new SEC rules in December 2015. The methodology used in developing the NPT VIA and the resulting work complies with all of the SEC's rules and uses a substantially similar methodology as employed in each of the two prior projects that have been reviewed and approved before this Committee. The criticisms directed against the NPT VIA are inconsistent with a plain reading of the rules and in many critical areas depart substantially from past precedent before the Committee. Moreover, if the Subcommittee were to adopt the opponents' interpretation of the SEC rules in many circumstances, it would produce nonsensical, impractical results.

CFP and others allege that the NPT VIA did not adequately identify scenic resources (including, for example, an assessment of all public roads and current use parcels), failed to consider visibility based on bare ground conditions, introduced new evaluation factors, produced photosimulations that do not meet SEC or professional standards, and undervalued the expectation of the typical viewer and the effect of future use and enjoyment of scenic resources. At the same time, both TJ Boyle and D&F acknowledge that they have no experience applying the SEC rules, that they were not involved in the SEC rulemaking process (which Mr. DeWan

---

<sup>125</sup> *Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, p. 98-101. The NPT VIA assesses each of these scenic resources and concludes that the Project will not have a high visual impact at those resources. *See* App. Ex. 1, Appendix 17, at 2-10-2-11, 2-40-2-41, 2-68-2-69, 2-72, 6-26-6-27, C-3-C-4. The Joint Munis have not offered any credible evidence that would counter or call into question the expert evidence the Applicants provided.

was) and they have not reviewed the MVRP or Antrim Wind VIAs or findings from those Subcommittees as part of their initial report, supplemental report, or even in preparing for their testimony. Nevertheless, Mr. Buscher offered the surprising opinion that if the prior VIAs did not follow his methodology, (which is wholly incomplete, merely an initial starting point, and produces completely unworkable results)<sup>126</sup> then the identification of scenic resources performed in prior projects was “improperly done” and all prior VIAs were “wrong.” *Tr. Day 46/Afternoon Session*, p. 99-100. Essentially, Mr. Buscher is telling the SEC that it was wrong in those prior cases. Mr. Buscher’s approach to scenic resource identification is fundamentally flawed. Consequently, TJ Boyle’s criticism of the NPT VIA (as well as other parties’ reliance on TJ Boyle) merits no weight.<sup>127</sup>

---

<sup>126</sup> TJ Boyle testified that “time limitations imposed by the SEC review process prevent a more in-depth or full analysis of all identified resources.” *Tr. Day 46/Afternoon Session*, p. 108-09. Their claim that they did not have enough time to assess the Project for this proceeding seems disingenuous because they already had in-depth knowledge about the Project as they had been working on assessing this Project for the United States Department of Energy since approximately March of 2013. Moreover, if an Applicant for a Project worked at the pace TJ Boyle worked on their SEC analysis (analyzing 5.1 resources per month), it would take approximately 121 years (Excluding current use parcels) to complete an analysis of the 7,417 so-called “potential scenic resources” identified by TJ Boyle. *Tr. Day 46/Afternoon Session*, p. 109-10. While TJ Boyle argued that they have never said that a full evaluation had to be done on all 7,417, they remained steadfast and argued that “the number of potential resources that appeared to be worthy of evaluation remains at, you know, 5, 6000 something like that.” *Id.* at 111. The sheer number of resources that TJ Boyle argues should be reviewed is not only impracticable, but it would be literally impossible for any energy project in New Hampshire to be permitted and built.

<sup>127</sup> In addition, the SEC should not entertain Mr. Dodson’s argument that each project before the SEC “would benefit from a different perspective” and by extension, a different interpretation of the rules. *Tr. Day 55/Afternoon Session*, pp. 41-42. Contrary to Mr. Dodson’s belief that “there are different ways of interpreting some of these rules . . . with a fresh perspective,” the SEC rules must be applied consistently from project to project so that all parties are on notice and have clear guidance as to what is required under RSA 162-H and the Committee’s rules. It would be highly damaging to the integrity of the SEC process if the interpretation of the rules changed from case-to-case, and the necessary analyses became a constant and unpredictable moving target. The SEC should reject any request from other parties seeking to have the rules applied differently from prior projects that have appeared before this Committee.

**a. TJD&A’s Identification of Scenic Resources Complies with the SEC Rules and Prior SEC Practice, Whereas TJ Boyle’s Identification of *Potential* Scenic Resources Does Not Provide the SEC With Useful Information in Determining Potential Impacts to Aesthetics**

TJD&A’s identification of scenic resources complies with the SEC’s rules and follows procedures consistent with the VIAs developed in MVRP and Antrim. In the initial VIA, *Application* App. Ex. 1, Appendix 17, prior to the adoption of the new SEC rules, Mr. DeWan and Ms. Kimball identified 525 resources within three miles of the Project. After reviewing viewshed maps and conducting significant field work to determine potential visibility in accordance with generally accepted practices, TJD&A conducted an in-depth analysis of 70 resources. In accordance with the SEC rules, TJD&A only reviewed those resources that would have a potential view of the Project. *See* Site 301.05(b)(5)–(6).

In the February 2016 Submittal, *Additional Information to Address Revised SEC Rules*, App. Ex. 2, TJD&A identified an additional 97 resources that would have potential visibility within 10 miles of the Project to comply with new SEC rules.<sup>128</sup> While TJD&A identified all scenic resources within the new 10 mile viewshed, based upon a generally accepted understanding about visibility and distance zones, TJD&A focused its additional review on

---

<sup>128</sup> CFP, SPNHF, and AMC incorrectly argue that the NPT VIA did not comply with the new SEC rules adopted in December 2015 and that the NPT VIA did not extend the identification of scenic resources within the area of potential visual impact out to ten miles. Contrary to the other parties’ claims that TJD&A only went out five miles, the February 26, 2016 supplemental filing to the NPT VIA included a complete viewshed analysis out to 10 miles that identified scenic resources between 3 and 10 miles from the Project, which complies with the new rules. *See* App. Ex. 2, *Additional Information to Address Revised SEC Rules*, Attachment 6 (expanded viewshed analysis maps out to 10 miles with scenic resources located on the maps); *see also* *Tr. Day 30/Afternoon Session* at 59–60 (Mr. DeWan testified that TJD&A supplemented their initial report by identifying all potentially impacted scenic resources ten miles out from each structure based on the new SEC rules); *see also* App. Ex. 93, *Project VIA Supplemental Report*, at 92–95 (expanding identification of scenic resources in the revised viewshed area). Therefore, the opposition’s positions misstate the record on this issue; NPT VIA has clearly met the requirements of Site 301.05(b)(4)–(5). *See also* *infra* note 182 (discussing vegetative screening and revised maps provided in April 2017).

scenic resources within five miles. Indeed, both TJ Boyle and D&F admit that the possibility of severe visual impacts of structures from Project of this nature generally occur within 1.5 miles of the Project and the potential for severe impacts is greatly reduced starting at 1.5 miles and going to three miles. *See Tr. Day 46/Afternoon Session*, p. 168 (agreeing that “[i]t is expected that the potential for adverse impacts in most areas are significantly reduced beyond 1.5 miles from a structure because of land cover screening”); *id.* at 167 (agreeing that between 1.5 miles and 3 miles “there are very few visible details at this distance and there is a growing sense that the Project is distant”); *id.* at 170 (confirming that beyond three miles “the proposed Project is visually part of the background and will only have modest visual presence”); *id.* at 179 (agreeing that “structures may be difficult to distinguish as other than a vague smudge on the landscape” at five to ten miles from the Project); *see also Tr. Day 46/Afternoon Session*, p. 163-65.<sup>129</sup>

Finally, for the April 17 Supplemental Report (App. Ex. 93) and Supplemental Pre-Filed Testimony (App. Ex. 92), TJD&A analyzed 32 additional resources. TJD&A undertook additional analyses of certain resources that were previously identified, which is summarized in the Supplemental Report and Testimony, and included two updates to the visibility analysis.<sup>130</sup> In total, 654 scenic resources within the area of potential visual impact (“APVI”) (as determined by using industry standard techniques and software) were analyzed by TJD&A.

TJ Boyle argues that the NPT VIA should have included a review of 18,993 potential resources. TJ Boyle reaches this overbroad conclusion though its erroneous interpretation of the

---

<sup>129</sup>Mr. Palmer testified that he had no idea about how many of the 7,419 resources fell within each distance zone. *Tr. Day 46/Afternoon Session*, pp. 169, 170; *see also Tr. Day 47/Morning Session*, p. 137 (stating that if TJ Boyle were to come up with a separate methodology for this Project that they would “probably focus on the first mile, mile and a half from the right-of-way and really look at the areas that are going to have the most sensitivity”).

<sup>130</sup>*See Supplemental Report to Visual Impact Assessment*, App. Ex. 93, pp. 25-41 (describing updates to the visibility analysis).

requirements of Site 301.05 and novel definition of scenic resources, none of which are consistent with the plain language of the rules and SEC precedent.<sup>131</sup>

“Scenic resource” as defined by the SEC rules

means resources to which the public has a legal right of access that are: (a) Designated pursuant to applicable statutory authority by national, state, or municipal authorities for their *scenic quality*; (b) Conservation lands or easement areas that possess a scenic quality; (c) Lakes, ponds, rivers, parks, scenic drives and rides, and other tourism destinations that possess a *scenic quality*; (d) Recreational trails, parks, or areas established, protected or maintained in whole or in part with public funds; (e) Historic sites that possess a *scenic quality*; or (f) Town and village centers that possess a *scenic quality*.

Site 102.45 (emphasis added). The definition of scenic resources focuses on “scenic quality,” namely, “a reasonable person’s perception of the intrinsic beauty of landforms, water features, or vegetation in the landscape, as well as any visible human additions or alterations to the landscape.”<sup>132</sup> Site 102.44.

The rules require a VIA to include “[a]n identification of all scenic resources within the area of potential visual impact and a description of those scenic resources from which the proposed facility would be visible.” Site 301.05(b)(5). The instructive language in this requirement is found as well in the definition of “area of potential visual impact,” which is

---

<sup>131</sup> Mr. Buscher specifically testified that TJ Boyle’s interpretation of the SEC rules requires a “very broad definition and a very broad list of . . . scenic resources.” *Tr. Day 46/Afternoon Session*, p. 42.

<sup>132</sup> AMC wrongly contends that TJD&A did not account for the “reasonable person’s perception” when assessing the intrinsic beauty of landforms, water features, vegetation, and visible human additions in the landscape and evaluating the “expectations of the typical viewer.” Their contention is misplaced and applies the wrong standard to identify the “reasonable person.” According to AMC, and unsupported by anything in the SEC rules, the “reasonable person” should be divided into three separate categories. Consistent with the SEC rules, TJD&A assessed scenic quality and the expectation of the typical viewer by considering “how society, in general, looks upon the resource,” not based on individuals or separately segregated classes of individuals as AMC suggests in their Post-Hearing Memorandum. *Tr. Day 31/Afternoon Session*, pp. 148-49. AMC misconstrues the “reasonable person” standard and appears to argue that the “reasonable person” is one who owns property where the Project might be visible. However, a property owner whose opinions and views are likely emotionally influenced are not representative of the views of the typical non-biased “reasonable person.” Contrary to the view espoused by AMC, the intended focus of the “reasonable person” is on society as a whole—not on different categories of individuals.

defined as “a geographic area from which a proposed facility would be visible, and would result in potential visual impacts, subject to the areal limitations specified in Site 301.05(b)(4).”<sup>133</sup> Site 102.10. The NPT VIA must, therefore, identify and provide a description *only* of those scenic resources within a 10-mile radius of a proposed transmission line, from which the Project *would be visible*.

In essence, the rules require an applicant to conduct a computer based “visibility analysis”<sup>134</sup> to determine the potential visibility of a proposed project. Following completion of the visibility analysis, the applicant must then determine the geographic areas “from which [the Project] *would be visible and would result* in potential visual impacts.”<sup>135</sup> Site 301.05(b)(5); Site 102.10. Once the area of potential visual impact is established, an applicant must identify scenic resources within that specified area. An applicant, therefore, must only identify scenic resources within those geographic areas from which the project would be visible *and* would result in potential visual impacts.<sup>136</sup> The NPT VIA complied with these requirements.

CFP and others also erroneously argue that the NPT VIA only assessed designated scenic resources, pursuant to Site 102.45(a). *Pre-Filed Testimony of Michael Buscher, James Palmer,*

---

<sup>133</sup> Site 301.05(b)(4)(d) requires a computer based visibility analysis to determine the “area of potential visual impact.” The rule requires a visibility analysis to extend out to 10-miles for an electric transmission line longer than one mile in a rural area “if the line would be located in a new transmission corridor or in an existing transmission corridor if either or both the width of the corridor or the height of the towers, poles, or other supporting structures would be increased.” *Id.*

<sup>134</sup> “Visibility analysis” is defined in Site 102.55 as “a spatial analysis conducted using computer software to determine the potential visibility of a proposed facility.”

<sup>135</sup> As described in more detail below, this specific area is determined after completing viewshed maps and conducting field visits, to confirm the accuracy of the viewshed maps, which is consistent with prior SEC precedent.

<sup>136</sup> This rules require a VIA to identify scenic resources from where the Project would be actually visible, not simply theoretically visible. TJD&A complied with this requirement and identified all scenic resources within 10 miles of the Project that would have visibility and would result in potential visual impacts. *Tr. Day 30/Afternoon Session*, pp. 59-60. CFP and others misinterpret this rule to support their inaccurate proposition that scenic resources should be identified by assessing theoretical visibility.

and Jeremy Owens, CFP Ex. 138, p. 7; see also *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, pp. 78–79. The NPT VIA, however, identified potential scenic resources by critically assessing and reviewing numerous data bases available in the State, such as, NH GRANIT data bases (ConsNH, recreational trails, scenic byways, water data), snowmobile trails, National Register of Historic Places (National Parks Service), State Register of Historic Places, GNIS points – digitized points from USGS map, State ATV Trail Map, and NHDHR eligible Historic Places. *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 11-13. The NPT VIA reviewed government and organizational materials, and material available on the internet, such as municipal master plans, recreation plans, and natural resource inventories; conservation commission planning documents; designated river management plans; scenic byways corridor management plans; the National Conservation Easement Database website; town and State websites including NHF&G, NH Parks and Recreation, DES Water Division for List of Public Waters;<sup>137</sup> New Hampshire Department of Resources and Economic Development for state-owned properties. *Id.* In addition, TJD&A also conducted internet searches, studied aerial photographs, and Google Street View, and read and assessed multiple guide books across the state. *Id.* All of these resources were used to develop a complete list of scenic resources within the APVI.<sup>138</sup>

---

<sup>137</sup> During direct examination of AMC’s witnesses, Dr. Kimball implied that using the DES Water Division List of Public Waters was unsatisfactory. *Tr. Day 62/Morning Session*, p. 23-24. However, using DES Water Division *NH Official List of Public Waters* to determine “public waters” in New Hampshire is consistent with prior projects that have appeared before the SEC. See *Antrim Wind Visual Impact Assessment*, Docket 2015-02, p. 7-8 (September 3, 2015). In addition to the use of the *NH Official List of Public Waters*, TJD&A also scoured town and state websites and other publicly available materials to identify public waters. Moreover, AMC has not provided any evidence to support their position that TJD&A did not assess publicly accessible water bodies that are also tourism destinations. See *infra*, section Part C, §III, A, 2(v) (discussion of Site 102.45(c)).

<sup>138</sup> CFP’s brief faults the NPT VIA for relying on publicly available materials in the identification of scenic resources and argues that TJD&A should have reached out to towns, local organizations, and individuals to assist in the identification of scenic resources. However, it is common practice for towns to

TJ Boyle, on the other hand, simply took all the aforementioned data-bases and concluded that all resources<sup>139</sup> within those data-bases needed to be reviewed as “potential scenic resources.” *Pre-Filed Testimony of Michael Buscher, Palmer, and Jeremy Owens*, CFP Ex. 138, Exhibit 4, pp. 68-70. Consequently, TJ Boyle testified that the 18,993<sup>140</sup> resources identified in their initial report was a preliminary starting point and the list of 7,417 submitted with their April 2017 supplemental testimony represented the first winnowing down step. As demonstrated on cross-examination, many of the resources on the so-called winnowed down list of 7,417 are either duplicates,<sup>141</sup> do not qualify as a scenic resource,<sup>142</sup> do not have public access,<sup>143</sup> or do not

---

identify and designate scenic resources, which can then be listed in publicly available formats, such as in master plans. *See e.g.*, App. Ex. 324, *Preliminary Review of Antrim Wind Energy Ordinance And Wind Energy Siting Considerations*, Jean Vissering (July 25, 2011) (Jean Vissering, after writing this, served as Counsel for the Public’s visual expert in Antrim I).

<sup>139</sup> TJ Boyle’s analysis identified resources with *potential* visibility of the Project based solely on bare ground visibility. TJ Boyle’s identification process did not follow the rules, which require an identification of only those resources that *would* have a view of the Project. The concept of bare ground visibility is discussed further *infra* Part C § III, A, 2, b.

<sup>140</sup> If TJ Boyle’s interpretation of the rules was correct, it would require an applicant to spend many, many years analyzing data. *Tr. Day 46/Afternoon Session*, pp. 110-11. Indeed, while Mr. Buscher and Mr. Palmer stated that not all 7,000 potential scenic resources need a full evaluation, Mr. Palmer held steadfast that the number of “potential resources that appeared to be worthy of evaluation remains at, you know, 5, 6000, something like that.” *Id.* CFP’s final brief argues that part of the reason TJD&A did not identify 18,000 resources is because it would have “taken too long.” Their conflation of this issue is not accurate. The rules require an identification of actual scenic resources that meet the definition of Site 102.45, not resources that do not satisfy the definition in the rules (as TJ Boyle did here).

<sup>141</sup> Mr. Buscher stated that “[i]t wouldn’t surprise me” when asked if his identification of 7,417 potential scenic resources still contained “a substantial amount of double counting.” *Tr. Day 46/Afternoon Session*, pp. 54-55. Mr. Buscher implied that it was not TJ Boyle’s responsibility to analyze the list of 7,417 potential scenic resources that they identified. *Id.* at 55. Their contention does not comport with the SEC requirement that an Applicant identify “all scenic resources within the area of potential visual impact”. Site 301.05(b)(5).

<sup>142</sup> TJ Boyle conceded that its list of 7,417 “potential scenic resources” are not actually all “scenic resources” as defined under the SEC rules. *Tr. Day 46/Afternoon Session*, p. 45. During cross-examination TJ Boyle was shown multiple sites that would, in fact, not qualify as a scenic resource including a Cheer Center that is now a firehouse, an indoor arcade and bowling alley, a go-cart track, a privately owned dam off Sheep Davis Road in Concord, pieces of conservation land located in-between houses in a sub-division, and a community center in Franklin. *Tr. Day 46/Afternoon Session*, pp. 43-49. Mr. Buscher erroneously interprets the rules as requiring an applicant to identify all *potential* scenic resources. *Tr. Day 47/Afternoon Session*, p. 47. (“I would probably note [a resource] as being identified through our background research, and then clearly give a reason why it wouldn’t be considered a scenic

possess requisite scenic quality. In sum, the list compiled by TJ Boyle in no way comports with the SEC rules and is essentially a meaningless amalgamation of sites that bear virtually no relationship to a useful list of locations which would merit serious scrutiny under the SEC rules. The NPT VIA, meanwhile, completed a full analysis of resources within the APVI and specifically determined which resources qualified as scenic resources under the SEC rules.

Further, as described in Mr. DeWan’s and Ms. Kimball’s supplemental pre-filed testimony, “[t]he Project VIA went above and beyond the SEC rules to be overly inclusive in the identification of scenic resources” by identifying “all scenic resources within 3 miles of the Project, regardless of whether they would be considered visible;” “beyond the 3-mile mark, [TJD&A] followed the SEC rules by limiting identification to areas within the APVI because the visual impact beyond this point would be far less (based on distance from the Project).” *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 93, p. 8-9 (emphasis added). As explained in detail below, TJD&A’s methodology is consistent with the SEC’s rules and prior VIA’s completed and accepted by this Committee.<sup>144</sup>

- i. A “scenic resource” must provide the general public with a “legal right of access”

To qualify as a scenic resource, the public must have a legal right of access to the resource. Site 102.45. The rules, however, do not define or clarify what constitutes “legal right

---

resource.”). Strikingly, Mr. Palmer further acknowledged that there could be literally thousands of resources on their list of 7,417 that may not actually qualify as scenic resources. *Tr. Day 46/Afternoon Session*, p. 51. Moreover, the SEC rules do not require an identification of all “potential” scenic resources. *See*, Site 301.05(b)(5).

<sup>143</sup> TJ Boyle did not determine whether all of the resources on its list of 7,417 identified resources were publicly accessible. TJ Boyle acknowledged that resources on its list of 7,417 were not, in fact, publicly accessible. *Tr. Day 46/Afternoon Session*, p. 62. On the other hand, Mr. DeWan and Ms. Kimball determined whether a listed resource was publicly accessible on a resource-by-resource basis. *Tr. Day 46/Afternoon Session*, p. 60.

<sup>144</sup> *See Antrim Wind Visual Assessment*, Docket No. 2015-02, pp. 6-8 (September 3, 2015) (describing scenic resource identification process); *see also Merrimack Valley Reliability Project*, Docket No. 2015-05, pp. 15-19 (December 31, 2015).

of access.” The NPT VIA “considered public access as having a way to both physically and legally access a property, consistent with prior visual impact assessments submitted to the NHSEC.” *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 14. In conjunction with site visits and the research described above, TJD&A was able to determine whether the public has a legal right of access to a specific resource on a site-by-site basis. *Id.* TJD&A’s interpretation of the meaning of “legal right of access” is consistent with New Hampshire case law and common law.

As a preliminary matter, TJ Boyle admitted that it did not review either of its lists, whether it be their initial list of over 18,993 potential resources or its so-called winnowed down list of over 7,000 potential resources, to determine if each location had the requisite “public access” to qualify as a scenic resource. *See Tr. Day 46/Afternoon Session*, p. 60. As demonstrated on cross-examination, many of the resources on its winnowed down list do not in fact have public access.<sup>145</sup> *See Tr. Day 46/Afternoon Session*, p. 61-63 (confirming that TJ Boyle did not conduct an analysis of public access and that their identification of potential resources was only “an initial level and an initial methodology”). Based on TJ Boyle’s lack of any further assessment or narrowing of the 7,417 resources, there is no credible basis for concluding that the so-called potential resources on their list actually meet the SEC definition of a scenic resource.<sup>146</sup>

---

<sup>145</sup> TJ Boyle’s list of resources includes locations that unequivocally do not provide for public access (and Mr. Buscher testified that TJ Boyle made no effort to even verify whether resources TJ Boyle identified even existed), such as the New Hampshire State Military Reservation, the Northwood Driving Range (that is no longer in operation), the Pembroke Water Works (that is clearly marked as private property), and a property in Concord (that has clearly been marked as private property with a no trespassing sign). *Tr. Day 46 PM at 62 to 63. See also Tr. Day 46 PM at 52* (Mr. Buscher asserting that a membership-only shooting range included on TJ Boyle’s list of resources should be considered publicly accessible when performing a VIA).

<sup>146</sup> Site 202.19(a) provides that “[t]he party asserting a proposition shall bear the burden of proving the proposition by a preponderance of the evidence.”

Moreover, TJ Boyle is mistaken that the NPT VIA did not assess publicly accessible scenic resources.<sup>147</sup>

As compared to the position taken by TJD&A, CFP argues in its Post-Hearing Brief that “resources to which the public has a legal right of access” includes “a broad category of resources to which the public has ‘the ability, right, or permission to [ ] enter...or use[.]’” *Counsel for the Public Final Post-Hearing Brief*, Docket No. 2015-06, pp. ADD5-ADD6. This position, on its face, confuses the “legal right of access” or the “*right* of access,” with distinctively different cases involving the *ability or permission to enter property*. There is no basis in law for the much broader claims asserted by CFP. The position of CFP is an exercise in circular reasoning and contrary to the law. Any person who has the *physical* ability to enter the private property of another would be said to have a legal right to do so in its view. In fact, it is just the opposite. Only those having the right to enter can be said to have the lawful ability to enter. Similarly, CFP claims that permission to enter land is to be transformed into an unfettered right to do so.

CFP cites *F.D.I.C. v. Caia*, 830 F. Supp. 60 (D.N.H. 1993) to support this assertion; however, CFP’s reliance on *F.D.I.C.* is deeply flawed. Most notably, *Caia* addresses concerns regarding private landowner rights and easement rights over land and does not involve public lands or the ability of the public to access private property. Moreover, the Court never defined the phrase “legal access.” Instead, the Court held that the unqualified word “*access*” is defined

---

<sup>147</sup> CFP’s final brief on this issue is misleading. They incorrectly claim that TJD&A did not assess town forests, water bodies, state parks, scenic byways, and historic sites. The record demonstrates the exact opposite is true. *See, e.g.*, App. Ex. 1, Appendix 17, pp. 1-113 (referencing Milan Town Forest), C-2 (discussing the six subareas and the fact that the overview for each area includes a description of the water bodies present, 6-46 (includes a photosimulation prepared for Pawtuckaway State Park, 6-27 (discussing the Upper Lamprey Scenic Byway), M-8 (describing the methodology employed and noting that State historic sites are of medium cultural value. Interestingly, CFP’s brief does not identify any specific resources that were missed and that actually qualify as a scenic resource.

as “the ability, right or permission to [], enter...or use.” *Id.* at 65; *citing* The Random House Dictionary of the English Language (emphasis added). The court did not define the phrase *legal access*. Simply having the *ability* to enter land does not grant individuals a legal right of access. In fact, *Caia* goes on to say “[t]his definition aptly describes *one of the characteristics* of nonpossessory interests in land of which easements are a subcategory.” *Id.* at 65 (emphasis added). This means that there is more required for a member of the public to have a nonpossessory interest sufficient to create legal access other than the simple “ability” to enter or use land. Similarly, it is not enough, as CFP seems to suggest, that “the public as a whole has the ability, right or permission to enter or use a significant number of resources beyond the state resources, including various forms of private property.” *Counsel for the Public Final Post-Hearing Brief*, Docket No. 2015-06, p. ADD6 (January 12, 2018).

CFP also relies on two New Hampshire State Supreme Court cases, *Berlinguette v. Stanton*, 120 N.H. 760 (1980) and *Capitol Plumbing & Heating Supply Co., Inc. v. State*, 116 N.H. 513 (1976). Both of these cases involve takings claims, however, and are not relevant to the issue before the SEC regarding the definition of “legal right of access.” To the extent these cases have any bearing on this discussion, the Court in both cases clearly implies that there are two elements relevant to the question of legal right of access – whether an individual has the physical means to enter a property and whether an individual has a legal or other possessory right to access the property. In *Capitol Plumbing & Heating Supply Co., Inc.* the court expressly called out this distinction holding that “there has been no taking over of the property, but rather a cutting off of the right of access for a temporary period. There was in fact no actual loss but only of the legal right off access.” *Id.* at 515. Implicit in this assertion is that a legal right of access

requires more than just an ability to enter, but rather implies a “right of access” that can be either given or denied.

CFP also misconstrues the common law in New Hampshire by asserting that a landowner that does not “post” their property (i.e., by putting up a publicly displayed notice which informs people they are trespassing if they enter their property) provides members of the public with a legal right of access to that private property without any invitation or permission from the underlying landowner. Contrary to CFP’s misinterpretation of New Hampshire common law, New Hampshire has long recognized that “a trespasser is a person who enters or remains on land in the possession of another without the possessor's consent or other legal privilege.”<sup>148</sup> Restatement (Third) of Torts: Phys. & Emot. Harm § 50 (2012). In other words, members of the public do not, generally, have a right to enter all private property in New Hampshire. Contrary to the position taken by Counsel for the Public on the meaning of the legal right of access, the New Hampshire Supreme Court has held that the mere existence of open land, without any form of posting, is insufficient to establish a public legal right of access. “The fact that the ground was unenclosed, and that...people at their pleasure went there without objection, was not an invitation; and from that fact alone no license to go there can be inferred.” *Clark v. City of Manchester*, 62 N.H. 577, 579 (1883). While in *Ouellette v. Blanchard*, 116 N.H. 552 (1976), the New Hampshire Supreme Court held that the historical distinctions between invitee, licensee, and trespasser as the sole determinants of the standard of care owed by an occupier of land was no longer applicable, the common law principle that it is a trespass to enter land without consent,

---

<sup>148</sup>The New Hampshire Supreme Court has held that “[o]ne is subject to liability to another for trespass, irrespective of whether he thereby causes harm to any legally protected interest of the other, if he intentionally (a) enters land in the possession of the other.” *Case v. St. Mary's Bank*, 164 N.H. 649, 658 (2013). Actions that would otherwise constitute trespass, however are not trespass if they are privileged, i.e. the owner or possession of the land has consented to the entry. *Case v. St. Mary's Bank*, 164 N.H. 649, 658 (2013)(Holding a Bank was privileged to enter by virtue of its mortgage agreement).

as articulated in *Case v. St. Mary Bank*, remained unchanged. *Case v. St. Mary's Bank*, 164 N.H. 649, 658 (2013).

Consistent with this authority, New Hampshire has specific statutes that deal with the rights and liabilities of landowners “who without charge permit[ ] any person to use land for recreational purposes.” N.H. Rev. Stat. Ann. § 508:14; similarly RSA 212:34 applies only to “[a] landowner who gives permission to another to enter or use the premises for outdoor recreational activity.” N.H. Rev. Stat. Ann. § 212:34. These statutes are premised on the legal proposition that a landowner gives permission to members of the public to use private property.<sup>149</sup> There is no implication that such use is permitted as a matter of right. As noted in the Restatement (Third) of Torts: Phys. & Emot. Harm § 50 (2012), an “actor’s privilege to enter land created by consent of the possessor [even consent by custom] is terminated by (the doing of any act...(b) a revocation of the possessor’s consent...(c) a transfer or other termination of the possessor’s possessory interest in the land.” In other words, consent by custom or otherwise, can be withdrawn at any time pursuant to the property owner’s legal right to exclude. New Hampshire common law has not even recognized such a custom of permission. Not surprisingly, CFP has not cited any New Hampshire case in support of the proposition regarding custom in New Hampshire.

---

<sup>149</sup>Engaging in hunting or fishing on private property in New Hampshire is not an automatic right. New Hampshire Fish and Game in its "Hunters Guide to Landowner Relations" recommends that hunters meet with landowners and seek permission before engaging in hunting or fishing on private property. New Hampshire Fish and Game specifically states that "[i]f we are to maintain the rich New Hampshire hunting tradition, it is important to remember than access to private land is a privilege provided to us through the generosity of the landowner." See New Hampshire Fish and Game, *Hunter's Guide to Landowner Relations*. <http://www.wildlife.state.nh.us/landshare/hunters-guide.html>.

CFP's position rests, in part, on the incorrect proposition that the New Hampshire criminal trespass statute in some way redefines<sup>150</sup> the common law of civil trespass. It is clear, however, that the provisions of the criminal trespass statute do not change the scope of the civil law on trespass. RSA 635:2 establishes the basis for a criminal prosecution against an individual who trespasses on posted property. Under the statute, criminal charges may also be brought against anyone who "knowingly enters or remains in any place in defiance of an order to leave or not to enter which was personally communicated to him by the owner." RSA 635:2, II (b)(2). The criminal trespass statute does not alter the right of a property owner to assert civil trespass claims against any person who enters private property without permission or fails to leave when asked. Accordingly, it does not follow from the terms of the criminal trespass statute, as Counsel for the Public argues, that the general public has an unfettered right of access to all unposted private property.

CFP mischaracterizes the law and the purpose of posting property in New Hampshire by asserting that "[m]any landowners in New Hampshire...have chosen not to post their property and instead permit access to their property by members of the public." *Counsel for the Public Final Post-Hearing Brief*, Docket No. 2015-06, p. ADD7. The absence of posting is not the equivalent of opening up private property for public use. Rather it means that no criminal case for trespassing will lie. Moreover, such a construction does not reflect either the terms, or applications in practice, of the SEC rules applicable to evaluation of scenic resources. Certainly,

---

<sup>150</sup>Of course, statutes are presumed not to have such an effect, and accordingly a statute that modifies the common law will only be given such effect if its purpose to do so is unmistakably clear on its face. There is no such clearly stated purpose of the New Hampshire criminal trespass statute. *See Jones v. City of Albany*, 151 N.Y. 223, 228 (1896)("It is the rule that an intention to change the rule of the common law will not be presumed from doubtful statutory provisions. The presumption is that no such change is intended, unless the statute is explicit and clear in that direction."); *see also Taylor v. Thomas*, 77 N.H. 410 (1914)("hence the principles already established for this purpose at common law remain in force, unless expressly changed by statute.")

there is no requirement when land is enrolled in current use that landowners open the land for public use. This is evident, in part, because the current use statute provides additional tax incentives, separate and apart from enrollment in the current use program, to landowners who choose to open their property up for public use, *see RSA 79-A:4(II)*, public access should also not be considered automatic or synonymous with current use.<sup>151</sup>

CFP's interpretation of the definition of "public access" is also contrary to SEC precedent as well as previous positions of the Attorney General. For example, TJ Boyle's list of resources assumes that all places where the public is required to pay in order to access a place is consistent with the principle of "legal right of access".<sup>152</sup> However, in the Antrim Wind docket, the SEC addressed this exact issue and considered whether a location that requires paying a fee for access was considered publicly accessible. The SEC concluded that when one pays a fee to access a viewpoint from a private area, such a resource would not be publicly accessible. *See Antrim Wind Deliberations Tr. Day 1/Afternoon Session*, pp. 43-46; *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, p. 118 (March 17, 2017)(concluding that "Without paying the fee, the general public cannot access and does not have a legal right of access" to Black Pond and therefore it "is not a 'scenic resource' as defined by the Committee's rules and shall not be considered while ascertaining the impact of the Project on aesthetics"); *see also Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 6 (September 3, 2015)("Not included in this VIA are private commercial businesses and residences, since

---

<sup>151</sup> Current use parcels that are open to the public for limited recreational opportunities are still not scenic resources under the SEC rules because they are not parcels that are maintained in whole or in part by public funds. Site 102.45(d).

<sup>152</sup> *Tr. Day 47/Morning Session*, p. 56 (TJ Boyle concluding that guest rooms and the spa tower at the Mountain View Grand, which require a fee for access, are "publicly accessible" under the SEC rules). While TJ Boyle maintains that private guest rooms are publicly accessible (which is contrary to SEC precedent), Mr. DeWan and Ms. Kimball assessed the components of the Mountain View Grand that are, in fact, publicly accessible (i.e., the access road, front porch, front lawn) and do not require a fee. *Application*, App. Ex. 1, Appendix 17, p. 2-34 to 2-39.

admission to these locations is prohibited, fee-based, or not readily accessible to the public at large.”); *see also Tr. Day 47/Morning Session*, pp. 131-34 (quoting Antrim Wind and discussing public access and the effect of requiring a fee has on public access). In fact, this is a perfect example of how TJ Boyle’s failure to assess prior SEC decisions and project VIA’s resulted not only in TJ Boyle’s work being deficient, but also in TJ Boyle offering meritless criticisms of TJD&A’s work.<sup>153</sup>

As stated during the Committee's Antrim II deliberations “classifying private property that you can pay to go into as a scenic resource [is] kind of a dangerous proposition.” *Tr. Deliberations*, Docket 2015-02, p. 43 (December 9, 2016)(Patricia Weathersby addressing concern regarding including private property available to the public for a fee). Even Dr. Boisvert, an Antrim Subcommittee member who felt that property that could be rented out should be included as a scenic resource, drew a distinction between the private property available for rental and the private home owners association, White Birch Point Historic District, because as he put it, “[t]hey do have a private situation there.” *Tr. Deliberations*, Docket 2015-02, p. 41 (December 9, 2016). During deliberations the Committee took the position that “[a] scenic resource is necessarily a place that the public has a right of access. So it’s not a view from home...But [the rule] speaks to the public – to the scenic resources to which the public has a right of access...So to me that is, you know, the mountains, the swamp, the lakes.” *Tr. Deliberations*, Docket 2015-02, p. 39 (December 9, 2016) (Patricia Weathersby identifying “scenic resources” covered by the rule). The position taken by the Subcommittee in Antrim II

---

<sup>153</sup> CFP’s brief misrepresents that the NPT VIA did not consider state parks and inaccurately cites to *Tr. Day 34/Morning Session*, pp. 124-25. The NPT VIA unquestionably identified all town forests, municipal parks, and state and federal parks within the APVI as scenic resources. *See, e.g., Application*, App. Ex. 1, Appendix 17, at M-8, 1-32–33. The brief also misstates that the NPT VIA did not assess scenic byways even though the evidence in the record indicates otherwise. *See, e.g., id.* at C-3.

demonstrates that the SEC has not interpreted its rules for "evaluation of scenic resources to which the public has a right of access" to include all unposted private property.

CFP's interpretation of the phrase "legal right of access" in the definition of scenic resources under the SEC rules does not reflect well established New Hampshire case law on the rights of private property owners and is contrary to the rulemaking history and SEC precedent on this issue. New Hampshire common law makes it clear that members of the public do not have a right to enter private property without consent. These distinctions plainly underlie the treatment of the distinction between private and public lands in SEC rulemaking history and SEC precedent.

ii. So-Called "Visual Access" is Not Legal Access At All

As discussed immediately above, to qualify as a scenic resource under the SEC rules, Site 102.45 requires that the public have a legal right of access to the resource. Certain parties, including CFP and their expert TJ Boyle, D&F and AMC, ignore the plain language of the rule and essentially invent the new concept of "visual access" (i.e., being able to view the project in a landscape that is privately owned from publicly accessible property) and then extend this errant notion to equate it with public access. *See, Tr. Day 46/Morning Session*, p. 27; *see also Tr. Day 47/Morning Session*, p. 16; *see also Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 77. In essence, these witnesses argue that the SEC rules require an assessment of potential impacts while looking towards (at or of) a scenic resource—and not *from* a scenic resource.<sup>154</sup>

---

<sup>154</sup> CFP's brief also mischaracterizes TJD&A's position and the record on this matter. *See Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 77. To qualify as a scenic resource, one must have a legal right of access, not simply visual access. *See e.g., Tr. Day 31/Morning Session*, p. 8 (Mr. DeWan disagreeing that "visual access" alone would qualify a resource as a "scenic resource"); *Tr. Day 31/Afternoon Session*, p. 25 (Mr. DeWan stating that visual access does not equate to public access); *Tr.*

The Applicant confronted this issue during cross examination, pointing out that the rules repeatedly refer to analysis “from” a resource. For example, when questioned, Mr. Buscher testified that the SEC should consider the concept of “visual access”, that he did not interpret the SEC rules as requiring an assessment of potential impacts only *from* a scenic resource, and that there is “discretion” that needs to be taken when assessing potential impacts.<sup>155</sup> *Tr. Day 47/Morning Session*, pp. 16-17. Mr. Owens also implied that one may have “visual access” to a historic building from a public road, which would require an assessment. *Tr. Day 47/Morning Session*, pp. 19-20. Such an interpretation<sup>156</sup> is inconsistent with both the plain meaning of the SEC rules and the intent of the rules as indicated by the rulemaking transcripts (discussed further below). Moreover, requiring an applicant to assess views *of* a scenic resource would be inconsistent with prior SEC practice.<sup>157</sup>

The Committee’s rules require an Applicant, and the SEC, to assess potential impacts *from* a scenic resource. For example, Site 301.05(b)(1), Site 301.05(b)(5), and Site

---

*Day 31/Afternoon Session*, pp. 177-78 (Mr. DeWan differentiating visual access and public access relating to historic private homes); *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 14 (defining legal right of access to require both physical and legal access to a property).

<sup>155</sup> Mr. Buscher conceded that the concept of “visual access” does not appear in the TJ Boyle report. *Tr. Day 47/Morning Session*, pp. 16-17.

<sup>156</sup> Mr. Dodson and AMC also mistakenly take the same position on this issue as TJ Boyle. *See Tr. Day 55/Afternoon Session*, pp. 59-60 (claiming that public access should be considered where travelling on a road in a public domain offers views of a private residence, erroneously asserting that “just because something’s a private residence doesn’t eliminate it from consideration, as long as there are other components in the view,” and concluding that “views of resources” such as from an undesignated road looking at a private residence is important); *Tr. Day 62* at page 69–70 (considering public access to include a view from a public viewpoint, such as a road, and looking at a historic building with the power line behind the historic building).

<sup>157</sup> *See Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 16-17 (September 3, 2015)(determining visual effect *from* sensitive scenic resources and assessing six criteria to determine “how visible a project may appear in the landscape *from* a particular resource”); *see also Merrimack Valley Reliability Project*, Docket No. 2015-05, p. 25 (December 31, 2015)(determining project visual impact by assessing selected viewpoints that “provide open views toward the Project site (as determined through field verification) *from* areas that could be considered scenic resources within the visual study area”).

301.05(b)(6)(c)–(d), all require a VIA to assess potential impacts of a Project from the resource, not of the resource. *See also* Site 301.05(b)(7) (requiring “[p]hotosimulations from representative key observation points, from other scenic resources for which the potential visual impacts are characterized as “high” . . . and, to the extent feasible, from a sample of private property observation points within the area of potential visual impact”). *See also* App. Ex. 347 (compilation of SEC rules requiring an analysis from scenic resources, not of scenic resources). In addition, when assessing impacts, the Committee must focus their review of potential impacts by assessing views from scenic resources.<sup>158</sup>

While the regulations are clear that the analysis must be done from a scenic resource, TJ Boyle inexplicably testified that the rules are “not clear” and that it did not interpret the rules “necessarily as saying a view from a scenic resource.”<sup>159</sup> *Tr. Day 47/Morning Session*, pp. 16-17. Such testimony strains credulity, undermining TJ Boyle’s credibility. On the other hand, Mr. DeWan and Ms. Kimball followed the SEC rules by assessing potential visual impacts from scenic resources.

Finally, further support for this interpretation is found in the deliberations from the SEC Committee’s rule-making proceedings. During a discussion of the definition and assessment of scenic resources, the SEC spent significant time considering the appropriate vantage point for evaluating scenic resources—whether scenic resources should be evaluated by assessing the

---

<sup>158</sup> *See* Site 301.14(a)(2), (4) and (6) (requiring the SEC to consider the “significance of affected scenic resources and their distance from the proposed facility”; “the scope and scale of change in the landscape visible from affected scenic resources”; and “the Extent to which the proposed facility would be a dominant and prominent feature within a natural or cultural landscape of high scenic quality or as viewed from scenic resources of high value or sensitivity”) (emphasis added).

<sup>159</sup> Without any basis, Mr. Dodson assumes SEC rules consider views from “non-designated roads” that look out towards a historic farmstead, woods, and the mountains. *Tr. Day 55/Afternoon Session*, pp. 60-62. However, Mr. Dodson conceded that the rules do not mention anything about “views of resources.” *Tr. Day 55/Afternoon Session*, p. 62 (emphasis added). AMC also mistakenly contended that views of a resource should be considered. *Tr. Day 62/Morning Session*, p. 70.

views and effect from the resource itself or whether the effect on the resource should be assessed by looking at the resource in context from other surrounding properties.

DES Commissioner Burack stated “if we were to broaden this definition to include private—privately held or privately owned scenic resources, a place that you are looking out from, I just don't know what that means, in terms of how you would go about applying this definition.” *Tr. Rulemaking*, Docket 2014-04, p. 47 (September 21, 2015). The Committee noted, unlike with private property, “if it’s a public resource, it is a point at which many members of the public, as well as the applicant, could actually go to study and understand what that impact is.” *Tr. Rulemaking*, Docket 2014-04, pp. 47, 50-53 (September 21, 2015) (determining that the focus of an analysis of scenic resources should be “from the perspective of the scenic resource”). In fact, Chairman Honigberg opined that as the SEC rules are written, it is clear that the aesthetics analysis must be done as if “you’re at the scenic resource and looking at the facility” and that an applicant must complete an “inquiry into how the facility would affect the view *from* the affected scenic resource.” *Id.* at 51 (emphasis added). It is plain that the Committee’s actions in adopting the rules make a clear distinction between assessing views *of* scenic resources with no public access (which is not covered by the rule) and views *from* scenic resources.

iii. Current Use Properties Do Not Qualify as Scenic Resources Under the SEC Rules

CFP and other parties opposed to the Project also wrongly conclude that current use parcels must be evaluated as “scenic resources.”<sup>160</sup> Current use parcels, however, have not been assessed or considered in prior visual impact assessments performed in New Hampshire. In fact,

---

<sup>160</sup>However, TJ Boyle has never interpreted the SEC rules before, has not reviewed prior VIAs or SEC decisions, and has not conducted any analysis of current use properties other than to suggest that they qualify as scenic resources. *See supra* Part C, III, A, 2, a; *Tr. Day 46/Afternoon Session*, p. 96.

evaluating current use parcels is contrary to the plain language of the SEC rules,<sup>161</sup> is inconsistent with the principle of “legal right of access” and there is no support anywhere, including in the rulemaking docket, for the notion that such land could be considered a scenic resource.<sup>162</sup>

CFP and opposing parties argue that a tax break—one that an individual landowner could potentially receive if their current use property is opened up to the public for some forms of recreation—is equivalent to establishing, protecting or maintaining an area in whole or in part with public funds. A tax break, however, does not amount to the receipt of public funds. *See Transcript Day 30/Afternoon Session*, pp.125-28. TJ Boyle’s conclusions also create an internal inconsistency as Mr. Palmer testified that he did not consider properties that receive other types of discounts or tax-related reductions (that are available for property owners throughout the state, for instance, veterans who receive a discount from their property taxes) as established, protected, or maintained by public funds. *Tr. Day 47/Morning Session*, p. 155.

Assuming, arguendo, that TJ Boyle’s interpretation of this rule were correct, a VIA under the SEC rules would require an Applicant to assess all current use properties that receive a recreation adjustment. Such a task would be nearly impossible as, according to TJ Boyle,

---

<sup>161</sup> The SEC rules do not require a VIA to assess current use properties and the SEC has never before considered current use parcels in the assessment of an application.

<sup>162</sup> CFP and TJ Boyle, as well as other parties, mistakenly assume that parcels in the current use program with a recreational adjustment—which land is open for members of the public to engage in a limited amount of activities, namely, hunting, fishing, snowshoeing, hiking, skiing, nature observation—are publicly accessible. *See RSA 79-A:4* (establishing an additional 20% discount if there is no prohibition on the aforementioned activities on the current use parcel). The opposing parties’ interpretation is inconsistent with general concept of “legal right of access” which contemplates allowing generalized access to a property. The recreation adjustment does not require general public access, and merely requires a landowner to open up their land for very few specific use activities. In addition, the recreation adjustment allows property owners to exclude mechanized vehicles, off-road vehicles, and camping, as well as some other uses that are not expressly allowed—and therefore are prohibited—including swimming, road and/or mountain biking, rock climbing, bouldering, horseback riding, water sports, etc., all of which are generally considered recreational activities. *See State of New Hampshire Current Use Criteria Booklet for April 1, 2015 to March 31, 2016, NH Dep’t of Rev.* Therefore, “access” to current use parcels is not consistent with the principle of “legal right of access.”

approximately 2.8 million acres of land in New Hampshire are in the current use program and 884,100 acres of these lands are active participants in the recreational adjustment category of current use.<sup>163</sup> *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, Exhibit 4, p. 76. Moreover, SEC VIA's have not treated current use parcels as scenic resources in prior proceedings.

The Joint Munis also argue that current use properties should be considered “scenic resources” under Site 102.45(d). They essentially claim that the current use system “rewards private property owners with a reduction in property taxes in exchange for retaining all or at least 10 acres or more of that property in its ‘current use’ as open space land” and that such qualifying lands are “valued at a lower rate than it otherwise would be.” The Joint Munis’ argument misstates the property assessment, tax payment and collection process in New Hampshire, which makes it clear that the current use recreation adjustment program does not equate to the establishment, protection, or maintenance of an area in whole or in part with public funds. *See Tr. Day 35/Morning Session*, pp. 143-46. In fact, during the re-direct examination of Mr. DeWan and Ms. Kimball, it became clear that public funds are not used at all to establish or protect current use properties. *Id.* To the extent there are properties subject to the current use recreation adjustment in a town, the town simply raises the necessary money for the town’s expenditures by taxing other property owners. *Id.* In fact, there is no diversion or expenditure of public funds in the current use program. Current use parcels (which are merely valued at a lower rate) are not established, protected, or maintained by public funds because they do not in fact receive any funds. Therefore, contrary to the Joint Muni’s position, a reduction in a property’s

---

<sup>163</sup>Moreover, Ms. Kimball testified that an existing spatial database of all current use properties does not exist. *See Tr. Day 30/Afternoon Session*, pp. 128-30. Ms. Fenstermacher also acknowledged that there is “no spatial data available” for current use properties. *See Tr. Day 60/Afternoon Session*, pp. 90-91.

assessed value is not synonymous with establishing, protecting, or maintaining and current use properties should not be considered a “scenic resource”. *Id.*

- iv. Historic Sites Must Be Publicly Accessible and Be Listed, or Eligible for Listing, on the National Register or State Register of Historic Places to Qualify as a Scenic Resource

The NPT VIA assessed all historic sites listed on the National and State Register of Historic Places, as well as those determined to be “eligible” for listing on both registers. *See Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 15-17; App. Ex. 93, pp. 11-14. Continuing its mistaken reading of the SEC rules, CFP and TJ Boyle (as well as SPNHF and AMC) maintain that the NPT VIA did not adequately consider historic sites, as that term is defined by Site 102.23.

The NPT VIA assessment of historic sites is consistent with the DHR’s interpretation of the definition of historic sites in a SEC proceeding as determined in its *Policy Memorandum – Agency Review of Applications before the New Hampshire Site Evaluation Committee*. *See* App. Ex. 116, p. 3. Indeed, only those above-ground historic properties that have been “identified through the preparation and submission of area and individual inventory forms” meet the definition of a historic site pursuant to Site 102.23. *Id.* The NPT VIA (by also considering those properties solely deemed to be *eligible* for listing and not actually on the State or National Register of Historic Places) is also significantly more inclusive than prior VIAs considered by the SEC since passing the new rules. *See Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 6 (September 3, 2015) (stating that historic sites and resources are not analyzed in the VIA, with the exception of National Historic Landmarks); *see also Application Merrimack Valley Reliability Project*, Docket No. 2015-05, p. 15–16; 94–98 (December 31, 2015) (assessing only

those historic sites that are *listed* on the National Register of Historic Places or State Register of Historic Places).

TJ Boyle alleges that a total of 1,290 “potential historic resources” should have been evaluated<sup>164</sup> (*Supplemental Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 139, p. 4, Table 1) but, those resources are merely “*potential*” historic resources that have not been evaluated or determined “eligible” by the DHR.<sup>165</sup> Inasmuch as these 1,290 potential sites have not been evaluated and determined eligible, they do not meet the definition of a “scenic resource” and therefore do not need to be assessed in a VIA.<sup>166</sup>

---

<sup>164</sup> AMC also inaccurately contends that the Applicants did not assess certain historic sites. However, Dr. Kimball conceded on cross-examination that he did not consider the DHR’s Policy Memorandum, which specifically addresses how DHR defines “historic sites” in the SEC process. *Tr. Day 62/Morning Session*, p. 133.

<sup>165</sup> TJ Boyle’s list of historic resources specifically included 1,290 potentially eligible historic sites—these sites were obtained from a data base simply because they were constructed before 1968. *See Supplemental Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 139, Appendix G, p. 2; *Tr. Day 46/Afternoon Session*, p. 79. TJ Boyle acknowledged that they had never seen the DHR Policy Memorandum before, that they did not conduct any review of “eligibility” for the State or National Register of Historic Places, and that they did not conduct an analysis of public access for the 1,290 “potential historic resources” listed on TJ Boyle’s list of 7,417. *Tr. Day 46/Afternoon Session*, pp. 75-80. Because they have not been assessed for public access and an eligibility determination has not been made on these 1,290 sites, they do not qualify as a scenic resource under the SEC Rules pursuant to NH DHR’s *Policy Memorandum – Agency Review of Applications before the New Hampshire Site Evaluation Committee*. App. Ex. 116, p. 3. Indeed, Mr. Buscher specifically acknowledged that there were various homes and points in the data base that were not publicly accessible. *Tr. Day 46/Afternoon Session*, pp. 80-84.

<sup>166</sup> SPNHF and AMC both contend that the NPT VIA did not assess potential visual impacts to cultural landscapes. They are mistaken. First, the phrase “cultural landscapes” is not defined and only appears once in the SEC rules. *See* Site 301.14(a)(6) (requiring the SEC to consider “the extent to which the proposed facility would be a dominant and prominent feature within a natural or cultural landscape of high scenic quality or as viewed from scenic resources of high value or sensitivity”). The specific requirements for a VIA found at Site 301.05 do not require an assessment of a “cultural landscapes” per se. Notwithstanding the lack of such a specific requirement, the NPT VIA identified and assessed many landscapes known for their scenic quality and assessed scenic resources, including cultural features, within those landscapes. TJD&A’s assessment provides the SEC with sufficient information to assess potential impacts on cultural landscapes. *See e.g., Application*, App. Ex. 1, Appendix 17 at 8-76, 6-5–6-7 (assessing Route 28, Suncook River, and Hillman Farm within the DHR identified Buck Street-Bachelor Road Cultural Landscape; *id.* at 4-46 to 4-51 (assessing Franklin Falls Reservoir and Dam within the DHR identified Franklin Falls Dam–Hill Village Cultural Landscape; *id.* at 1-83 to 1-97 (identifying Pike Pond, Percy State Forest, Devils Slide State Forest, Stark Covered Bridge, and Stark Union Church and

v. Public Roads (and lakes, ponds, rivers, and parks) Do Not Qualify as a “Scenic Resource” Unless They Are Tourism Destinations

Site 102.45(c) includes scenic resources that are “[l]akes, ponds, rivers, parks, scenic drives and rides, *and other tourism destinations* that possess a scenic quality.” Site 102.45(c) (emphasis added). Therefore, to qualify as a scenic resource under Site 102.45(c), the resource must be on the enumerated list and must also be a tourism destination. To conclude otherwise would be to ignore the plain language of the rule referring to “other tourism destinations.” In fact, as the record shows, TJ Boyle did just that—it explicitly ignored this key phrase when it interpreted the rule. When questioned by Attorney Iacopino, Mr. Palmer admitted that TJ Boyle did not consider the word “other” prior to “tourism destinations” when assessing whether a public road would qualify as a scenic resource. *Tr. Day 47/Morning Session*, pp. 153-54.

CFP and other parties erroneously argue that all public roads, regardless of whether they are tourism destinations, should be considered and assessed as “scenic resources” under the SEC’s rules. In response to a data request, TJ Boyle stated that

Site 102.45(c) states that “scenic drives”--meaning the place not the activity--that “possess a scenic quality” are a scenic resource. *It seems safe to assume that most public roads in New Hampshire, particularly those outside of urbanized areas, are therefore a scenic resource.* In addition, when presented with a view that possesses a scenic quality, it is assumed that many drivers and passengers will appreciate it. It was assumed that all areas “possess a scenic quality.”

---

assessing Route 110 Woodland Heritage Scenic Byway, Kauffman Forest, Upper Ammonoosuc River – Northern Forest Canoe Trail, Christine Lake, Nash Stream Forest and Cohos Trail in the DHR identified Upper Ammonoosuc River Cultural Landscape). Second, to the extent SPNHF and AMC argue that a “cultural landscape,” as that phrase is used in Site 301.14(a)(6), necessarily equates to a “historic site,” as defined by Site 102.23, they are wrong. In fact, DHR only recently determined that certain cultural landscapes along the Project route would be eligible for listing on National Register on November 30, 2017. *See App. Ex. 112c*. Therefore, these landscapes would not have been considered a “historic site” until November 30, 2017. As the SEC adjudicative proceedings commenced in April 2017, the NPT VIA cannot be expected to have assessed a cultural landscape (as a historic site and defined by DHR) as a standalone scenic resource.

App. Ex. 329 (emphasis added). TJ Boyle, therefore, asserts that 3,947 public roads—over half of the scenic resources on its winnowed down list of 7,417 “potential resources”—must be assessed for potential impacts from the Project. *Supplemental Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 139, Appendix G, p. 4. Mr. Dodson also testified that he did not evaluate whether public roads were “tourism destinations” when he mistakenly concluded that all public roads could be a “scenic resource” under Site 102.45(c).<sup>167</sup>

CFP and others ignore the plain reading of Site 102.45(c), which refers to “lakes, ponds, rivers, parks, scenic drives and rides” as tourism destinations to qualify as a “scenic resource.”<sup>168</sup> Indeed, the phrase “and other tourism destinations” clearly modifies the introductory phrase of “lakes, ponds, rivers, parks, scenic drives and rides.”<sup>169</sup> Therefore, to qualify as a scenic resource

---

<sup>167</sup> Mr. Dodson also testified that the 43 public roads that Mr. DeWan did not evaluate were not identified as “tourism destinations” and that the word “other” in the definition of scenic resource under Site 102.45(c) does not apply to “the other features in that sentence.” *Tr. Day 55/Afternoon Session*, pp. 53-55. Mr. Dodson could not identify any of these 43 public roads as being designated by a local, state or federal authority. *See Tr. Day 55/Afternoon Session*, pp. 51-52 (stating that “I don’t see any [designated scenic roads] on this list”).

<sup>168</sup> The Joint Muni’s final brief appears to intentionally leave out the phrase “and other tourism destinations” in their discussion of the definition of a “scenic resource” under Site 102.45(c). Instead, they argue, without providing any evidence, that towns maintain a separate “complete list” of scenic roads that is separate and distinct from such roads identified on their websites or within their master plans. However, they fail to cite to any evidence in the record that indicates the NPT VIA did not assess any specific locally designated scenic road.

<sup>169</sup> CFP’s reliance on *ejusdem generis*, a canon of statutory interpretation (*Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 12), is misplaced and, in fact, is directly at odds with New Hampshire Supreme Court precedent. *See State v. Meaney*, 134 N.H. 741, 744 (holding that the principle of *ejusdem generis* provides that: “where specific words in a statute follow general ones, the general words are construed to embrace only objects similar in nature to those enumerated by the specific words”); *see also State v. Breed*, 159 N.H. 61, 65 (“The principle of *ejusdem generis* provides that, where specific words in a statute follow general ones, the general words are construed to embrace only objects similar in nature to those enumerated by the specific words.”); *State v. Wilson*, 165 N.H. 755, 761 (2017) (stating that the principle of *ejusdem generis* provides that, where specific words in a statute follow general ones, the general words are construed to embrace only objects similar in nature to those enumerated by the specific words.”). Most recently, in *Wilson*, a case decided in April 2017, the State specifically questioned the Court’s interpretation of *ejusdem generis* observing that the doctrine had been traditionally understood and applied in the opposite presentation; that is where general words follow a specific enumeration. *Wilson*, 165 N.H. at 761-62. In that case, the Court declined to reexamine its

under Site 102.45(c), a scenic drive or ride (or a lake, pond, river, or park)<sup>170</sup> must also be a tourism destination. TJ Boyle, however, did not provide any evidence to support a conclusion that the 3,947 listed public roads in their supplemental report qualify as a tourism destination.<sup>171</sup> *Tr. Day 46/Afternoon Session*, pp. 86-89, 91. CFP’s interpretation of this rule for this Project would require a visual impact assessment to identify and evaluate every single public road within a 10-mile radius—certainly something that was not contemplated by this Committee in revising its rules.<sup>172</sup> Moreover, CFP misleadingly states that the NPT VIA only identified state designated scenic byways. Such a statement is completely inaccurate. TJD&A considered all designed scenic roads, whether designated by the federal government, the state, or a local municipality.

---

*ejusdem generis* jurisprudence. Therefore, CFP’s reliance on this canon of statutory interpretation is misplaced and backwards and does not support their arguments.

<sup>170</sup> The definition of Site 102.45(c) provides that only those lakes, ponds, rivers, parks, scenic drives and rides that are a tourism destination qualify as a scenic resource. Therefore, to the extent any party asserts that TJD&A did not assess a specific pond, lake, stream, or river (i.e. Town of Deerfield’s Ms. Hartnett and her assertion that Thurston Pond was scenic resource) their position cannot be sustained without evidence that the site is also a “tourism destination.” *See, e.g., Tr. Day 66/Afternoon Session*, pp. 212-13 (Ms. Hartnett had no additional evidence to support her claim that Thurston Pond was a tourism destination other than her own personal experience and she further conceded that she had no knowledge of Thurston Pond being on any tourism brochures.). In addition, while AMC argued during their examination that the NPT VIA did not assess certain publicly accessible water bodies that are not included on the *NH Official List of Public Waters*, they have not provided any evidence to support their contention that these publicly accessible water bodies are also tourism destinations. Therefore, AMC has not provided sufficient factual evidence to support their contention that the Applicants did not assess certain scenic resources. It is noteworthy that even CFP’s final brief limits the definition of scenic resources only to those natural water bodies of 10 acres or more, which are considered state-owned pursuant to RSA 271:20, and have public access and navigable rivers with public access. AMC’s arguments are unfounded.

<sup>171</sup> Mr. Dodson also conceded that D&F did not have any evidence to support its assertion that the 43 public roads identified in its VIA qualify as tourism destinations. *Tr. Day 55/Afternoon Session*, p. 53.

<sup>172</sup> The plain meaning of the definition of “scenic resource” under Site 102.45(c) is apparent on its face. CFP’s and TJ Boyle’s overly-expansive interpretation of this rule, which would have required the Applicants to assess 3,947 generic public roads, “leads to an absurd or illogical result.” *See Stihl, Inc. v. State*, 168 N.H. 332, 334-35 (2015) (“When construing its meaning, we first examine the language found in the statute, and where possible, we ascribe the plain and ordinary meanings to the words used. ...When statutory language is ambiguous, however, we will consider legislative history and examine the statute’s overall objective and presume that the legislature would not pass an act that would lead to an absurd or illogical result.”).

*See Application*, App. Ex. 1, Appendix 17 at M-8 (identifying National Scenic Byways, State Scenic and Cultural Byways, and municipal scenic roads).

Finally, the TJD&A methodology is fully consistent with the VIAs recently accepted and relied upon by the Committee under the new SEC rules and focused its assessment on those scenic byways or roads that have been identified federally, by the state, or by a local municipality or other recognized organization. *See Merrimack Valley Reliability Project Visual Impact Assessment*, Docket No. 2015-05, pp. 17, Appendix A, p. 1 (December 31, 2015)(completing analysis only of designated scenic roads and byways that have been designated by a federal, state or a local authority); *Antrim Wind Visual Assessment*, Docket No. 2015-02, pp. 7–8; 51–53, (September 3, 2015)(conducting an analysis of only National Scenic Byways, designated scenic and cultural byways and overlooks, and designated scenic drives or locally identified scenic roads).<sup>173</sup> CFP essentially ignores this important point and in doing so, takes positions directly contrary to positions it took in Antrim and MVRP.

vi. Identification of Scenic Resources by Other Parties Does Not Comport with SEC Rules

TJ Boyle’s list of resources does not provide useful information to the SEC. The lists are simply a compilation of “potential resources” that have not been refined or examined, except to remove some duplicates. In fact, using TJ Boyle’s approach would make it impossible to conduct necessary visual assessments in a workable timeframe.<sup>174</sup> TJ Boyle’s lists are more of a

---

<sup>173</sup>To the extent Mr. Buscher disagrees with the methodology used by prior VIA’s, he asserted that the prior VIAs were wrong. *See Tr. Day 46/Afternoon Session*, pp. 99-100. Mr. Buscher’s statement implies, by implication, that the SEC’s prior findings of no unreasonable adverse effect on aesthetics for MVRP and Antrim would have been reliant on a flawed methodology—such a position is untenable.

<sup>174</sup>Mr. Buscher agreed that at the pace TJ Boyle performed their assessment it would take years to complete an analysis of the number of potential scenic resources that he would evaluate. *Tr. Day 46/Afternoon Session*, p. 109-10; *Tr. Day 47/Afternoon Session*, pp. 136-139 (questioning by Committee Member Christopher Way).

misguided academic exercise than a meaningful effort to interpret the rules in light of SEC practice and precedents.

In D&F's original filings, it asserted that D&F identified an additional 57 resources or viewpoints where the Project would be visible.<sup>175</sup> *See Supplemental Pre-Filed Testimony of Will Abbott* SPNF Ex. 69, Appendix E. As elicited on cross-examination, he failed to acknowledge 15 resources that the Applicants considered in their original VIA.<sup>176</sup> In addition, his list of resources included 43 public roads that have not been designated as scenic roads pursuant to any federal, state, or local authority and are not tourism destinations,<sup>177</sup> and the only two remaining resources, Alton Woods in Concord and the Concord Municipal Airport, do not meet the definition of a scenic resource. Moreover, while Mr. Dodson's testimony initially argued that the list of 57 were resources allegedly missed by the NPT VIA, on cross-examination, it became clear that his list of resources were simply sites that were visited by Mr. Dodson. Therefore, in reality, D&F has not identified any actual resources that were missed by the NPT VIA and would qualify as a scenic resource under Site 102.45.

AMC identified a total of 240 resources and further alleged that the NPT VIA missed 82 resources—all of which were actually identified in the NPT VIA, the supplement to the NPT

---

<sup>175</sup>The supplemental pre-filed testimony of Mr. Dodson also provides that "I found a noteworthy conclusion of the TJ Boyle review determines that more than 18,993 potential visual resources within the projects area of potential visual impact should be further evaluated." However, the list of over 18,993 was subsequently reduced to 7,417 and on cross-Examination, Mr. Dodson stated that he was not aware that many resources remaining on the TJ Boyle list were in fact duplicates or did not meet the definition of a scenic resource. *Tr. Day 55/Afternoon Session*, p. 36. AMC, also without basis, continues to support TJ Boyle's methodology to identify "thousands more scenic resources for initial analysis." *Post-Hearing Memorandum of Non-Governmental Organization Intervenors*, Docket No. 2015-06, pp. 14-15. However, AMC's credibility is eroded when their own analysis only identified (at most) 50 scenic resources that TJD&A had allegedly missed (all of which are not actually scenic resources as described in Mr. DeWan's and Ms. Kimball's Supplemental Pre-Field Testimony). *See App. Ex. 93*, pp. 19-24.

<sup>176</sup>*See App. Ex. 373* (listing 15 resources that the Applicants' VIA considered that Mr. Dodson said were not assessed).

<sup>177</sup>*See App. Ex. 376* (listing 43 resources public roads that Mr. Dodson said were missed by the NPT VIA that do not actually meet the definition of a scenic resource)

VIA, or do not qualify as scenic resources for one reason or another. *See Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 74-77; App. Ex. 93, p. 19-24. During direct examination, Dr. Kimball testified that AMC cut the list back to 50 resources, but AMC made no effort to specify which 50 resources (of the 82 initially identified) had supposedly been missed. *See Tr. Day 62/Morning Session*, pp. 11, 130. As discussed above and in Mr. DeWan and Ms. Kimball's supplemental pre-filed testimony, all of the resources allegedly missed by the NPT VIA either lacked public access or do not qualify as a scenic resource. Furthermore, Dr. Kimball evidently misunderstands the DHR process for identifying historic resources, stating that he did not consider the DHR Policy Memorandum regarding identification of historic resources, and admitting that he had no evidence to support a finding that the resources he identified were determined eligible by NH DHR. *See Tr. Day 62/Morning Session*, pp. 130-133. Therefore, AMC's conclusion that certain resources had not been considered is unsupported.

CFP's listening sessions identified a total of 444 total scenic resources within a 10 mile radius of the Project, which is more in line with Applicants' VIA. *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, p. 80. TJ Boyle's assessment of the SEC rules, which would require an applicant to assess over 7,000 resources (let alone identifying and assessing 18,993 potential scenic resources as an initial step) does not comport with the number of resources identified by interested citizens in the State.<sup>178</sup> TJ Boyle provides no support for an interpretation that the New Hampshire Legislature or the SEC

---

<sup>178</sup> Mr. Buscher and Mr. Palmer seemed to imply on cross-examination that the rules required an identification of all "potential" scenic resources. *Tr. Day 46/Afternoon Session*, p. 111. However, nothing in the SEC rules implies that an Applicant must assess "potential" scenic resources. Indeed, the definition of a "scenic resource" is never once qualified by the word "potential." Site 301.05(b)(5) only requires an identification of those resources that have in fact been identified and determined to be scenic resources.

intended to have an applicant under RSA 162-H spend years researching potential impacts to places like the Weirs Beach Go-Kart Track in Laconia, which is 8.8 miles from the line and has no visibility, or the Cheer Center in Allenstown, which is 3.4 miles from the line and also has no visibility. *See Tr. Day 46/Afternoon Session*, pp. 43-48.<sup>179</sup>

**b. The NPT VIA Complies With the SEC's Rules Requiring the Submission of Bare Ground / Bare Earth Condition Viewshed Maps**

An Applicant must provide a description and map depicting the locations of a proposed project that would be visible from scenic resources based on two separate scenarios, namely, (1) using bare ground conditions<sup>180</sup> and (2) using screening by vegetation and other factors, such as buildings. Site 301.05(b)(1) requires a VIA to include:

*a description and map* depicting the locations of the proposed facility and all associated buildings, structures, roads, and other ancillary components, and all areas to be cleared and graded, that would be visible from any scenic resources, based on both bare ground conditions using topographic screening only and with consideration of screening by vegetation or other factors.

Site 301.05(b)(1)(emphasis added).

Mr. DeWan testified that “the Project VIA did not rely on a bare-earth visibility analysis because the SEC rules do not require a visibility analysis to include bare-earth conditions.” To comply with the requirements of Site 301.05(b)(1) Mr. DeWan and Ms. Kimball included a bare-earth visibility map and a description of the same in their supplemental report and pre-filed

---

<sup>179</sup> Other individual parties have either misinterpreted or misapplied the SEC rules or did not read and comprehend all of the material submitted in the NPT VIA. For example, the brief filed by the Dummer-Stark-Northumberland Group mistakenly asserts that the NPT VIA did not assess resources in the Kauffman Forest, Nash Stream Forest, or the Upper Ammonoosuc River a/k/a the Northern Forest Canoe Trail. In fact, the NPT VIA assessed all of these resources. *See Application*, App. Ex. 1, Appendix 17, pp. 1-83 and 1-93 (assessing Northern Forest Canoe Trail); *id.* at 1-92, 1-96 to 1-97 (assessing Nash Stream Forest and Kauffman Forest).

<sup>180</sup> Bare ground or bare earth conditions, generally refers to a “visibility analysis [that] excludes all features in the landscape aside from terrain from consideration.” *Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92., p. 8.

testimony, both submitted to the SEC on April 17, 2017. *See* App. Ex. 93, pp. 86-90; *see also* *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 6-11. Mr. DeWan and Ms. Kimball’s supplemental pre-filed testimony concludes that the development and production of a bare earth visibility map, without any further analysis, is all that is required under the rules. Moreover, in their supplemental pre-filed testimony, the Applicants’ visual experts described in great detail why a bare earth visibility analysis would provide little useful information to the SEC, which is charged with evaluating the effects of the Project in the landscape as it exists today. *See Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 6-11. TJ Boyle, however, conflates the bare ground requirement for purposes of defining the area of potential visual impact with determining the extent of visual impacts and argues that the NPT VIA failed to consider visibility from scenic resources based on bare ground conditions. *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, p. 8.

The Applicants completed a bare ground map and description based upon proposed Project conditions, in compliance with the SEC rules. Nothing more is required. The phrase “bare ground conditions” appears once in the SEC rules and site 301.05(b)(1) is not cross-referenced by any other rule.<sup>181</sup> Moreover, the “area of potential visual impact” (“APVI”) is not determined based only on an assessment of bare ground conditions, but is defined by identifying the area from which the proposed facility *would* be visible and *would* result in potential visual impacts. Site 102.10 (emphasis added).

---

<sup>181</sup> *Tr. Day 46/Afternoon Session*, pp. 149-52 (TJ Boyle confirming that the rules only mention bare ground in Site 301.05(b)(1), agreeing the specific rule requiring a map based on bare ground conditions is not cross-referenced, and conceding that Mr. DeWan provided a bare ground map and a vegetative screening map, which “checked the box” and complied with the SEC rules).

The first step in determining the APVI, is generally to conduct a computer-based visibility analysis, which means “a spatial analysis conducted using computer software to determine the potential visibility of a proposed facility.” Site 102.55. The definition of “visibility analysis” does not identify specific computer-based software that should be used to determine the extent of the potential visual impact.<sup>182</sup> TJ Boyle and other parties mistakenly assume that the “area of potential visual impact” should be determined based on bare ground conditions; the rules do not support such an interpretation.<sup>183</sup> To the extent the SEC intended to require a bare earth analysis to identify the “area of potential visual impact,” the new rules would have explicitly required such an assessment. *See supra* note 183.

While visual experts agree that computer-based visibility analyses may generally be useful tools as a first step in determining visibility, all visibility analyses, whether based on bare ground or vegetative screening, must be field checked with extensive field work.<sup>184</sup> The use of either bare-earth or vegetative viewshed map alone, is not sufficient, in part, because viewshed maps indicate “theoretical visibility.”<sup>185</sup> In fact, Mr. DeWan and Ms. Kimball spent 31 days in

---

<sup>182</sup> During the SEC rulemaking, AMC specifically suggested that an applicant should be required to conduct a computer based visibility analysis “based on best publicly-available topographic and land cover data to determine the area and magnitude of potential visual impact.” However, the SEC rulemaking Committee explicitly rejected such a requirement. *Tr. Rulemaking*, Docket No. 2014-04, pp. 46-53 (Sept. 23, 2015).

<sup>183</sup> Site 301.04(b)(4) simply requires that “a visibility analysis” be conducted without specifying the means by which such an analysis should be done.

<sup>184</sup> *Tr. Day 46/Afternoon Session*, pp. 127-128. Such a position is consistent with prior projects before the Committee. *See Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 8 (September 3, 2015)(determining visual effect *from* sensitive scenic resources and assessing six criteria to determine “how visible a project may appear in the landscape *from* a particular resource”); *see also Merrimack Valley Reliability Project*, Docket No. 2015-05, p. 37 (December 31, 2015).

<sup>185</sup> *Tr. Day 46/Afternoon Session*, pp. 127-128.

the field assessing potential impacts from 347 locations and driving the entire route and the surrounding area to determine actual visibility.<sup>186</sup>

In addition,

Without trees or structures to block the view, the bare-earth viewshed covers 1,130 square miles in the 10-mile study area, which amounts to 35% of the total land area within 10 miles of the Project. . . . Within 3 miles of the Project, the bare-earth visibility map covers 616 square miles or 71% of the total land area with 3 miles. Since a large portion of the land area shows potential visibility, the bare-earth viewshed model has limited value as a tool to narrow down scenic resources that likely have visibility. If we were to rely on this tool, nearly all scenic resources within 3 miles of the Project and a large portion beyond 3 miles would show up as having potential visibility.

*Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 9.

TJD&A's field work concluded that existing conditions of the Project area did not reveal such wide-spread visibility of the Project. If the SEC were to adopt TJ Boyle's interpretation of the SEC rules, which would require an Applicant to define the area of potential visual impact solely on bare ground maps, the SEC would be required to assume that several thousand resources—that do not actually have a view of the Project based on the presence of existing vegetation—would potentially be impacted.<sup>187</sup> In reading the SEC rules in totality, there is no support for TJ Boyle's contention, and adopting their interpretation would simply require an Applicant to produce volumes of analyses for scenic resources that would not have a view of the Project based on existing vegetation.

---

<sup>186</sup>They also “drove” much of the proposed project route using Google Maps to help identify potential visibility.

<sup>187</sup>Several other parties in addition to CFP mistakenly argue that the NPT VIA did not identify certain scenic resources in the AVPI. See, e.g., *Post-Hearing Memorandum of The Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, p. 17 (pointing out that TJ Boyle identified 38 additional town and village centers). The difference between the TJ Boyle assessment and TJD&A's analysis derives from TJ Boyle's overreliance on the bare ground viewshed analysis that does not accurately portray existing conditions and does show actual visibility. See *Tr. Day 31/Morning Session*, p. 26 (Mr. DeWan testified that TJ Boyle's identification of potential scenic resources relied only on bare ground maps that do not account for vegetation).

Finally, the Applicants use of bare ground maps and vegetative viewshed maps complied with the plain meaning of Site 301.05(b)(1) and is consistent with prior VIA that have been accepted and reviewed by the SEC.<sup>188</sup> For example, the visual assessment submitted by Mr. David Raphael in the Antrim Wind docket relied upon viewshed maps that combined both topography (bare ground) and vegetation to identify potential visibility. *See Antrim Wind Visual Assessment*, at 10 (September 3, 2015). Importantly, Mr. Raphael’s approach further substantiates the analysis completed by TJD&A. *See Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 8 (“[v]iewshed analyses are used mainly as a point of departure for identifying areas with potential visibility” and “show that, due to topography or intervening vegetation, some resources will have no views of the Project and therefore will not be affected.”); *see also Merrimack Valley Reliability Project Visual Impact Assessment*, Docket No. 2015-05, pp. 23-24 (December 31, 2015)(stating that while bare ground or “topographic viewshed maps” are “very accurate in predicting where visibility will not occur due to topographic interference” they are “less accurate in identifying areas from which the Project would *actually* be visible” and finding that “the vegetation viewshed is a much more accurate representation of potential Project visibility”)(emphasis added).<sup>189</sup>

---

<sup>188</sup> Mr. Dodson also testified that TJD&A’s viewshed maps were “relatively accurate technologies”; that the Applicants “produced Excellent viewshed data”; that the Applicants’ representation of the visual impacts of the proposed project was Excellent based on the viewshed data; that D&F relied upon TJD&A’s viewshed maps and did not try and re-do the Applicant’s analysis; and that D&F used the Applicants’ vegetative visibility maps (and not bare ground maps) to screen out resources with no potential visibility of the Project. *Tr. Day 55/Afternoon Session*, pp. 16-17, 21, 24.

<sup>189</sup> The Environmental NGO Post-Hearing Memorandum misstates the record in the prior Antrim (2015-02) and MVRP (2015-05) dockets at p. 12. In both those dockets, bare ground maps were simply provided to the SEC—like they were here. In those VIAs, there was no identification or analysis of additional scenic resources that would be potentially visible only according to a bare ground visibility analysis. The NPT VIA provides the same information that was provided in Antrim and MVRP—nothing more, nothing less. *See Additional Information to Address Revised SEC Rules*, App. Ex. 2, Attachment 6 (expanded viewshed analysis maps out to 10 miles with scenic resources located on the maps); *Tr. Day 30/Afternoon Session*, pp. 59-60 (Mr. DeWan testified that TJD&A supplemented their initial report by

i. TJ Boyle's Vegetative Viewshed Maps for the Underground Portion are Unreliable

TJ Boyle confirmed that the vegetative maps provided to the SEC as part of CFP Ex. 139 were actually done for the USDOE's analysis of Alternative 2, which depict both proposed *and* existing structures; the vegetative maps provided by TJ Boyle are not for the proposed Project (which was considered by the US DOE as Alternative 7). *Tr. Day 46/Afternoon Session*, pp. 132-33. Indeed, the US DOE assessed Alternative 2, which was primarily overhead (except for the 8 mile underground sections in the North Country) and did not contain the additional 52 miles of underground through the WMNF.<sup>190</sup> Therefore, for the underground portion of the Project, TJ Boyle's vegetative maps indicate visibility of the Project where the Project will be underground. This significant error decidedly undercuts their reliability and renders these maps useless in this proceeding.<sup>191</sup>

c. **The NPT VIA Does Not Use Any New Evaluation Factors**

Contrary to TJ Boyle's and others' claims that the NPT VIA introduces new resource evaluation factors into the VIA process, the NPT VIA follows the SEC's rules and the prior practice of VIAs accepted by the Committee. It uses a commonly accepted method to assess potential impacts to scenic resources. TJ Boyle's interpretation of the Committee's rules on the

---

identifying all potentially impacted scenic resources ten miles out from each structure based on the new SEC rules); *see also* App. Ex. 93, pp. 92-95 (expanding identification of scenic resources in the revised viewshed area). AMC has also argued that the Applicants used an inaccurate vegetative screening model. While the vegetation heights for certain land forms may not have been fully captured in the October 2015 VIA, the Applicants resubmitted their vegetative viewshed maps in their April 2017 filing to address that issue. App. Ex. 93, pp. 25-41. As a result of the updated maps, TJD&A also identified and assessed 15 resources with additional visibility and 17 new resources with visibility. *Id.* at 25-26, 35-36.

<sup>190</sup> *See Final EIS*, App. Ex. 205, p. S-10 to S-11, S-15 (describing differences between Alternative 2 and Alternative 7).

<sup>191</sup> *See also supra* Part C, § II, A, 3, d, iii (KRA's reliance on these viewshed maps is also misplaced because as demonstrated on cross examination, they simply assumed that TJ Boyle's viewshed maps indicated actual visibility, when in fact, they simply show theoretical visibility).

other hand, is unsupported by the express language in the SEC rules and prior practice before the Committee.

i. Assessing Scenic Significance in a VIA is a Generally Accepted Practice and is Required by the SEC Rules

The NPT VIA used the concept of “scenic significance” to determine which identified scenic resources with visibility of the Project would benefit from a detailed visual impact assessment. *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 17.<sup>192</sup> As described above, the NPT VIA identified over 600 scenic resources. To concentrate the review on the resources with the greatest significance and highest potential for visual impacts, the NPT VIA assessed the scenic significance of each resource with a view of the Project, which is a combination of the cultural value rating and visual quality rating for each resource. *Id.* at 17. Prior VIAs before the SEC have found that it is important to determine a resource’s visual sensitivity because “the lower its visual sensitivity, the higher its ability to accept change.”<sup>193</sup> *Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 12 (September 3, 2015).

ii. Cultural Value

CFP and AMC argue that the SEC rules do not allow Applicants to consider cultural value. *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, p. 8. Cultural designation, however, has been consistently assessed in VIAs before the SEC

---

<sup>192</sup> See also Site 301.14(a)(2), (a)(6) (requiring the Committee to consider the “significance” of scenic resources).

<sup>193</sup> See *Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 13 (September 3, 2015) (cultural designation and scenic quality are the two “key factors in establishing a ranking of sensitivity of visual resources in terms of both their inherent value as scenic/recreational/cultural/natural resources and the anticipated level of sensitivity reasonable viewers would have to potential alteration of the landscape within view of those resources”).

and is used as an evaluation factor by both SPNF and AMC.<sup>194</sup> Cultural value “is the value that has been placed on a particular resource by a public agency or non-governmental organization, and indicated by formal designation, inclusion in current planning documents, or similar sources of information.” *Application*, App. Ex. 1, Appendix 17, at M-8; *see also Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 13 (September 3, 2015)(the cultural designation indicator “considers the local, regional, statewide or national cultural significance of a particular resource, often indicated by formal designation or inclusion in a current or recent community (or official) planning document that recognizes its cultural, natural resource, recreational, or scenic value”).

Certain parties and their representatives, including TJ Boyle, have criticized TJD&A for eliminating certain resources from an in-depth review in the VIA based on having “low cultural value.”<sup>195</sup> However, on cross-examination, Mr. DeWan clarified that cultural value was “characterized in terms of determining significance to meet the criteria of the SEC rules” and that an analysis of cultural value was done to “identify those places that had high significance.” *Tr. Day 31/Morning Session*, p. 37-38. TJD&A also testified that they “found through [their] extensive fieldwork and professional experience that scenic resources with a low cultural value

---

<sup>194</sup> D&F also assessed cultural value when conducting their review of specific resources. On cross-examination, Mr. Dodson agreed that using cultural value is a “legitimate way to assess resources” and disagreed with TJ Boyle’s conclusion that the SEC rules do not provide justification in Site 301.05 to use cultural value to evaluate scenic resources. *Tr. Day 55/Afternoon Session*, pp. 24-25. Moreover, while AMC’s Dr. Kimball testified that cultural value should be considered when assessing scenic resources, he testified that he had no experience developing cultural value rating systems, nor did he have any experience developing them and using them in a professional context to prepare VIAs. *Id.* at 114. *Tr. Day 62/Morning Session*, p. 20.

<sup>195</sup> The NGOs Post-Hearing Memorandum mischaracterizes TJD&A’s experience assessing cultural values. *See Post-Hearing Memorandum of Non-Governmental Organization Intervenors*, Docket No. 2015-06, p. 47. The record is clear that Mr. DeWan consulted with Cheryl Widell and Preservation Company on historic sites, but also has over 30 years’ experience assessing cultural features and development patterns in landscapes. *Tr. Day 31/Afternoon*, pp. 126–28. To state that TJD&A lacked experience in evaluating cultural resources and cultural values is simply wrong.

rating generally do not possess a high scenic quality”<sup>196</sup> and that “[t]here is an inherent correlation between scenic quality and cultural value, as the most scenic locations tend to be recognized as such through their classification as resources with national, state, or regional significance.” *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 17-18.

While TJD&A’s methodology as presented in the October 2015 Application complied with the SEC’s rules and SEC precedent, TJD&A conducted additional analyses of all 171 resources that received a “low cultural value” score in the October 2015 Application and submitted those findings to the Committee as part of its Supplemental Testimony and Report. *See Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 2; *see also* App. Ex. 93, pp. 2-10. To the extent the criticisms lodged against the NPT VIA report have any validity, the issue of eliminating a review of scenic resources based solely on cultural value is moot.<sup>197</sup>

### iii. Scenic / Visual Quality

The focus of the Committee’s rules regarding aesthetics is to assess potential impacts to scenic resources, namely, those resources that inherently possess a certain degree of scenic quality and therefore should receive a full assessment in a VIA to ensure that adverse effects are

---

<sup>196</sup> The NPT VIA did, however, complete a full evaluation for several resources that received a low cultural value rating, i.e., Diamond Pond Road, the Signal Mountain Fire Tower, the Veteran’s Memorial at Hill Pond, and the Soucook River.

<sup>197</sup> Without acknowledging TJD&A’s supplement to the October 2015 VIA (App. Ex. 93), the *Post-Hearing Memorandum of Non-Governmental Organization Intervenors* continues to argue that TJD&A “eliminated” resources from consideration based on cultural value. *Post-Hearing Memorandum of Non-Governmental Organization Intervenors*, Docket No. 2015-06, p. 47. Their contention is inaccurate. *See* App. Ex. 93, pp. 2-10 (performing additional analysis on all 171 resources that received a low cultural value in the initial October 2015 VIA). In fact, the only specific resource that they name that was allegedly eliminated from review in this category is the Androscoggin River, which was reviewed in-depth in the original VIA. *See Application*, App. Ex. 1, Appendix 17, pp. 1-76 to 1-77. Here, AMC and others have provided no evidence supporting their arguments.

avoided or minimized. *See Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 16 (September 3, 2015)(focusing visual assessment review on “those resources that have a scenic value or purpose associated with them and where public access is established”). The NPT VIA completed visual quality ratings for all resources that received at least a medium rating for cultural value. *See Application*, App. Ex. 1, Appendix 17. To complete these ratings, TJD&A relied upon the Bureau of Land Management’s rating system, consistent with generally accepted professional standards.<sup>198</sup>

TJ Boyle takes the remarkable position that everything possesses a scenic quality<sup>199</sup> and therefore construes the SEC rules to require an applicant to perform a full assessment of all potential scenic resources whether the scenic quality is low, medium or high. Its position that all potential resources possess at least a minimum level of scenic quality, and therefore, require a full evaluation under the SEC rules is unworkable, contrary to the main purpose of conducting a VIA, inconsistent with the rules, and markedly different from standard practice in New Hampshire.

TJ Boyle “assumed that all or nearly all of the resources identified in these databases ‘possess a scenic quality.’” *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy*

---

<sup>198</sup> AMC also inaccurately alleges that the NPT VIA merely gives “the appearance of a scoring system that balanced multiple informed opinions.” During examination of TJD&A, in following up to questioning from Ms. Weathersby clarified that of the 77 visual effects determinations were made, Mr. DeWan adjusted ratings to only nine scenic resources and that none of those changes resulted in modifying a “high” rating to a “medium” rating. *Tr. Day 35/Morning Session*, pp. 139-40.

<sup>199</sup> App. Ex. 329 (stating that TJ Boyle “assumed that all areas ‘possess a scenic quality’”). TJ Boyle assessed 941 viewpoints for scenic attractiveness, ranging from superlative, to distinctive, to noteworthy, to ordinary, to indistinctive. *Id.* In conducting its assessment, it determined that out of the 941 viewpoints, only 17 achieved a superlative rating, 95 achieved a rating of distinctive, 256 achieved a rating of noteworthy, 540 achieved a rating of ordinary, and 33 achieved a rating of indistinctive. *Id.* Based upon TJ Boyle’s reading of the rules 96% of these possess the requisite scenic quality as defined by the SEC rules. *Id.* Such a conclusion is unworkable and places too much of an emphasis on an assessment of “ordinary” viewpoints (57.37% of the viewpoints assessed were given a rating of ordinary). *Id.*

*Owens*, CFP Ex. 138, Exhibit 4, p. 68.<sup>200</sup> While TJ Boyle has taken the position that the vast majority of resources they identified possesses a minimum level of scenic quality that requires a full evaluation, Mr. Palmer has exercised reasonable restraint in certain circumstances. *See* App. Ex. 338 (while TJ Boyle’s report contends that places like the Shaw’s Supermarket on Loudon Road in Concord must be evaluated as a scenic resource, Mr. Palmer acknowledged that “most Americans would agree” that the Shaw’s parking lot on Loudon Road, which is “an open field of asphalt visually enclosed by a shopping center, transmission lines, and trees” is “not scenic”) (emphasis added).<sup>201</sup>

TJ Boyle’s interpretation of the rules requiring a VIA to assess all potential scenic resources does not comport with past SEC practice. In Antrim, the LandWorks visual assessment went through a process to identify sensitive scenic resources—typically the lower the visual sensitivity, the higher the ability to accept change. Only those resources that were

---

<sup>200</sup>TJ Boyle’s report further stated “Extensive field investigation found that almost all locations documented by TJ Boyle possessed at least a minimum level of scenic quality.” *Id.* TJ Boyle considered that almost all locations on its original list of over 18,000 possessed “at least a minimum level of scenic quality.”

<sup>201</sup>D&F also assessed the scenic quality of certain viewpoints. However, when performing its analysis of scenic quality, D&F essentially assigned a viewpoint rating by simply assigning it a value of 1, 3, or 5 without conducting any underlying analysis. Indeed, D&F did not create or produce any materials to support its scenic quality rating conclusions along with its initial report and pre-filed testimony that was submitted on December 31, 2016. Without such information, it is impossible to recreate or reproduce D&F’s assessment. *See* SPNF Ex. 264, (SPNHF’s letter to the SEC correcting the record and confirming that the scenic quality evaluation chart did not Exist prior to April 17, 2017 and was created specifically to respond to data requests). Because information supporting D&F’s scenic quality ratings was not developed when the scenic quality values were initially determined, D&F subsequently backfilled their conclusions approximately four months after their initial report. The new information provided by D&F in April 2017 included additional assessments of landform, vegetation, water bodies, intactness, meaning (iconic character and/or representativeness), color, views, uniqueness, and human development, which should have been assessed prior to the development of a scenic quality rating. *Id.* Conversely, TJD&A assessed a majority of these categories (landform, vegetation, water bodies, color, views, distinctiveness, positive human development, and negative human development) to determine a resource’s scenic quality rating prior to making its ultimate conclusion. While TJD&A’s methodology comports with generally accepted professional practices, D&F’s methodology for determining scenic quality, and consequently potential visual impacts, is backwards and is therefore not reliable.

particularly sensitive to change were assessed in greater detail. *Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 12, 16 (September 3, 2015).

- iv. Using the Concept of Scenic Significance as a Tool to Focus a VIA's Assessment to Sensitive Scenic Resources is a Generally Accepted Methodology, Has Been Used Previously Before the Committee, and Is Required by the SEC Rules

Determining the scenic significance of a resource is consistent with generally accepted professional standards and is a requirement under the SEC rules. Indeed, Site 301.14(a)(2) specifically requires the NHSEC to consider the “significance of the affected scenic resource.” TJD&A’s methodology, while helpful to determine which resources require a full individual impact assessment, is also useful for the SEC to determine the significance of a specific scenic resource. *See Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 18.

In Antrim, Mr. Raphael screened from further consideration all scenic resources that did not achieve at least a medium-high overall scenic sensitivity rating (i.e. scenic significance)—essentially identical to the methodology employed in the NPT VIA. Mr. Raphael specifically concluded that “[a] resource that receives an Overall Sensitivity Level rating of ‘Low,’ ‘Low-Moderate’ or ‘Moderate’ has the ability to accept change in the landscape, and is not further analyzed (i.e., the project will not have an unreasonable visual effect given the low to moderate sensitivity of the resource). *Antrim Wind Visual Assessment*, Docket No. 2015-02, p. 16 (September 3, 2015). The NPT VIA was even more conservative because it completed an assessment for those resources that achieved just a medium (i.e., moderate) rating for scenic significance.

Here, TJ Boyle’s criticism of the October 2015 NPT VIA for using scenic significance as a screening tool is mistaken because even if a resource received a low cultural value rating, it could also receive a high visual quality rating, equaling a rating of medium scenic significance. *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, Exhibit 4, p. 21. TJ Boyle assumes that the NPT VIA did not assess any resources that had a low cultural value and a high visual quality. TJ Boyle is wrong. The NPT VIA completed a full evaluation for several resources that received a low cultural value rating, i.e., Diamond Pond Road, the Signal Mountain Fire Tower, the Veteran’s Memorial at Hill Pond, and the Soucook River.<sup>202</sup> Moreover, as discussed above, the Committee has previously accepted and relied on VIA’s that used scenic significance or scenic resource sensitivity to screen resources from further review, thus undercutting TJ Boyle’s criticism of DeWan.<sup>203</sup>

Scenic significance ratings are incorporated into the VIA to provide the Committee with useful information about the resources that are most sensitive and subject to potential impacts from a proposed energy facility. As explained in the TJD&A supplemental testimony and report, the NPT VIA has identified and assessed all scenic resources that will have a view of the project within the “area of potential visual impact.” *See Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 17-18. No resources were completely eliminated from the NPT VIA based solely on cultural value, scenic quality, or their ultimate rating of scenic significance. All of the opponents’ arguments on this topic are moot.

---

<sup>202</sup> *See Application*, App. Ex. 1, Appendix 17, pp. 1-26, 1-60, 4-36, 5-24.

<sup>203</sup> Again, if TJ Boyle had studied prior Committee decisions and prior VIA’s, they would have understood their position here is contrary to that body of work and perhaps approached their assessment here without having to reinvent the wheel (mistakenly), so to speak.

**d. The NPT VIA Photosimulations Meet the SEC Standards and Have Been Shown to Have a Very High Degree of Accuracy**

TJ Boyle and others argue that the NPT VIA photosimulations do not meet the standards required by the SEC's rules. *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, p. 9. While TJD&A disputes the accuracy of this claim, the record is also clear that the TJ Boyle team contradicts itself on this issue: Mr. Palmer, in response to questions from Chairman Honigberg, admitted that the photosimulations produced by TJD&A are "representative of the Project" and that they are "reasonably accurate." *Tr. Day 47/Morning Session*, p. 158. Mr. Palmer further offered the fact that TJ Boyle relied on and used some of TJD&A's photosimulations when evaluating the Project. *Id.*; *see also* App. Ex. 93, pp. 77-85 (presenting a series of side-by-side comparisons of photosimulations prepared by TJD&A to demonstrate the accuracy of its visual assessment work in prior transmission line projects using "the exact same software and methodology used in the [NPT] VIA"). Mr. Dodson also acknowledged that the photosimulations were generally "professional and well crafted." SPNF Ex. 69, Appendix C, page 2; *see also Tr. Day 55/Afternoon Session*, p. 20.

**e. The NPT VIA Does Not Undervalue of the Typical Viewer and the Effect of Future Use and Enjoyment**

Site 301.14(a)(3) requires that the SEC consider "[t]he extent, nature, and duration of public uses of affected scenic resources." To help the SEC assess this requirement, TJD&A developed an Extent, Nature, and Duration of Public Use Form, which rates the extent of use, nature of activity, and duration of view based on a number of factors. Such a methodology is generally consistent with the Antrim VIA,<sup>204</sup> and complies with the SEC's rules.<sup>205</sup>

---

<sup>204</sup> *See Antrim Wind Visual Assessment*, Docket No. 2015-02, pp. 88-90 (September 3, 2015)(assessing activity, Extent of use, duration of view, and remoteness on a high, medium, and low basis).

CFP claims that the NPT VIA undervalues the expectation of the typical viewer and the effect of the Project on future use and enjoyment of the scenic resource. *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, p. 9. It mistakenly asserts that the manner in which TJD&A assessed this category did not follow “precedent” and that the criteria thresholds do not appear to be grounded in research or previously used methods.

To assess the expectations of a typical viewer and the effect of a project on future use and enjoyment, CFP and other parties essentially argue that intercept surveys<sup>206</sup> should have been conducted even though they did not identify any transmission project where such a survey has ever been done. This assertion, like so many other TJ Boyle assertions, is not supported by the SEC regulations or customary industry practice. The record is clear that TJD&A is not aware of any VIA completed for a transmission line that included an intercept survey, and TJ Boyle has not identified any such VIA. *See Tr. Day 31/Morning Session*, p. 72. Indeed, the SEC rules do not mention, let alone require, intercept studies in their newly adopted rules.<sup>207</sup> Moreover, as the

---

<sup>205</sup> D&F also made no effort to analyze the extent, nature, or duration of use at a specific scenic resource, except based on their own scant observations. SPNF Ex. 264 (Mr. Dodson did not rely on any other additional information other than “by being there” and taking photographs); *see also Tr. Day 55/Afternoon Session*, p. 79; *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 68 (D&F does not provide any indication in their evaluation of how to make the distinction between a high, medium, or low rating).

<sup>206</sup> Intercept surveys refer to field surveys that target groups of potential users of land that may be impacted by a project. *Tr. Day 31/Morning Session*, p. 63.

<sup>207</sup> AMC also conceded that the rules do not require an applicant to conduct intercept surveys to understand viewer expectations at scenic resources. *Tr. Day 62/Morning Session*, p. 155. The Post-Hearing Memorandum of Non-Governmental Organization Intervenors, also argues that the Applicants also should have held public meetings, met with governmental agencies, and other county and municipal officials to determine the “typical viewer.” Similar to their unfounded position on intercept surveys, the SEC rules do not require an Applicant to conduct any of these suggested measures.

SEC recently finalized new rules, it could have included such a specific requirement if it intended to require such intercept surveys as part of an application.<sup>208</sup>

While Mr. DeWan and Ms. Kimball agree that intercept surveys may be useful in some circumstances, they have further testified that in their professional experience, a determination of user expectation, extent, nature and duration of use, and continued use and enjoyment is generally made by experts who “make a professional judgment regarding public sensitives based upon research and their experience in similar situations.”<sup>209</sup> *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 19-20. The NPT VIA, therefore, contains ratings for “user expectation”, ratings for the “extent, nature, and duration of public use,” and ratings for “continued use and enjoyment” consistent with SEC rules and the prior VIAs considered by the Committee.<sup>210</sup>

**f. The Applicants’ Proposed Avoidance, Minimization and Mitigation Measures Significantly Avoid and Reduce Potential Visual Impacts**

The Applicants have proposed substantial avoidance, minimization, and mitigation measures to reduce potential impacts associated with the construction of the Project. Contrary to CFP’s baseless claims, TJD&A was heavily involved with the Project design team in selecting avoidance, minimization, and mitigation measures. *See Tr. Day 47/Morning Session*, pp. 71-74

---

<sup>208</sup> Intercept surveys were not performed in Antrim or MVRP. *See Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, p. 107 (March 16, 2017)(“Mr. Raphael testified that he did not conduct a user survey, but relied on other resources such as numerous publications, internet sources, experience and field trips to determine the primary type of activity users are engaged in at Willard Pond and duration of view.”).

<sup>209</sup> TJD&A’s approach is identical to that of the approach taken in Antrim Wind, where LandWorks assessed “the expectations of the reasonable viewer” by “using a multitude of sources such as guide books, publications, online media, anecdotal and interview sources, background polling, user surveys, studies, as well as general field observations and professional Experience.” *Antrim Wind Visual Assessment*, Docket No. 2015-02, pp. 29-30 (September 3, 2015).

<sup>210</sup> For each scenic resource, TJD&A completed an assessment based on the ratings forms in its Methodology. *See Application*, App. Ex. 1, Appendix 17, p. M-15.

(TJD&A identified and recommended sections of the corridor for monopole structures where they might be visible from scenic resources and the Applicants' construction panel specifically testified that TJD&A were significantly involved in this process); *see also* App. Ex. 332. Mr. DeWan and Ms. Kimball also specifically testified that they worked directly with Project engineers in finalizing the design of the Project and made significant suggestions to the design team to avoid, minimize, and mitigate potential impacts to aesthetics. *See Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 16, p. 4 (TJD&A "presented recommendations to the design team on possible measures to avoid and minimize impacts"); *id.* at 16-17 (discussing avoidance, minimization, and mitigation measures proposed by TJD&A that were included in the October 2015 Application).

CFP's Post-Hearing Brief erroneously claims that the mitigation plans are "general in nature" and TJ Boyle, without basis, argues that the Applicants have not proposed "reasonable" measures to reduce potential impacts. Specifically, as part of their evaluation of 41 sites, TJ Boyle concluded that the "Project fails to incorporate reasonably available mitigation that could significantly reduce adverse impacts." *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, Exhibit 4, p. 120. TJ Boyle claims that certain impacts are unreasonably adverse particularly because of the alleged lack of avoidance, minimization and mitigation measures proposed by the Applicants. *See, e.g., Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, Exhibit 4, Appendix F, p. F-12 (concluding unreasonable adverse effect at Bear Brook State Park because "additional mitigation measures could have been taken"). Mr. Buscher also stated that part of TJ Boyle's ultimate

conclusions for this Project were based in part on their opinion that the Applicant had not implemented “reasonable mitigation” measures.<sup>211</sup>

While Mr. Dodson admitted he had no experience conducting visual impact assessments for transmission lines, and that he had no experience assessing or recommending mitigation measures for transmission lines, he is the sole *expert* witness that maintains that complete burial of the Project is the only means of significantly reducing the Project’s unreasonable adverse aesthetic impacts.<sup>212</sup> Mr. Dodson, however, did not perform an assessment to determine whether complete burial would be effective and economically feasible as required by Site 102.12; Mr. Dodson further admitted that he did not have in mind the requirement that the Committee must consider economic feasibility when considering mitigation measures.<sup>213</sup> Contrary to TJ Boyle’s position that some of the measures proposed by the Applicant do in fact represent effective measures to reduce potential impacts, Mr. Dodson did not assess the effectiveness of any of the other avoidance, minimization, or mitigation measures proposed by the Applicants because he believed that the measures proposed by the Applicant would only be a “slight improvement” and would not really mitigate the visual impact of the Project.<sup>214</sup> Indeed, Mr. Dodson disagrees with TJ Boyle’s conclusion that “things like structure relocation, vegetative screening, monopoles,

---

<sup>211</sup>When questioned by Subcommittee Member Way regarding unreasonable adverse effects, Mr. Buscher stated that “one of the big conclusions that we came up with in this project is that reasonable mitigation that we would expect to be implemented as part of this project isn't being followed. To a certain degree, for that sole fact we find the Project to be unreasonable.” *Tr. Day 47/Morning Session*, p. 152. Of note, Mr. Buscher testimony here essentially finds that the whole Project as a whole (and not simply unreasonable adverse effects on aesthetics) is unreasonable without providing any support for that assertion. Mr. Buscher’s statement confuses the proper standards the SEC should consider and shows his predisposition making conclusions that are adverse to the Project.

<sup>212</sup>*Tr. Day 55/Afternoon Session*, pp. 94, 97. AMC’s Dr. Kimball also testified that the only mitigation that is appropriate is to underground the whole project. *Tr. Day 62/Morning Session*, p. 140.

<sup>213</sup>*Tr. Day 55/Afternoon Session*, pp. 95-99 (Mr. Dodson simply assumed that because other high voltage electric transmission lines have been proposed to be constructed underground / underwater that it was feasible here).

<sup>214</sup>*Tr. Day 55/Afternoon Session*, pp. 102-103.

different kinds of monopoles, could be effective mitigation measures.”<sup>215</sup> In sum, Mr. Dodson takes the extreme position that there are no possible avoidance, minimization, or mitigation measures that could reduce potential impacts from the construction of a transmission line in the State of New Hampshire—a position that is clearly contrary to the evidence, opinions of other experts, and common sense practice.<sup>216</sup>

In assessing potential impacts to aesthetics, the Subcommittee must examine “the effectiveness of the measures proposed by the applicant to avoid, minimize, or mitigate unreasonable adverse effects on aesthetics, and the extent to which such measures represent best practical measures.” Site 301.14(a). The Committee’s rules define “best practical measures” as the “available, effective, and economically feasible on-site or off-site methods or technologies used during siting, design, construction, and operation of an energy facility that effectively avoid, minimize, or mitigate relevant impacts.” Site 102.12. TJ Boyle’s report fails to acknowledge the requirement that the Committee consider “best practical measures,” especially those that are “available” and “economically feasible.” In addition to D&F, TJ Boyle also conceded that its report did not conduct an analysis or consider whether any of the additional measures it proposed were “economically feasible” despite the rules explicitly requiring such consideration.<sup>217</sup> *Tr. Day 47/Morning Session*, pp. 78-79. On the other hand, the Applicants have provided substantial evidence to the Subcommittee supporting the conclusion that

---

<sup>215</sup> *Tr. Day 55/Afternoon Session*, pp. 103-104.

<sup>216</sup> TJ Boyle and D&F do not see eye-to-eye on the Applicants’ proposed avoidance, minimization, and mitigation efforts—D&F does not agree that structure relocations, vegetative screening, and use of monopoles are effective mitigation measures. *Compare Tr. Day 55/Afternoon Session*, p. 103 (D&F disputing whether such mitigation measures are not effective), *with Tr. Day 47/Morning Session*, pp. 76-77 (TJ Boyle agreeing that many of the measures proposed by the Applicants are in fact effective mitigation measures).

<sup>217</sup> Neither D&F, nor AMC, testified or provided any evidence that they had performed an assessment on whether complete burial of the Project was economically feasible. *Tr. Day 55/Afternoon Session*, p. 99; *see also Tr. Day 62/Morning Session*, p. 144.

additional burial is uneconomical and not feasible. *See An Evaluation of All UG Alternatives for the Northern Pass Transmission Project*, App. Ex. 80, (concluding that it would cost an additional \$1 billion to construct the Project underground).

The Applicants efforts to avoid impacts have been substantial. As originally proposed, the Project would have travelled overhead in existing utility corridors through the White Mountain National Forest. After receiving significant public input, the Applicants re-designed the Project to completely avoid any potential impacts generally associated with the construction of an overhead line in the White Mountain National Forest. *See Supplemental Pre-Filed Testimony of William Quinlan*, App. Ex. 6, p. 1 (as part of the Forward NH Plan, the Project was redesigned to go “underground in and around the White Mountain National Forest to avoid and minimize impacts” and respond to concerns about an overhead line in this area). TJ Boyle’s report and testimony fails to acknowledge the magnitude of the Applicants’ decision to site an additional 52 miles underground and their commitment to working with citizens of New Hampshire to address their concerns.<sup>218</sup> While TJ Boyle and other parties have made the assertion that additional burial of the Project is warranted to avoid impacts, no other party has made an assessment to determine whether additional burial is effective or economically feasible. Without such an assessment or analysis, these parties have not provided any evidence to support their proposition that additional burial is effective or economically feasible, and therefore, they cannot meet their burden of proof pursuant to Site 202.19.

---

<sup>218</sup> Mr. Buscher stated during cross-examination that “The underground is a great portion.” *Tr. Day 47/Morning Session*, p. 81. However, he went on to say that “Our understanding, although . . . – we considered that a mitigating element, it wasn’t done specifically for a mitigation reason.” *Tr. Day 47/Morning Session*, p. 81. Mr. Buscher now seeks to introduce an element of “intent” into whether an avoidance, minimization, or mitigation measure should be considered under Site 301.05(b)(10) and Site 301.14(a)(7)—something the rules do not contemplate. Moreover, Mr. Quinlan specifically testified that the Project was redesigned to go underground in and around the WMNF to respond to public concerns. *Supplemental Pre-Filed Testimony of William Quinlan*, App. Ex. 6, p. 1.

The Applicants have also testified that they have designed the Project in a manner to avoid impacts and have made numerous changes since the original announcement to further minimize those potential impacts. *See Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 16, pp. 16-17 (listing specific avoidance, minimization, and mitigation efforts, including, use of existing rights-of-way, co-locating the majority of the transmission line in existing corridors, use of weathering steel monopoles, locating new transmission structures in close proximity to existing structures; matching materials used for the relocated 115 kV structures and proposed transmission structures; lowering the heights of the structures and relocating certain structures; and maintaining and restoring vegetation at road crossings and riparian areas); *see also* App. Ex. 332, Applicants' Response to CFP Expert Assisted Data Request 1-127 (describing the specific locations where TJD&A recommended structure modifications); JT MUNI 55 (confidential document titled Northern Pass Change Request Form Executive Summary provided along with Applicants' response to CFP Expert Assisted Data Request 1-127, which identifies 82 specific structures that changed from lattice to monopole based solely upon TJD&A's opinion). Mr. Buscher testified that switching from monopole to lattice structures, offering to relocate structures, and using vegetative screening are effective mitigation measures. *Tr. Day 47/Morning Session*, pp. 75-77. In addition, Mr. Bowes and Mr. DeWan both reviewed all of TJ Boyle's recommendations and assessed whether the proposed measure would qualify as a "best practical measure." *See Supplemental Pre-Filed Testimony of Kenneth Bowes*, App. Ex. 90, pp. 3-11; *see also Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 24-27, 37-53. Mr. Bowes and Mr. DeWan, in general, concluded that the additional suggested measures would not be available or effective

means to avoid potential impacts to aesthetics. Their analysis and testimony provides the requisite evidence for the Applicants to carry their burden of proof.

In certain instances, for example, the use of non-specular conductors,<sup>219</sup> adjustment to structure locations,<sup>220</sup> and additional monopoles, could be supplementary minimization measures.<sup>221</sup> On the other hand, the majority of the recommendations made by TJ Boyle are impracticable due to the lack of land rights (i.e., installing vegetative screening on private property without landowner permission;<sup>222</sup> reconfiguring the transmission lines and acquiring wider easements; altering the corridor alignment or modifying the proposed route; placing portions of the Project underground in the existing easement, for instance at Turtle Pond—all

---

<sup>219</sup> See *Supplemental Pre-Filed Testimony of Kenneth Bowes*, App. Ex. 90, p. 4-5 (discussing non-specular conductors and specific locations where non-specular conductors could be considered, although, the use of non-specular cable is minimally beneficial because while untreated conductors will “initially have higher reflectivity than non-specular conductors, their reflectivity fades over a few years until they achieve a reflectivity that is the same or similar to that of non-specular conductors”); see also *Tr. Day 6/Morning Session*, pp. 106-07 (Mr. Bradstreet testified that it is Eversource standard design criteria to use untreated conductors and that over time the non-treated conductors have a similar appearance to non-specular conductors); see also *Tr. Day 7/Morning Session*, pp. 151-55 (Mr. Bowes also testified to the same premise, that Eversource has not received customer complaints about using un-treated conductors, and that there would be a cost increase associated with using non-specular conductors).

<sup>220</sup> Mr. Buscher testified that TJ Boyle made no assessment to potential impacts to wetlands, deer-wintering areas, vernal pools or other sensitive habitats that might be disturbed in relation to TJ Boyle’s recommendation to relocate certain structures. In fact, for this reason alone, the Applicants have not suggested structure relocations in order to avoid such natural resources. See, e.g., *Supplemental Pre-Filed Testimony of Kenneth Bowes*, App. Ex. 90 (Mr. Bowes testified that should the Project accommodate requests to relocate certain structures, such “design changes would trigger other impacts on neighboring properties, aesthetics, or natural resources” and “[f]or example, lowering a structure height in one location could result in the addition of another structure; relocating one structure could result in longer spans and an increase in structure height; moving one structure away from a road crossing could increase permanent or temporary impacts to a wetland, etc.”). Moreover, neither CFP nor opposing parties have presented any evidence that would support their proposition that adjustments to structure locations could be done without impacting other sensitive locations.

<sup>221</sup> But see *Supplemental Pre-Filed Testimony of Kenneth Bowes*, App. Ex. 90, pp. 3-11; see also *Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, pp. 24-27, 37-53 (Messrs. Bowes and DeWan testified that they had reviewed supplemental mitigation recommendations and determined that they would not be “best practical measures”).

<sup>222</sup> Mr. Buscher admitted on cross-examination that that the Project could not use vegetation screening on private property without landowner permission. *Tr. Day 47/Morning Session*, pp. 74-75.

would require additional land rights). Contrary to TJ Boyle’s position regarding a lack of vegetative screening, the Applicants have committed to working with willing landowners to develop vegetation screening plans to help mitigate potential visual effects associated with the Project. *See Supplemental Pre-Filed Testimony of Kenneth Bowes*, App. Ex. 90, p. 5; *see also Supplemental Pre-Filed Testimony of Terrence DeWan and Jessica Kimball*, App. Ex. 92, p. 25.

TJ Boyle also suggested that the Project could use Natina-treated steel to make structures less visible in the landscape. *Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, Exhibit 4, p. 134. However, Natina is not a practical or available alternative. *See Supplemental Pre-Filed Testimony of Kenneth Bowes*, App. Ex. 90, pp. 6-7 (explaining that Natina is a proprietary product that is more appropriate for arid landscapes, that Natina has not been used in the Northeast, that its use significantly impacts the structure manufacturer’s warranty, and would increase both cost and the construction timeframe). Counsel for the Public’s construction witnesses also testified that they had no knowledge of Natina being used for overhead transmission lines and were generally unfamiliar with such a product.<sup>223</sup> *See Tr. Day 51/Afternoon Session*, pp. 32-34. Therefore, the use of Natina is not available, it has not been determined to be effective in the Northeast, and therefore cannot be considered a “best practical measure.”

In listening to feedback from the public, the Applicants have made a substantial number of design changes since the Project was first introduced. Based on the Applicants’ efforts, the Project has committed to using all “best practical measures” to avoid, minimize, and mitigation potential adverse effects. Indeed, TJ Boyle agrees that the measures proposed by the Applicants

---

<sup>223</sup>Indeed, no party has provided evidence supporting the proposition that Natina steel is an available, effective, and economic measure to further avoid, minimize, or mitigate potential impacts. Therefore, they have not met their burden of proof. *See Site 202.19*.

are effective mitigation measures. *Tr. Day 47/Morning Session*, pp. 76-79. To the extent the Subcommittee wishes to require additional design changes as a condition of its approval of the Certificate of Site and Facility as described in the supplemental pre-field testimony of Kenneth Bowes, the Applicants will evaluate and consider such practicable measures to reduce Project impacts identified by the Subcommittee as conditions in the Certificate. *See Supplemental Pre-Filed Testimony of Kenneth Bowes*, App. Ex. 90, pp. 3-11. TJ Boyle agreed that the Committee is tasked with assessing potential visual effects particularly at locations where TJ Boyle and TJD&A disagree and further agreed that the SEC could order additional mitigation (as discussed in the Application, February 2016 Additional Information to Comply with the New Rules, and the pre-filed and supplemental pre-filed testimony of Mr. Bowes and the Joint testimony of Mr. DeWan and Ms. Kimball) if the Committee thought such additional measures are appropriate.<sup>224</sup> *Tr. Day 47/Morning Session*, pp. 83-84.

---

<sup>224</sup> SPNHF cites Antrim I for the remarkable proposition that the SEC may not issue a Certificate containing a condition of approval that modifies the Project in any way. In Antrim I, the SEC chose not to condition an approval of the project on the removal of two turbines and the reduction in size of the balance of the facility because such measures would “likely change other dynamics of the Project to such a degree that the Subcommittee would be unable to confidently assess the consequences of issuing a Certificate.” *Decision and Order Denying Application for Certificate of Site and Facility*, Docket No. 2012-01, at p. 54 (September 25, 2013). Here, the additional avoidance, minimization, and mitigation measures that have been discussed by the Applicants, particularly in Mr. Bowes’ Supplemental Pre-Filed Testimony, would not come remotely close to rising to the level (Antrim I) that would prohibit the SEC from requiring the Applicants to use such measures, including, additional monopoles, non-specular conductors, shifting of structures, vegetation planting plans, etc. *See* RSA 162-H:4, I(b) (the SEC may determine terms and conditions of a certificate to comply with the statutory requirements under RSA 162-H). Indeed, any additional avoidance, minimization, and mitigation efforts considered in Mr. Bowes testimony (if ordered by the Subcommittee) would not have an effect on any of the Project’s dynamics other than cost incurred by the Applicants. Any potential modification to NPT exists in sharp contrast with Antrim, which would have required the elimination of two turbines and significantly impacted its power production capabilities.

**g. To Assess Potential Visual Effects, the SEC Rules Require an Analysis of Effects on the Resources As a Whole, Not Simply From One Particular Viewpoint**

The NPT VIA assessed 654 resources within the APVI and completed scenic resource evaluation forms for 70 resources that have the greatest potential to be impacted by the Project. TJD&A concluded that the Project will not have an unreasonable adverse impact on any scenic resource within the APVI, will not have an unreasonable adverse impact on any of the six subareas studied in-depth, and will not have a an unreasonable adverse impact on the region.

TJ Boyle on the other hand undertook an analysis of 41 scenic resources, and concluded that the Project would have an unreasonable adverse impact on 29 resources (13 of which are undesignated public roads that are not tourist destinations).<sup>225</sup> TJ Boyle's analysis of potential impacts, however, improperly focuses on specific viewpoints within a resource, and does not study potential impacts from analyzing the resource as a whole. TJ Boyle's method is inconsistent with generally accepted practices and does not comport with the SEC rules or prior VIAs before the Committee.<sup>226</sup>

For example, TJ Boyle concluded that the Project would have an unreasonable adverse effect on Bear Brook State Park, which is the largest developed State Park in New Hampshire, consisting of over 10,000 acres and 40 mile of trails.<sup>227</sup> TJ Boyle reached this conclusion even though most of Bear Brook State Park will have no views of the Project and for a majority of a

---

<sup>225</sup> *Tr. Day 47/Morning Session*, pp. 25-26.

<sup>226</sup> Curiously, SPNHF's final brief argues that the NPT VIA failed to assess scenic resources from a myriad of vantage points. The record, however, reflects that this is exactly what TJ Boyle failed to do and exactly what TJD&A did to assess scenic resources. *Compare infra* note 234 (TJ Boyle assessing impacts from one or two static view points) *with infra* note 236 (DeWan assessing impacts from multiple vantage points within the resource).

<sup>227</sup> *Tr. Day 47/Morning Session*, p. 27.

visitor's experience to the Park, there will be no visibility of the Project.<sup>228</sup> To reach its conclusion, TJ Boyle relied on TJD&A's two photosimulations from the top of Catamount Mountain on Catamount Trail—both of which already have visibility of an existing electric transmission line.<sup>229</sup> Importantly, Mr. Buscher specifically stated that “we were really looking at the impact from this viewpoint, which is sort of a celebrated situation.” Mr. Buscher further conceded that he was not assessing impacts to the scenic resource as a whole, but from two particular static viewpoints within a resource that is made up of over 10,000 acres, that are approximately 1.1 to 3.4 miles away from the Project.<sup>230</sup>

TJ Boyle's very limited analysis of potential impacts to aesthetics does not comport with the SEC rules and mistakenly concentrates review of impacts from one or two specific viewpoints and not from the resource as a whole. The SEC rules require an applicant to include an identification of scenic resources and assessment of potential impacts to those scenic resources—the rules do not form a basis for a visual impact assessment to simply assess single viewpoints.<sup>231</sup> In fact, the rules are quite clear about distinguishing between a “scenic resource”

---

<sup>228</sup> *Tr. Day 47/Morning Session*, pp. 32-33.

<sup>229</sup> *Tr. Day 47/Morning Session*, p. 28. TJ Boyle also concluded that as many as 90 structures could be visible by using a bare earth view shed, which it appears they relied on in part to reach their conclusion of unreasonable adverse effects at this resource. *Id.* at 29-31.

<sup>230</sup> *Tr. Day 47/Morning Session*, pp. 33-35. TJ Boyle essentially assessed each resource in a similar fashion. *See, e.g., Tr. Day 47/Morning Session*, pp. 35-38 (assessing Coleman State Park based on the “views in areas that have the highest concentration of use in the park” and not looking at the resource, which is 1,500 acres, as a whole); *id.* at 38-40 (concluding the Project will have an unreasonable adverse effect on the entire 165-mile long Cohos Trail based upon one crossing and not on evaluating the trail in its entirety); *id.* at 42-48 (concluding that the Project would have an unreasonable adverse effect on the 98-mile long Moose Path Scenic Byway based a particular stretch of the Byway where the Project would be visible).

<sup>231</sup> *See* Site 301.05(b)(5) (requiring “[a]n identification of all *scenic resources* within the area of potential visual impact and a description of those *scenic resources* from which the proposed facility would be visible); Site 301.05(b)(6) (requiring “[a] characterization of the potential visual impacts of the proposed facility, and of any visible plume that would emanate from the proposed facility, *on identified scenic resources* as high, medium, or low, based on consideration of the following factors: . . . (b) The effect on

as a whole and a “key observation point,” which is “a viewpoint that receives regular public use and from which the proposed facility would be prominently visible.”<sup>232</sup> Indeed, the SEC rules simply require an applicant to produce photosimulations from “key observation points” and other scenic resources to help aid in their determination of potential impacts to a specific resource as a whole. By concluding the Project would have high aesthetic impacts on a resource by simply assessing one or two viewpoints and not the entire resource is contrary to the SEC rules.<sup>233</sup>

By contrast, TJD&A’s assessment<sup>234</sup> is more reliable and properly portrays the effects on the affected resources because they followed the SEC rules and precedent to assess resources as a whole, and not simply from one or two viewpoints.<sup>235</sup>

---

future use and enjoyment of the *scenic resource*; (c) The Extent of the proposed facility, including all structures and disturbed areas, visible from the *scenic resource*; (d) The distance of the proposed facility from the *scenic resource*); Site 301.14(a)(2)–(4) (requiring the SEC to assess “the significance of affected *scenic resources* and their distance from the proposed facility; the Extent, nature, and duration of public uses of affected *scenic resources*; and the scope and scale of the change in the landscape visible from affected *scenic resources*.”)

<sup>232</sup>Site 102.25.

<sup>233</sup>TJ Boyle’s application of the SEC rules regarding unreasonable adverse effects is also curious and inconsistent with prior findings on other projects. *Compare Tr. Day 47/Morning Session*, pp. 49-57 (Photosimulations from Mountain View Grand, which was determined to be unreasonable by TJ Boyle), *with Tr. Day 47/Morning Session*, pp. 65-69 (Photosimulations from Willard Pond, Goodhue Hill, and Balk Mountain Overlook).

<sup>234</sup>CFP’s and other parties’ post-hearing memoranda fail to acknowledge that the Applicants’ analysis provides sufficient evidence for the SEC to find that the Project as a whole will not have an unreasonable adverse effect on aesthetics. *See* App. Ex. 431 and 432 (summarizing TJD&A’s compliance with Site 301.14(a) and 301.05(b)).

<sup>235</sup>*See, e.g., Application*, App. Ex. 1, Appendix 17, pp. 1-32 to 1-33 (assessing potential impacts to Coleman State Park as a whole and reviewing potential views from Diamond Pond, Diamond Pond Road, Sugar Hill, the boat launch, parking area, picnic area, campground, visitor center, entrance, recreation building, etc. and not from just one or two view points); *id.* at 1-54 to 1-55 (assessing the overall impacts to Moose Path Train Scenic Byway as a whole, and not just at the corridor crossing location); *id.* at 1-96 to 1-97 (assessing the entirety of the Nash Stream Forest and not just particular viewpoints, such as Victor Head, within the Forest); *id.* at C-3 to C-4 (assessing all scenic byways and rivers as a whole, and not just at one single viewpoint).

**h. The Construction of the Underground Portion of the Project will Not Have an Unreasonable Adverse Effect on Aesthetics**

Contrary to the position of the Grafton County Commissioners, the underground portion of the Project located along scenic byways will not create an unreasonable adverse effect on any of the byways as a whole. The Grafton County Commissioners imply that, because the DOT could determine that portions of the underground section of the Project should be located outside of the disturbed areas within the traveled right-of-way, there will be extensive tree clearing, which will have an adverse effect on aesthetics.

Mr. DeWan, however, testified that following discussions with the Project's engineers, he understood that there would be "minimal amounts of tree clear-cutting" on Route 116, which is a scenic byway. *Tr. Day 34/Afternoon Session*, pp. 143-44. To the extent there is tree cutting, the Applicants would work with underlying landowners to reestablish vegetation to minimize potential impacts. *Tr. Day 34/Afternoon Session*, p. 145. Mr. Johnson testified that they were confident there would be no impact to trees for 91.5% of the scenic byway. *See Tr. Day 42/Morning Session*, pp. 21-22.<sup>236</sup>

In addition, the Applicants have specifically requested that the DOT follow the agency's procedures and guidelines as outlined in the Utility Accommodation Manual ("UAM"). The UAM generally places emphasis on locating underground facilities "where they will not conflict with highway improvements." UAM, p. 9. However, pursuant to Section III of the UAM, the Commissioner or authorized representative may grant exceptions to the general requirements.

Section VII of the UAM establishes as a general practice that new utility installations are not permitted within scenic byways unless "the installation does not require extensive removal or

---

<sup>236</sup> See *infra* note 238.

alteration of trees or other natural features visible to the highway user or impair the aesthetic quality of the lands.” To the extent the UAM would generally require an applicant to construct underground facilities outside of the improved portion of the highway right-of-way, and would require tree clearing, the Applicants will seek an exception request to construct the Project within the maintained travel right-of-way.<sup>237</sup> *Tr. Day 42/Morning Session*, p. 25. By applying for such exception requests, the Applicants will avoid and minimize potential impacts to aesthetics from tree clearing along state-designated byways.

As DOT maintains a policy to protect natural beauty, such as scenic byways, the Applicants anticipate that the DOT will follow and enforce its own rules ensuring that aesthetic impacts are avoided and minimized to the greatest extent practicable.<sup>238</sup> In addition, the Applicants have proposed a specific condition to address potential impacts along this portion of the Project, which will limit tree cutting along the underground portion of the Project that is along cultural and scenic byways.<sup>239</sup> Therefore, the construction and operation of the Project will not have an unreasonable adverse effect on aesthetics.

---

<sup>237</sup> During the re-call of the Applicants’ construction panel, Mr. Johnson testified that as currently proposed, tree clearing may be required along approximately 3.7 miles of the underground portion of the project along a scenic byway. *See Tr. Day 42/Morning Session*, pp. 21-22; *see also* App. Ex. 222 (identifying potential areas where tree removal may and may not be necessary). Moreover, Mr. Johnson testified that they were confident there would be no impact to trees for 91.5% of the scenic byway. *See Tr. Day 42/Morning Session*, pp. 21-22

<sup>238</sup> The Applicants also request that the DOT undertake the same analysis for locally-maintained roads as delegated by the Subcommittee.

<sup>239</sup> *See Applicants’ Proposed Tree Preservation Commitment, infra* at Applicants’ Proposed Condition 19, namely that the Applicants would accept a condition as follows: Further Ordered that DOT is authorized to monitor and enforce the Applicants’ commitment (subject to DOT’s final approval of the Applicants’ exception requests) with respect to tree clearing in public highways where the Project may be constructed outside the paved portion of the highway right-of-way, (i.e., that the Applicants agree not to cut trees greater than 6” in diameter within a cultural or scenic byway where tree clearing is required) and to the extent the Applicants seek to deviate from this condition, the Applicants must seek approval from the SEC Administrator or from a SEC delegated agency or representative.”

### 3. Conclusion

The criteria identified in Site 301.14, require the Subcommittee to consider the effects of the Project on the viewshed in the region as a whole (rather than focus only on an individual resource). Based upon a plain reading of the SEC's rules regarding aesthetics and contrary to the unfounded opinion offered by CFP, a single visual impact at a single scenic resource, cannot result in a conclusion that a Project would have an unreasonable adverse effect on aesthetics.

The seven criteria in Site 301.14 are:

(1) the existing character of the area of potential effect; (2) the significance of affected scenic resources and their distance from the proposed facility; (3) the extent, nature, and duration of public uses of affected scenic resources; (4) the scope and scale of the change in the landscape visible from affected scenic resources; (5) the evaluation of the overall daytime and nighttime visual impacts of the facility; (6) the extent to which the proposed facility would be a dominant and prominent feature within a natural or cultural landscape of high scenic quality or as viewed from scenic resources of high value or sensitivity; and (7) the effectiveness of the measures proposed by the applicant to avoid, minimize, or mitigate unreasonable adverse effects on aesthetics, and the extent to which such measures represent best practical measures.

These criteria focus on the “area of potential effect” and “change in the landscape,” speak in terms of “scenic resources” in the plural, and require an evaluation of “the overall daytime and nighttime visual impacts of the facility.” Site 301.14 (emphasis added). In the past, the SEC has generally considered the effects of the Project on the viewshed in the region as whole when assessing whether a Project may have unreasonable adverse effects on aesthetics.<sup>240</sup>

---

<sup>240</sup> See, e.g., *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-05, pp. 64-65 (October 4, 2016)(concluding that “the Project will not have an unreasonable adverse effect on aesthetics *of the region*” even though the project will adversely impact 10 scenic resources) (emphasis added); *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, p. 118 (March 17, 2017) (concluding that the “Project will not have an unreasonable adverse effect on the aesthetics of the *region*”) (emphasis added); *Decision Issuing a Certificate of Site and Facility with Conditions*, Docket No. 2006-01, at 27 (June 28, 2007) (“In determining whether the Project will have an unreasonable adverse effect on aesthetics, the Committee considers the effects on the viewshed in the *region*.”) (emphasis added).

The guiding principle of the new rules, which is consistent with past practice, leads the Subcommittee to evaluate potential aesthetic effects from a holistic perspective, that is, to place the facility in the larger context of the region.<sup>241</sup> In order to assist the Subcommittee’s review, the rules require that an applicant provide an assessment of individual scenic resources within the viewshed area, (Site 301.05(b)(5)), so the Subcommittee can appreciate the relationship of the individual parts to the whole area of potential visual effect. In reaching an ultimate conclusion, therefore, the Subcommittee must look at the totality of the regional viewshed and potential aesthetics effects to determine whether the effects are unreasonably adverse. Here, to the extent the Project affects aesthetics, the effects are not *unreasonably* adverse.<sup>242</sup>

In Antrim II, the Subcommittee focused its review of aesthetics on the region as a whole as well as on nine individual scenic resources that would have a view of the proposed project. In particular, the Subcommittee assessed photosimulations and potential impacts for Bald Mountain (App Ex. 345), Willard Pond (App. Ex. 344), and Goodhue Hill (App Ex. 346). In the

---

<sup>241</sup> CFP’s brief erroneously argues that the NPT VIA reached an overall conclusion on potential impacts to aesthetics without determining whether the project would have an unreasonable adverse effect on individual scenic resources. The SEC’s rules at Site 301.05(b)(6) require a VIA to include an evaluation of a number of factors and rank potential impacts as “high, medium, or low”. The final determination of unreasonable adverse effects is not done on a resource-by-resource basis, but is determined by assessing the viewshed in the region as a whole. *See supra* note 109. Contrary to CFP’s claims, the NPT VIA methodology for determining whether the Project will have an unreasonable adverse effect is clearly laid out in the NPT VIA at pp. in the Methodology (M-1 to M-16) and Conclusion Section (C-1 to C-5).

<sup>242</sup> AMC misconstrues the standard for determining whether a project could result in unreasonable adverse effects on aesthetics of the region and without any support suggests that the standard the SEC should employ is “what level of *diminished* aesthetic Experience leads to ‘an unreasonable adverse effect.’” *See Pre-filed Testimony of Kenneth Kimball and Larry Garland*, NGO Ex. 103, p. 11. On cross-examination, when presented with Applicants’ Exhibit 431 (Terrence DeWan and Associates – Visual Impact Assessment, Compliance with Site 301.14(a)) AMC did not argue that TJD&A’s work failed to analyze unreasonable adverse effects based on the SEC standards. *Tr. Day 62/Morning Session*, pp. 159-161. Indeed, in AMC’s review of the Project, AMC made no effort to correlate the work that TJD&A completed and the criteria in 301.14(a). *Id.* at 160. In fact, AMC specifically conceded that TJD&A completed and analyzed all of the required factors found in Site 301.05(b)(6). *See Tr. Day 62/Morning Session*, pp. 162-63 (agreeing that all the steps in Site 301.05(b)(6) were completed and that TJD&A had “fill[ed] in the boxes”); *see also* App. Ex. 432 (Terrence DeWan and Associates – Visual Impact Assessment, Compliance with Site 301.05(b)(6)).

Subcommittee's final decision granting a Certificate for Antrim Wind, the Subcommittee noted that the proposed turbines were approximately 1.62 to 3.05 miles away from Bald Mountain and 3.01 miles away to 3.23 miles away from Willard Pond. While the Subcommittee found that up to nine turbines would be prominently or *very* prominently visible from these scenic resources, the Subcommittee concluded that the turbines (and the project as a whole) would not be a dominant factor in the landscape and that the project's impacts on aesthetics does not rise to the level of being unreasonably adverse. *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, pp. 119-121 (March 17, 2017).<sup>243</sup> Here, the scope and scale of NPT is significantly less intrusive than Antrim Wind.

The NPT VIA assesses all of the required criteria in Site 301.05(b)(5) and Site 301.14(a) and reasonably concludes that the Project will not have an unreasonable adverse effect on aesthetics at each of the individual resources, for each of the six subareas, and the region as a whole.<sup>244</sup> As TJD&A demonstrated by a preponderance of the evidence, the Project will not substantially affect areas of significant value and the proposed structures are not out of scale or context with the region and do not overwhelm the landscape.<sup>245</sup> Moreover, the Project will not have a significant adverse effect on any scenic resource within the viewshed in the region.

---

<sup>243</sup> Predictably, Mr. Buscher testified that he was unaware of the Subcommittee's findings and conclusions regarding aesthetics at each of these locations. *Tr. Day 47/Morning Session*, pp. 65-68.

<sup>244</sup> Since AMC specifically conceded the NPT "fill[ed] in the boxes" for a complete VIA, *see supra* note 243, their remaining contention can only be that they disagree with the ultimate conclusions in the NPT VIA. However, as discussed above, the AMC witnesses are not aesthetics experts, they have never performed a visual impact assessment, and they have not developed photosimulations assessing potential impacts. Their opinions, therefore, should be given no weight.

<sup>245</sup> SPNHF's mistaken position is that the NPT VIA did not look at New Hampshire's landscape as a whole in a broad perspective. SPNHF misses the point of the NPT VIA, namely, to assess the Project at individual scenic resources and within different subareas and as a whole. The NPT VIA spends significant time assessing, understanding, and reporting on the distinctive regional characters throughout the State. *See, e.g., Application*, App. Ex. 1, Appendix 17, pp. 1-1 to 1-5 (assessing the project in relation to Subarea 1); *id.* at 2-1 to 2-5 (assessing the project in relation to Subarea 2).

Each of the parties that disagrees with this assessment has failed to provide substantial credible evidence to support their opinion that the Project would in fact result in unreasonable adverse effects. CFP and TJ Boyle—and D&F and AMC—do not interpret the SEC’s rules in any practical way. Instead, they merely offer counter arguments to the Applicants’ analysis. They do not prove the proposition that the Project will have an unreasonable adverse effect on aesthetics by a preponderance of the evidence, nor does TJ Boyle apply the SEC’s rules properly.

The Applicants have committed to conducting significant avoidance, minimization, and mitigation measures to reduce potential impacts to aesthetics, including siting an additional 52 miles of the Project underground since the Project’s original inception. To the extent the SEC would require additional mitigation measures, such as those documented in the Application, the pre-filed and supplemental pre-filed testimony of Mr. DeWan and Ms. Kimball and the pre-filed and supplemental pre-filed testimony of Mr. Bowes, the Applicants would be willing to consider such practical additions as conditions of a Certificate of Site and Facility. *Tr. Day 47/Morning Session*, pp. 83-84. The preponderance of the evidence presented by the Applicants proves sufficient facts for the SEC to find that the Project will not have an unreasonable adverse effect on aesthetics.

## **B. Historic Sites and Archeological Resources**

As demonstrated in the discussion below, the Applicants have proved facts sufficient for the Subcommittee to find that the project will not have an unreasonable adverse effect on historic sites, including both archeological resources (underground) and above-ground historic resources. The Applicants have provided substantial credible evidence with respect to the identification of historic sites, the assessment of potential adverse effects, and mitigation for any unavoidable adverse effects. The evidence produced by intervenors and Counsel for the Public does not credibly refute the Applicants' experts' opinion that the Project will not have an unreasonable adverse effect on historic sites.<sup>246</sup>

The substantial credible evidence and opinions provided by the Applicants' experts, Ms. Widell and Dr. Bunker, and described herein, can form the foundation for the Subcommittee's finding of no unreasonable adverse effects in the first instance, and that finding can be reinforced and assured by the ongoing Section 106 process. Accordingly, consistent with well-established SEC practice, the Applicants propose standard conditions to the Certificate that incorporate the Section 106 process and the involvement of DHR.

The evidence shows there will be minimal impact to archeological resources. The archeological survey work was extensive and followed DHR-approved methodology, the Applicants made effective route design modifications to avoid impacts where archeological sites were found, and the Applicants will conduct archeological data recovery pursuant to DHR and

---

<sup>246</sup>The determination of whether a project will have an unreasonable adverse effect on historic sites is controlled by the five criteria in Site 301.14. These five criteria are further informed by the SEC application requirements in Site 301.06. Both archeological (below-ground) resources and above-ground resources are included in this review.

DOE-approved methods as mitigation for the one site where impacts cannot be avoided. *Tr. Day 30/Afternoon Session*, p. 49.

The Project will have some adverse effects on above-ground resources, but those effects are small in number and are not substantial in either scope or degree. *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App Ex. 95, p. 1; *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, p. 11; *Tr. Day 28/Afternoon Session*, pp. 68-75. Through the combined work of SEARCH (the DOE consultant) and the Northern Pass consultants, all historic sites that could be affected by the Project were identified and evaluated for National Register of Historic Places (“NRHP” or “National Register”) eligibility. The DHR’s Determination of Eligibility Committee has made findings on eligibility for all the historic sites it required to be reviewed. While the DHR and the DOE have not completed their final review of potential effects under Section 106<sup>247</sup>, the record in this proceeding demonstrates that the Applicants’ experts have done a thorough assessment of potential effects to all historic properties, both in the initial Assessment Report that was included as Appendix 18 of the Application and subsequently in the separate prescribed Effects Tables for each resource that the DHR identified as requiring an effects evaluation. *Tr. Day 30/Afternoon Session*, p. 39-40 (describing the immense work performed by the Applicants’ consultants to identify, inventory and analyze potential effects to historic properties along the Project route). The DHR also has provided its preliminary effects findings in its letter of December 21, 2017. *See infra* Part C, §III, B, 1, a.

Principally by locating 160 miles of the Project along existing ROWs (for transmission lines and state roads) and taking comprehensive steps to avoid and minimize potential impacts from the Project, the Applicants have identified only seven historic resources that will be

---

<sup>247</sup>DHR did submit a preliminary effects assessment to the SEC in a letter dated December 21, 2017. That letter is discussed below.

adversely affected. *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, pp. 13-14. Further, the Applicants will provide full mitigation for any adverse effects on these seven resources, and on any other adverse effects should they be identified by the DOE and the DHR, as required in the Section 106 process. The Programmatic Agreement (“PA”) that was finalized in August 2017 (App. Ex. 204) is the binding commitment of the Applicants, and the state and federal agency signatories to complete the Section 106 process to ensure that any adverse effects are mitigated. *See Tr. Day 30/Morning Session*, pp. 69-72 (Ms. Widell and Dr. Bunker addressing Mr. Way’s questions on the PA). DHR’s continued role as a signatory to the PA and as the State Historic Preservation Officer in overseeing implementation pursuant to what have now become the standard set of conditions in site certificates provides even greater assurance that adverse effects will be fully mitigated. *Tr. Day 41/Afternoon Session*, pp. 59-63 (Applicants’ expert Cherilyn Widell discussing her expectation, and recommendation, that the SEC condition approval on the DHR’s continued role ); *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, pp. 15-16; *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, p. 12.

1. Archeological Resources

a. **The Applicants Conducted a Thorough, Agency-Approved Identification and Assessment of Potential Effects on Archeological Resources.**

The Applicants’ archeological consultant, Victoria Bunker, Inc. (“VBI”), has extensively assessed the Project’s effects on archeological resources, and VBI has determined that there will be only one unavoidable adverse effect on site along the entire route. *Tr. Day 30/Afternoon Session*, p. 49. Dr. Bunker and VBI staff conducted Phase I-A surveys to identify archeologically sensitive areas for the entire route. *Pre-Filed Testimony of Victoria Bunker*, App. Ex. 17, pp. 6-7; *see also Application*, App. Ex. 1, Appendices 19-30. In addition, Dr.

Bunker incorporated the findings of Phase I-A surveys completed by SEARCH, the DOE's historic resources consultant. The DHR reviewed all of the Phase I-A reports and concurred with the management recommendations presented in them. *Supplemental Pre-Filed Testimony of Victoria Bunker*, App. Ex. 94, p. 4; *see also* App. Ex. 113b, Bates APP68421 (August Monthly Report to the DHR).

VBI then conducted Phase I-B surveys to expand upon and refine the Phase I-A survey results. VBI's Phase I-B work included survey of areas that VBI identified in its own Phase I-A surveys and areas that SEARCH identified but VBI had not. The DHR reviewed all of the Phase I-B reports and concurred with the management recommendations presented in them. *Supplemental Pre-Filed Testimony of Victoria Bunker*, App. Ex. 94, p. 4; App. Ex. 113b, Bates APP68421 (August Monthly Report to the DHR).

After completing Phase I-B surveys, VBI completed Phase II field investigations for twenty sites, including eighteen sites along the overhead portion of the Project, and two sites for the underground segments along State-maintained roads. The Phase II work consisted of more extensive physical survey of an identified archeological site and more detailed analysis of findings to determine whether the site should be recommended as eligible for listing on the National Register. The Phase II surveys have been completed,<sup>248</sup> and the DHR has concurred in VBI's recommendations. App. Ex. 108a (Phase II reports); *see also* App. Ex. 112c, Bates APP88963-APP88965 (DHR concurrence with VBI's recommendations in the Phase II reports).

A total of twenty-two eligible or potentially eligible archaeological sites (twelve pre-European contact; ten post-contact) were identified within the direct APE from Deerfield to Pittsburg and five potentially eligible archaeological sites (four pre-contact; one post-contact)

---

<sup>248</sup> Excepting the 4-mile segment of the underground route along locally maintained roads in Stewartstown and Clarksville. *See* discussion below at Part C § III, B, b.

have been identified within the direct APE from Deerfield to Scobie Pond as part of the Phase IB survey effort. Four of the archaeological sites were recommended by VBI and determined eligible for the National Register by the DHR. As of the date the record closed in this proceeding, the DOE had not yet rendered its findings on eligibility

As the DHR indicated in its December 21, 2017 letter, impact avoidance was not possible at only two locations. *Tr. Day 30/Afternoon Session*, p. 49; *see also DHR Finding of Effects*, Docket No. 2015-06 (December 21, 2017). Avoidance measures were explored at the Cold Brook site in Canterbury and the Turtle Town Pond site in Concord. For those sites, it is expected that the DHR will approve Phase III data recovery as the appropriate mitigation measure at the Turtle Town Pond site and will approve protective capping as the appropriate mitigation measure at the Cold Brook site in Canterbury. These are best practical measure to mitigate for the impacts at those sites. *Tr. Day 30/Afternoon Session*, p. 49-50 (describing the process of consulting with the DHR to continue field investigation and information gathering at the one site where impact cannot be avoided).<sup>249</sup>

The Applicants have satisfied all of the criteria set forth in Site 301.14(b), and no other party addressed the issue of archeological resources. The Applicants identified all archaeological resources potentially affected by the Project and the number and significance of any adversely affected archaeological resources. *Application*, App. Ex. 1, Appendices 19-30. The nature and extent of those adverse effects was further examined using information gathered

---

<sup>249</sup>The Joint Municipal Group's claim that the impact to the Turtle Town Pond site is unreasonably adverse in part due to a lack of proposed mitigation is misguided. *Post-Hearing Memorandum filed by Municipal Groups 1 South, 2, 3 South and 3 North*, p. 112. Ms. Bunker testified that for impacts to sites that are unavoidable, the Applicants will consult with the DHR to develop a mitigation plan, which will include a Phase III data recovery effort. *See Tr. Day 30/Afternoon Session*, pp. 49-50. This is standard, even favored mitigation for archeological sites. *Tr. Day 30/Morning Session*, p. 8. For these reasons, CFP's assertion that the "Applicants have not proposed any minimization or mitigation techniques for [the] two impacted archeological sites" is incorrect. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 112.

during the Phase I-B and Phase II surveys. App. Ex. 108 (Phase I-B Reports); App. Ex. 108a (Phase II Surveys). The Applicants' steps to avoid, minimize and mitigate adverse effects on archaeological resources were extensive and effective, and represent best practical measures developed through regular consultation with the DHR. *See generally* App. Ex. 113; *see also* App. Ex. 113a-e (monthly reports and other DHR correspondence). Of the four eligible sites, the Project was able to avoid impact entirely to two of them. *Tr. Day 30/Afternoon Session*, p. 49. Further, the Phase III data recovery work is the DHR's and the DOE's preferred mitigation approach for that site. Last, the DHR has concurred in all of the findings and recommendations made by the Applicants' consultants. *See* App. Ex. 94; *see also DHR Finding of Effects*, Docket No. 2015-06, (December 21, 2017).

**b. The Applicants Have Proposed a Reasonable Approach to Survey the 4-mile Segment of Underground Route from Stewartstown to Clarksville.**

The segment of the underground route along locally maintained roads in Stewartstown and Clarksville will be fully surveyed when authorized by the Subcommittee. For completion of the Phase I-B survey along the locally-maintained roads in Clarksville and Stewartstown, the Applicants have requested by separate motion filed on this date that the Subcommittee authorize the Applicants to perform the shovel test pit excavations needed to meet the requirements of the Section 106 process and delegate authority to the DOT, or engage a consultant, to monitor and enforce the excavation and restoration of the highway. This would be done in the same manner as the DOT exercises its authority for work along state-maintained highways. The Applicants will submit Applications to the SEC modeled on the DOT's application form, containing the necessary information for minor disturbances.

The Joint Municipalities assert that because the review of this segment in Clarksville and Stewartstown is not complete, the Subcommittee has insufficient information to make a finding.

*Post-Hearing Memorandum filed by Municipal Groups 1 South, 2, 3 South and 3 North, Docket No. 2015-06, p. 105 (January 12, 2018).* This position is wrong. The record demonstrates that this segment will be surveyed as required, consistent with the requirements of the Section 106 process, and that if archeological sites are found (including human grave sites), the Applicants will design the route to avoid impacts. *Tr. Day 30/Afternoon Session, pp. 50-51 (Dr. Bunker stated that directional drilling below any grave site is an option available to the Project.)*

**c. The Project Will Not Have an Unreasonable Adverse Effect on Archeological Resources.**

There will be almost no impact to archeological sites for the entire length of the Project. For the 1 or 2 sites where impact cannot be avoided, the Applicants will conduct full Phase III data recovery. This will allow for the recovery of artifacts and other salient data at those sites in a manner that fully mitigates the impact to the sites. This will be done in full conformance with DHR and DOE directives. In sum, the Applicants have put forth substantial and uncontroverted evidence that the Project will not have an unreasonable adverse effect on archeological resources.

2. Historical Sites/Above Ground Resources

**a. The Applicants Conducted a Thorough, Agency-Approved Review of the Historic Resources Identified in Site 301.14(b), addressing both the number and significance of above-ground historic sites.<sup>250</sup>**

The Applicants' evaluation and assessment of above-ground resources -- performed by seven different consulting firms, in collaboration with Cheryl Widell of Widell Preservation Services LLC -- is extensive, and it was subject to unprecedented levels of analysis from state and federal regulating agencies. Starting first with the SEC application, the Applicants submitted a two volume Historic Resources Assessment Report (*Application, App. Ex 1,*

---

<sup>250</sup>Site 301.14 (b) sets forth the criteria for review of historic sites by the SEC.

Appendix 18) documenting the Applicants' review of 1,284 separate properties or districts in the Area of Potential Effect ("APE") that were considered as potentially eligible historic resources and that might be affected by the Project. *Id.* at 1. Of that total, Ms. Widell and the Preservation Company determined that 194 of the resources had a sufficient visual relationship with the Project to merit further assessment of their historic character and potential effects of the Project.<sup>251</sup> Accordingly, the Applicants' consultants completed, and included in the Assessment Report, detailed Historic Resource Assessment forms for those 194 resources. *Id.* at 2. This Report was the result of a multi-year study and field review of these 194 properties, and it presents a comprehensive analysis of the potential effect on these properties.

At the same time that the Applicants were performing this study, the DOE's consultant (SEARCH) was completing the PAFs to provide historical context for the Section 106 historic resources review, and to identify those properties in the APE that merited further study. *Project Area Forms*, App. Ex. 111. SEARCH completed and the DHR approved PAFs for the Merrimack Valley, Lakes, White Mountains, and Great North Woods regions. *Id.*; *see also* App. Ex. 112, Bates APP59551-81 (DHR review and approval of the four PAFs).

From the recommendations from SEARCH in the PAFs, 123 properties were identified by the DHR as requiring full assessment of eligibility for listing on the National Register. DHR-

---

251 The Applicants' consultants explained the methodical process they used to make their determinations in the *Assessment of Historic Properties* report. *Application*, App. Ex 1, Appendix 18, pp. 6-8. Contrary to CFP's mischaracterization of that methodology in its post-hearing brief (*Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, pp.100-101), the Applicants erred on the side of including properties where it was not clear whether there was a sufficient visual relationship. *Application*, App. Ex 1, Appendix 18, p. 7. CFP also states that the consultants eliminated properties from further consideration based only on an assessment of views of the existing transmission line. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p.101. This is incorrect. As Preservation Company describes in its report, "[w]here the existing line was not in view... we located the existing line and its location relative to the historic resource using USGS maps. Then taking into account the tree cover and topography of the location (as shown on USGS maps and actual views) we estimated whether or not the new line and taller structures would be in view." *Application*, App. Ex 1, Appendix 18, p. 7.

prescribed inventory forms for all properties specified by the DOE and the DHR were completed by the Applicants to assist in determining whether a given resource is eligible for listing on the National Register. All 123 of these Inventory Forms and the correlative DHR determinations of (NR) eligibility (the so-called “green sheets”) are found at App. Ex. 110 and 110a. The DHR and the DOE have made a determination of eligibility on all of the inventoried sites. App. Ex. 112; *see also* App. Ex. 112a; *see also DHR Finding of Effects*, Docket No. 2015-06, p. 3 (December 21, 2017).

In addition, based on methods approved by the DHR in late 2016, the Applicants completed a total of fifteen cultural landscape report volumes pertaining to the Suncook River Valley, Pemigewasset River Valley, Ammonoosuc River Valley, and Great North Woods study areas, as well as a shorter report addressing potential cultural landscapes in Deerfield. *See generally, Cultural Landscape Reports*, App. Ex. 211. In these cultural landscape reports, the Applicant addressed and incorporated comments from the DOE and the Section 106 Consulting Parties. Ten cultural landscapes initially inventoried by Public Archeology Laboratory (“PAL”) (the Applicants’ consultant) in consultation with Ms. Widell were recommended by the Applicants as eligible for the National Register. The DHR and the DOE have since concurred in those recommendations, including the subsequent recommendation to split the Rt.3/Franconia Notch cultural landscape into two separate cultural landscapes and reports. App. Ex. 112c at APP88940—APP88961 (DHR concurrence in the Applicants’ recommendations); APP88948 (Determination of Eligibility form for the Route 3/Franconia Notch cultural landscape).

**b. The Criticism of the Applicants' Historic Site Assessment by CFP, SPNHF, the Historic Preservation Group and the Joint Municipal Group is Entirely Lacking in Analysis of Eligibility and Potential Effect**

The record in this proceeding demonstrates that the Applicants have produced an unprecedented amount of research and analysis of historic resources in New Hampshire.<sup>252</sup> As described above, the record includes the following documents addressing above-ground historic resources:

- Project Area Forms (App Ex. 111) (prepared by DOE's consultant);
  - Appendix 18 (the Historic Resources Assessment Report);
  - 123 Inventory Forms (App. Ex. 110, 110a) (evaluating eligibility of historic sites);
  - 15 report volumes relating to 5 different cultural landscape study areas (App. Ex. 211);
- and
- 114 Effects Tables (App. Ex. 196, 196a, 196b)

Any claim that the Applicants have attempted to limit the breadth and depth of review of cultural resources is incorrect.<sup>253</sup> The actual state of the record in this proceeding is that only the

---

<sup>252</sup>The methods required by DHR are also unprecedented. In two specific regards, DHR has created new procedures in its historic resource assessment process during its review of this Project. First, cultural landscapes had never been required to be reviewed in past projects, but it has been, as the Subcommittee is fully aware, front and center in this case. The methods for preparing cultural landscape reports were established for the first time in New Hampshire by DHR in November of 2016. Second, DHR also established new "effects tables" that the Applicants were directed to use.

<sup>253</sup>CFP mischaracterizes Ms. Widell's testimony on the scope of her work. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, pp. 98-99: (1) CFP states that "Ms. Widell even went so far as to criticize Counsel for the Public's experts for conducting community workshops to get localized input." *Id.* at 98 (citing Ms. Widell's Supplemental Pre-filed Testimony at page 7). In that testimony, however, Ms. Widell did not criticize CFP at all for "conducting community workshops." Rather, she criticized aspects of how those workshops were conducted; not that they were conducted in the first place. (2) CFP says that Ms. Widell acknowledged that all of the potential historic sites were "historically and culturally significant to the state's communities." *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 99 (referencing Ms. Widell's testimony on Day 27). However, in that testimony, Ms. Widell was asked by Attorney Roth whether she agreed with him that "people in those communities were showing to us that those resources were significant to them, to their community, culturally and historically?" *Tr., Day*

Applicants have identified listed or potentially eligible historic sites, and that only the Applicants have done an assessment of potential effects of the Project on those sites. CFP and several intervenors have made broad arguments that the Project will have an unreasonable adverse effect on many historic sites, but in no case do they back up their assertions with any specific analysis.

The Historic Preservation Intervenor Group filed no testimony on historic resources. It did submit a Post-Hearing Memorandum of Law, however, in which it used the North Road-Lost Nation Road Cultural Landscape as its sole example of why the Project will have an unreasonable adverse effect on historic sites. *Historic Preservation Group Post-hearing Memorandum*, Docket No. 2015-06, p. 7. The group does say that the “scale of adverse effects across the state is very large” and it adds that for this one cultural landscape the “adverse effect is significant in extent and duration, and it is damaging to the fundamental character of the historic resource.” *Id.* On this basis only - for this one property and with no description whatsoever of any specific aspect of the effect - the Historic Preservation Group concludes that “it clearly

---

27/Morning Session, p. 21. Ms. Widell answered “Yes. They were showing that they believed these properties had significance to them within their community.” *Id.* Ms. Widell carefully answered this question by saying it was the attendees’ belief that the properties had significance; she did not acknowledge that they were in fact historically and culturally significant. This is precisely the fundamental deficiency in CFP’s approach in their entire historic site review. CFP has done no assessment of significance of any of these properties. Ms. Widell was certainly not saying here that she agreed they were significant. (3) CFP states that “Ms. Widell’s review ignored many smaller structures like historic stone walls and trees.” *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 99 (referencing the transcript of Day 29, pp. 7-8). She was asked by Ms. Meyer, “And do you have maps that show an inventory of where our stone walls, where there might be particularly historic buildings, historic trees that are very large and so would have some significance? Do you have maps that show that on your inventory even though initially you were asked to just look at the, you know, assume it’s a Project under the pavement. Now it’s expanded. Do you have maps that show inventories of those things you’d need to look at?” *Tr., Day 29/Afternoon Session*, pp. 7-8. Ms. Widell answered on page 8 that “I do know that our team has looked a historic transportation map that indicates some of those features, and, of course, through site visits we are identifying those features that contribute to the significance of the property.” This is a far different answer than saying she did not identify stone walls and trees. (Moreover, stone walls [and trees] are referenced in various effects tables. *E.g.*, App. Ex. 196b, Bates APP82898-900 (noting the condition of a stone wall on the Frederick Philbrick Weeks House property); App. Ex. 196b, Bates APP82993-95 (describing a stone vault and trees within the Woodstock Cemetery); App. Ex. 196a, Bates APP68205-08 (describing boundary stone walls as a character-defining feature of the Peaked Hill Historic District)).

satisfies the criteria for unreasonable adverse effect on historic sites.” *Id.* (Emphasis added.)

This bald assertion is not supported by a shred of evidence.

SPNHF claims that the Applicants created a “gaping hole” in the historic site assessment by misinterpreting Site 102.23. *Post-Hearing Memorandum of The Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, p. 36. Yet, nowhere in SPNHF’s testimony or brief does it provide any evidence of historic resources that have not been properly assessed. SPNHF argues that the number of adverse effects found by the Applicants is “astonishingly small.” *Id.* at 40. SPNHF then goes on to argue that CFP expert’s “numbers” are significantly higher, stating further that “Ms. O’Donnell found 3,024 locations.” Asserting that Ms. O’Donnell found 3,024 adverse effects, as suggested by SPNHF in its brief, is misleading in the extreme. *Post-Hearing Memorandum of The Society for the Protection of New Hampshire Forests*, p. 40. She did not assess the eligibility of or effects on any specific location. *Tr. Day 54/Morning Session*, p. 58.

Furthermore, even SPNHF’s attempt to illustrate the “gaping hole” by referring to the Town of Whitefield and its 37 “valued, historic places, areas, and objects in the community” that “shape the character of the town” falls flat. SPNHF identifies no specific property and provides no explanation at all of any real effect on an actual historic site. By contrast, the Applicants did undertake this analysis. *See infra*, Part C, §III, B, c(iv)(relating to King’s Square and other properties in Whitefield that have been assessed by the Applicants.) SPNHF also mentions the 6 railroad historic districts “that will be adversely affected.” *Post-Hearing Memorandum of The Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, pp. 51-52. SPNHF fails to disclose that the DHR has not found that these railroads will be adversely affected; DHR simply asked for additional information. *DHR Finding of Effects*, Docket No. 2015-06, p. 4

(December 21, 2017). Furthermore, SPNHF itself offers no explanation as to why and how the Project will have an adverse effect on these railroads, except to refer twice to “sweeping vistas.” Still, SPNHF brazenly asserts that “[h]ere again, each of these on its own would have an unreasonable adverse effect but the number and significance as well as the extent, nature and duration of all of them together can lead only to a finding of unreasonable adverse effects.” *Id.* at 52. This is not a serious claim: there is no evidence of any effect at all.<sup>254</sup>

The Joint Munis’ Post-Hearing Memorandum addresses the Deerfield Center Historic District, and at least makes an attempt to describe the adverse effect it claims will be caused. But, in contrast to the Applicants’ two detailed assessments,<sup>255</sup> the Joint Munis loosely describe the possible effects. It refers to multiple “towers” that will affect the Deerfield Center District, but there is no evidence of how many, where they are, where they can be seen, and what effect they may have. The municipalities rely on Mr. Newman’s testimony to support their position, but, as described below, even he as a professional in the field does very little to demonstrate what the effect will be. *See infra*, Part C, §III, B, c(iii). Hyperbolic statements referencing multiple, “massive” towers “looming” over the area<sup>256</sup> are not only inconsistent with the

---

<sup>254</sup>SPNHF’s claim that the Applicants have failed to assess potential effects on the so-called “Southern Municipalities” is incorrect. *Post-Hearing Memorandum of The Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, pp. 58-59 (January 12, 2018). The Applicants fully studied the area between the Deerfield and the Scobie Pond Substations and concluded that no properties in that segment will be adversely affected by the Project. *Application*, App. Ex. 1, Appendix 18, Attachment B, Bates APP17364-81; *see also Application*, App. Ex. 1, Appendix 22 (results of Phase I-A and Phase I-B archeological survey between the Deerfield and Scobie Pond Substations).

<sup>255</sup>One was submitted with the Application (*Application*, Appendix 18, Attachment A, Bates APP14872-93) and a second “Effects Table” was produced for DHR last year in the Section 106 process. App. Ex. 196a, Bates APP68180-94.

<sup>256</sup>*Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, p. 110.

professionally prepared photosimulations in these locations, but are of no value to the Subcommittee in its analysis of potential effects from the Project.<sup>257</sup>

CFP's sweeping statements about the Project's effects on three cultural landscapes further illustrates the complete absence of rigor in its review. CFP criticizes the Applicants' assessment of the Short Falls Cultural Landscape by first noting correctly that 1.6% of the landscape area is in the APE and that the Project will not be in view within the APE. *Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p. 106. CFP then states that "[b]y discounting visual impacts outside the one-mile APE, Ms. Widell minimized reporting of adverse effects on cultural landscapes." *Id.* CFP does not dispute the Applicants' facts, and CFP provides absolutely no information on what effects (outside the APE) were not addressed by the Applicants. CFP goes on to say that Ms. Widell "under-reported the actual adverse effects of the Project on historic sites." *Id.* at 107. Given the enormous amount of descriptive information about Project effects in the 194 original assessments forms and the 114 subsequent effects tables (with some overlap), in contrast to the total absence of effects assessment for any property, district or landscape in CFP's expert's report and testimony, and in CFP's Post-hearing memorandum, this assertion is patently without merit.

- i. The Applicants correctly interpreted the definition of "historic site" under Site 102.23

As is readily apparent from the above description of the surveys completed for this Project, the scope of the Applicants' identification of historic sites was extensive. Following on the DOE-directed surveys completed by SEARCH in the PAFs, the DHR directed the Applicants

---

<sup>257</sup> So, too, is the reference to the Nottingham Road Historic District with "industrial scaled" lines causing an "exponentially greater" effect to that area. The actual effects are laid out in detail in the Applicants' assessment forms and effects tables. While there may be reasonable disagreement on whether the effect to the historic district is adverse, there has been no disagreement from any party on the actual description of the area and the Project's potential effect on it.

to complete inventory forms for 123 properties. This work followed the DHR's standard process to identify historic resources, resulting in a comprehensive survey of historic sites that might be affected by this Project.

The theory asserted by Counsel for the Public and its historic resources consultant, Heritage Landscapes ("Heritage"), that the Applicants' work has failed to "capture" thousands of historic sites as that term is defined in Site 102.23 is plainly wrong. Heritage Landscapes did no evaluation of individual properties whatsoever, and Ms. O'Donnell has failed to point to any historic sites on her list of thousands that should have been surveyed and were not. *Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 140, p. 3 (describing Heritage's evaluation method as including reviewing the Applicants' filed materials and hosting public workshops and gathering existing datasets, but not including evaluation of individual properties). In contrast, Ms. Widell testified that she believes that the Applicants' survey work captured all the historically significant properties within the APE, and she can think of no historic site that was missed. She added that she had "kept in mind the broadest possible application of what could be considered under the historic site definition." *Tr. Day 30/Afternoon Session*, pp. 47-48. .

The SEC adopted for the first time a definition of the term "historic sites" in its December 2015 rulemaking. Prior to then, there was no operative definition in either RSA 162-H or the SEC's rules. The new rule, at Site 102.23, defines "historic sites" as follows:

"Historic sites" means "historic property," as defined in RSA 227-C:1, VI, namely "any building, structure, object, district, area or site that is significant in the history, architecture, archeology or culture of this state, its communities, or the nation." The term includes "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior," pursuant to 36 C.F.R. §800.16(l)(1).

CFP and its consultants assert that "historic sites" should mean any site "valued by the people of New Hampshire." *Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 140,

Exhibit B, p. 23. Ms. O'Donnell believes that the Applicants should have considered almost 13,000 properties in the historic resources assessment for the Project. *Id.* at 113 (citing the “widespread presence of 12,904 enumerated historic sites and cultural landscapes”). As explained below, this view is contrary to a reasonable interpretation of the definition of the term “historic site” in Site 102.23, contrary to DHR policy guidance, contrary to SEC precedent, and contrary to common sense.

The definition is not identical to that for “historic properties” under Section 106 regulations, and its wording invites a reasonable inquiry as to what resources it covers. Upon examination, however, there is very little, if any, practical difference between the state and federal definitions. The reach of both is broad, covering all aspects of historic significance for properties important at the local, state and national level. *Compare* 36 C.F.R. §800.16(1)(1) (defining the term “historic property” to include any historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register), *and* §800.16(1)(2) (defining “eligible for inclusion in the National Register” to include both properties formally determined as such and all other properties meeting National Register criteria), *with* Site 102.23 (providing only a single example of what a historic site is, referring specifically to those properties that meet the Section 106 definition – those that are included, or eligible for inclusion, in the National Register); *see also Supplemental Pre-filed Testimony of Cherilyn E. Widell*, App. Ex. 95, p. 5; *see also Tr. Day 27/Morning Session*, pp. 13 (in reference to Site 102.23, Ms. Widell testified that “I would say that the definition encompasses most everything I can think of that would be

eligible for the National Register,”; *see also id.* at 14-15 (Ms. Widell explaining that the Applicants’ identification of historic resources was very comprehensive”).<sup>258</sup>

Moreover, the new SEC rules on historic sites focus almost completely on Section 106 requirements. The application requirements set forth in Site 301.06 require that the Applicant demonstrate that project review has begun in compliance with Section 106 where applicable (Site 301.06( a)), that all historic sites and areas of potential archaeological sensitivity be identified within the area of potential effects as defined by the federal law (Site 301.06( b)), that the determination by the DHR or the lead federal agency if applicable on effect on historic properties be included in the Application (Site 301.06( c)), and that the Applicant describe the status of consultations with the lead federal agency and consulting parties as defined in the Section 106 Regulations (Site 301.06( e)). As can be readily seen, the SEC focused its Application requirements for historic sites on Section 106-related information. This is fully consistent with the SEC’s practice under the new rules, as well. *See infra* Part C, § III, B, g.

The DHR’s guidance on this issue is instructive – and compelling. The DHR’s *Policy Memorandum—Agency Review of Applications before the New Hampshire Site Evaluation*

---

<sup>258</sup> Several intervenors make the legal argument that the definition of historic site under Site 102.23 is not the same as the definition of historic property under the Section 106 regulations. The Applicants do not disagree. The Applicants do disagree, however, with any suggestion that they failed to identify a historic site as defined in Site 102.23 or failed to assess any historic sites for adverse effects that fall under the that definition. Not a single intervenor has identified a place or property that should be considered a historic site under the SEC rules and that the Applicants failed to address. For example, SPNHF argues the point at some length and describes the Applicants’ interpretation of the rule as “exceedingly narrow.” *Post-Hearing Memorandum of The Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, p. 36. Nowhere in its brief, however, does SPNHF identify any property that should be considered a historic site and was not assessed. Similarly, CFP repeats Ms. O’Donnell’s observation that the Applicants failed to “capture” the full range of historic sites that may be impacted by the Project. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p.94. Yet, CFP also fails to identify a single property that the Applicants missed because of its errant interpretation of the definition. CFP acknowledges this very point when it states that “Mrs. O’Donnell found the potential for many more adverse effects to historic sites than reported by Ms. Widell.” (Emphasis added.) Again, completely lacking in her analysis is any evidence that there are in fact more widespread numbers of historic sites than the Applicants have identified. She provides not a single example of one.

*Committee* (January 15, 2016) reveals a clear sense of the DHR’s assessment of what is properly covered by the new SEC rules on historic sites. *See* App. Ex. 116. (While this is not binding on the SEC, it certainly is instructive, as the DHR is a statutory member of the SEC.) This policy guidance was adopted on January 15, 2016 to clarify how it would apply the revised SEC rules that had been enacted a month earlier. The DHR observes that “[t]hroughout the SEC Rules, 36 C.F.R. §800 refers to the federal regulations implementing Section 106 of the National Historic Preservation Act.” *Id.* at APP59849. Furthermore, the DHR asserts in its *Policy Memorandum* that “[w]ith rare exception, proposed energy projects seeking a certificate from the SEC are reviewed under Section 106 Regulations.” *Id.* This means that “[I]n NH, above ground historic properties meeting the definition of Site 102.23 are identified through preparation and submission of area and individual inventory forms ... Information gathered and analyzed in individual inventory forms and historic district area forms provides a recommendation of whether a property is eligible for listing on the National Register of Historic Places.” *Id.* at APP59850. Nowhere in the document does the DHR suggest that the DOE or the SEC should undertake a broader review of historic sites for SEC purposes than what is covered under Section 106. *Id.*

The Section 106 approach has also been the focus of the DHR’s review, as reflected in its updates to the SEC on the Northern Pass Project. The DHR’s letters to the SEC all have focused on Section 106 compliance and progress. *See, e.g., Application*, App. Ex. 1, Appendix 49 at APP27354-APP27355 (DHR meeting minutes of 3/5/15); CFP Ex. 443 (8/25/17 DHR letter to the SEC).

In cases decided since the new rules were adopted, the SEC itself has relied on Section 106 as the guidepost for reviewing the effects on historic sites under RSA 162-H and the new

rules. In its deliberations on the 2016 *Antrim Wind* project, the Subcommittee was advised by one of its members, Dr. Richard Boisvert -- the Deputy Director of the DHR and State Archeologist -- that the definition of historic sites in SEC rules follows the definition in federal regulations, specifying for the Subcommittee that "'historic' here means that whatever makes it eligible for listing on the National Register." App. Ex. 366 at APP84415-APP84416 (excerpt of transcript from Day 1 of *Antrim Wind* Deliberations); *see also* App. Ex. 366 at APP84412. Section 106 was the focus of the SEC's consideration of historic sites in the Merrimack Valley Reliability Project as well. *Decision and Order* (10/4/16) at pp. 32-33, 65-66.

In her work, Ms. O'Donnell did not make any effort to determine how the SEC had applied its new rules in recent cases. *Tr. Day 54/Morning Session*, p. 114.<sup>259</sup> In the Heritage Landscapes report, CFP's apparent position is that it is reasonable to require assessment of any properties in categories it finds important without having to meet any standard of historical significance or integrity, including the 50-year old threshold for eligibility for the National Register.<sup>260</sup> Instead, in addition to identifying sites that are listed or eligible for the National Register, Heritage Landscapes identified every location it found in seven categories of resources with no consideration whatsoever of significance or integrity. This approach is not how the

---

<sup>259</sup> Ms. O'Donnell acknowledged not knowing Elizabeth Muzzey, the DHR Director and SHPO (*Tr. Day 54/Morning Session*, p. 46) and when asked whether she knew who Richard Boisvert is, she replied, "Nope." *Id.*

<sup>260</sup> CFP relies on Ms. O'Donnell's testimony to support its legal position that the 50-year criterion is a guideline only. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 95, fn. 491. CFP also cites to Mr. Roth's cross-examination of Ms. Widell who said it was a guideline, as well, but then said it was under Criterion G. Ms. Widell was wrong to refer to it legally as a "guideline" and CFP is wrong to use that answer to support its erroneous statement of the law. Ms. Widell was correct that the 50 year rule is under Criterion G, *viz.* 36 CFR §60.4 Criteria for evaluation. This federal regulation establishes the criteria that "shall be used in evaluating properties for nomination to the National Register, by NPS in reviewing nominations, and for evaluating National Register eligibility of properties," and it includes section (g): "A property achieving significance within the past 50 years if it is of exceptional importance. This exception is described further in NPS "How To" 2, titled "How to Evaluate and Nominate Potential National Register Properties That Have Achieved Significance Within the Last 50 Years."

review of historic resources is done, and such an unfiltered listing of possible historic sites provides nothing of value to the Subcommittee in its consideration of what resources have historic value and what effects the Project may have on them.

Heritage Landscapes identified seven categories of resources that it included in its assessment, such as current use properties, conservation lands, recreation lands, trails, and public waters. *Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 140, Exhibit B, p. 21. Heritage Landscapes included each of these categories as historic sites under the SEC rules because it considered them “historic sites and cultural landscapes valued by the people of New Hampshire.” *Id.* at 23. Of the 12,904 total resources identified, 10,146 were included solely because they are listed as current use parcels in town records for the 31 towns bordering the Project corridor or for the 4 towns within one mile of the corridor. *Id.* at 107-08 (table of current use parcels in the 35 total towns). Heritage Landscapes included all current use parcels in these towns, which included many parcels located beyond the 1-mile APE and even beyond the 10-mile APE that Ms. O'Donnell used. *Id.*; *see also Tr. Day 54/Morning Session*, pp. 59-61 (Heritage identified current use parcels generally by town, but did not identify whether a particular current use parcel was within the 10-mile APE that Heritage used in its report). Indeed, Heritage Landscapes included all current use parcels regardless of whether the Project would be in view from those parcels and Heritage Landscapes did not perform any further work to determine or assess visibility from these properties. *Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 140, Exhibit B, pp. 107-08 (table showing all current use parcels in 35 towns); *see also Tr. Day 54/Morning Session*, pp. 95-96.

The New Hampshire current use statute was adopted in 1973. Despite the fact that none of the current use parcels could meet the typical 50-year age threshold for determining

significance, they were identified as historic sites and dominate the list of sites identified by Heritage Landscapes. *Tr. Day 54/Morning Session*, pp. 66-67 (testifying that even if land was placed into current use very recently, it nonetheless becomes an historic site for purposes of Heritage Landscape's methodology).

No consideration was given to the significance or integrity of any of the category of resources identified. Rather, they were included solely because of their location in a municipality along the route and because they fit into one of the seven categories created by Heritage Landscapes. *See Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 140, Exhibit B, p. 22; *see also Tr. Day 54/Morning Session*, pp. 59-61, 70 (testifying that current use parcels were included because current use is a "de facto conservation process by landowners"). As Ms. O'Donnell pointed out, approximately 60% of New Hampshire is in current use. To suggest that parcels of land comprising 60% of New Hampshire are "historic sites" under the SEC definition illustrates the nonsensical position taken by Ms. O'Donnell. *Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 140, Exhibit B, p. 27.

In addition to the seven categories identified, Heritage Landscapes also included "Community Resources," which consisted of resources identified by members of the community during community workshops. *Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 140, Exhibit B, p. 33-36. These resources were identified by providing participants of the workshop with a form on which they could indicate locations that were significant to them within any of the 35 host communities. *Id.* at 33. Heritage Landscapes included each of the 580 resources identified in this manner in its final report. *Id.* No assessment or analysis was done regarding the integrity or significance of these resources. Moreover, no assessment was done to determine

actual effect from the Project on these resources. *See generally Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 140.<sup>261</sup>

The Heritage Landscapes report and Ms. O'Donnell's testimony essentially suggest that the 12,904 resources identified in their report should have been evaluated for eligibility as a historic site and then assessed for effects. This is an extraordinary number of properties to suggest for review under Section 106, and this method is not aligned at all with the SEC rules, recent SEC practice, DHR guidance, and any rational assessment of historic resources.

ii. The APE for Historic Sites is 1 Mile, not 10 Miles

The APE for review of indirect visual effects on historic sites for this Project has been long established by the DOE and the DHR as approximately one mile. *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, Attachment 1. In its assertion that the APE should instead be ten miles, CFP extends its unreasonable reach for historic properties in direct contravention of this agency determination and of SEC rules. CFP's theory flies in the face of Site 301.06(b), the rule requiring the Applicants to identify "historic sites and areas of potential archeological sensitivity located within the area of potential effects as defined in 36 C.F.R. §800.16(d)." The lead federal agency for a given project, in consultation with the State Historic Preservation Officer ("SHPO"),<sup>262</sup> is responsible for determining the APE. 36 C.F.R. §800.4(a).

---

<sup>261</sup> A few examples of the properties CFP has included in its list will illustrate the irrationality of their approach. One property included in Heritage's final count of historic sites was Grey Knob Camp in Randolph, identified during a community workshop. App. Ex. 369 at APP84424. Grey Knob Camp is roughly thirteen miles from the *underground* portion of the proposed Project, and yet it was included in Heritage's final count. *Tr. Day 54/Morning Session*, p. 82. Another property, also identified at a community workshop and included in Heritage's tally of historic resources, is the so-called Conkling Family Homestead in New Hampton. App. Ex. 369 at APP84424. The reason for the property's importance given by the community member who identified it was "[I] live there." *Id.*; *see also Tr. Day 54/Morning Session*, pp. 80-81.

<sup>262</sup> In New Hampshire, the SHPO is the DHR. RSA 227-C:2.

In compliance with that regulation, the DOE several years ago established an indirect APE of approximately one mile on either side of the right-of-way for visual effects and a direct impact APE along the underground section of the Project of approximately 20' from the edge of pavement.<sup>263</sup> The DHR concurred with the DOE on this APE. *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, Attachment 1 (March 28, 2013 letter from Richard Boisvert, State Archaeologist and Deputy State Historic Preservation Officer, DHR, to the DOE). Thus, since early 2013, the identification of historic sites and the assessment of visual effects on those sites for the Project have proceeded in accordance with that one-mile APE. The extent of the APE as defined in Site 301.06(b) and defined and determined pursuant to 36 C.F.R. Part 800 is approximately one mile. The Subcommittee in this case already addressed this issue. *Order on Applicant's Request for Partial Waivers Under the Newly Adopted Rules*, Docket No. 2015-06 (June 23, 2016). In that Order, the Subcommittee granted a waiver of the requirement that historic sites be assessed on adjacent properties if such properties extended beyond one mile from the Project, finding that it would be unduly burdensome for the Applicants to assess historic sites for properties extending more than a mile from the line. In the *Order*, the Subcommittee noted that the Applicants had already assessed historic properties within the one-mile APE from the edge of the ROW, "which constitutes the Area of Potential Effect (APE) as designated by the

---

<sup>263</sup>CFP mischaracterizes the Applicants' identification of potentially affected historic sites along the underground portion of the route and implies that the Applicants ignored potential vibration impacts. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 97. In fact, as is evident in the Applicants' inventory forms, properties that touched the 20-foot APE at any point were identified entirely, including areas beyond the APE, and, as evident from effects tables, potential vibration impacts from construction were considered in the effects analysis. *E.g.* App. Ex. 110a, Bates APP64082 (inventory form of the George Foster Rice House property in Plymouth, the majority of which is beyond the 20-foot APE); App. Ex. 196b, Bates APP82895 (effects table for same property, including consideration of vibration impacts and the NHDOT Standard Specifications guidelines relating to vibration effects); App. Ex. 110a, Bates APP64100 (inventory form for the Frederick Philbrick Weeks House property in Plymouth the majority of which is beyond the 20-foot APE); App. Ex. 196b, Bates APP82900-01 (effects table for same property, also including consideration of vibration impacts and the NHDOT Standard Specifications guidelines relating to vibration effects).

[DOE], and the [DHR]”, and visual impact for properties beyond a mile from the ROW “has been addressed by the Applicant in the Visual Impact Assessment report that was provided.” *Id.* at 23.<sup>264</sup>

Heritage Landscapes, nevertheless, applied a 10-mile APE. Ms. O’Donnell has opined that a 10-mile APE is more appropriate for assessing visual effects on historic sites, borrowing a SEC requirement for assessment of aesthetics/scenic resources and applying it to her assessment of historic resources. Under Site 301.05(b)(4), a ten-mile “area of potential visual impact” applies to the assessment of aesthetic effects, but not to the historic site assessment required in Site 301.06(b). Ms. O’Donnell’s assertion that the APE for the Subcommittee’s review of historic sites should be ten miles is directly contradicted by the SEC rules, a prior ruling in this proceeding, and all of the assessment work completed in reliance on the DOE and the DHR’s direction on the APE.<sup>265</sup> In sum, Heritage Landscapes applied an extremely broad interpretation of the definition of historic sites and determined that there are 12,904 historic sites within a 10-mile APE, and in some instances beyond, that could potentially be impacted by the Project. Without any assessment of the historic significance or integrity of these resources or whether there is any effect, much less an adverse effect, on any of the individual sites, Heritage Landscapes nonetheless concluded that the Project as proposed would have unreasonable adverse

---

<sup>264</sup> In its post-hearing brief, CFP states that “it is nonsensical to arbitrarily limit” the APE to one mile. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 96 (January 12, 2018). The APE that has been established by the DOE, agreed to by DHR (the New Hampshire SHPO), and acknowledged by this Subcommittee is neither nonsensical nor arbitrary. While it is true that the equivalent of the APE for an SEC visual impact assessment differs, that rule is for the VIA, not for historic resource assessments. It is CFP’s assertion that is nonsensical -- requiring an applicant to provide an in-depth historic assessment of all properties out to 10 (or more ) miles, contrary to the APE established in accordance with the federal rule specifically referenced in the SEC rule definition.

<sup>265</sup> Dr. More’s belief, stated in her testimony for the NAPO-SB Intervenor Group (*Tr. Day 48/Afternoon Session*, p. 226), that the APE should even be 20 or more miles on either side of the ROW is also not tenable, for all the previously stated reasons. *See also Post Hearing Memorandum submitted by the Weeks Lancaster Trust*, Docket No. 2015-06, p. 3.

effects on historic sites. Heritage Landscapes fails to present substantial credible evidence to support its position.

**c. Adverse Effects to Historical Sites Will be Minimal.**

After identifying historic sites within the one-mile APE, the Applicants completed a thorough, objective assessment of the potential effects of the Project on historic sites. As explained more fully below, the record established that, as part of the original Application, the Applicants performed a full assessment of historic resources. At the time the application was filed, Ms. Widell and the Preservation Company<sup>266</sup> initially found that 12 of the 194 properties they evaluated in depth might have adverse effects caused by the Project. *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, p. 6. Subsequent to the filing of the Application, the Applicants completed the DHR-prescribed effects tables for the 114 eligible and listed resources (including individual properties, historic districts, and cultural landscapes) having the potential to be affected by the Project. Those effects tables are found in App. Ex. 196 and 196a-c.<sup>267</sup>

A result of this extensive evaluation and collaboration is that the number of historic resources that Ms. Widell determined likely to be adversely affected decreased from twelve to

---

<sup>266</sup> CFP says that “[i]t is important to note, however, that the Preservation Company’s report did not attempt to reach a conclusion on...unreasonable adverse effect.” *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 113. CFP does not explain why this is important and, in fact, it is not the least bit important. This historic assessment report is no different than the wetlands and wildlife assessment report prepared for the Application that also do not reach conclusions on unreasonable adverse effect. The reports address the effect of the Project; the opinion on unreasonable adverse effect was addressed in the testifying experts’ pre-filed testimony.

<sup>267</sup> Ms. O’Donnell and CFP claim that the Applicants’ assessment of potential effects is flawed because Ms. Widell “focused primarily” on Criterion C and therefore “eliminated the importance of setting for each of the properties she evaluated.” *Counsel for the Public’s Post-Hearing Brief*, Docket No. 2015-06, p. 104. This is untrue, as Ms. Widell in many instances focused on Criterion A, which specifically relates to setting. *See, e.g.*, App. Ex. 495 (table summarizing the Project’s assessment of effects on above-ground resources includes a column showing what criteria applied to each of the properties); App. Ex. 196, Bates APP65426 (effects table for the Dummer Pond Sporting Club which describes the Project’s effects under Criterion A); *see also* App. Ex. 196b, Bates APP82815 (effects table for Ashland Village Historic District, which describes the Project’s effects under Criterion A).

six. *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, p. 13. This decrease was due to several factors: the DHR required no further evaluation for four of the twelve properties initially identified by Ms. Widell, one property is being largely demolished for reasons unrelated to the Project, thereby losing its historical integrity, and two individual adversely affected properties were combined by the DHR into one district. *Id.* Ms. Widell subsequently included one additional resource in her list of adverse effects, after review of the 10 cultural landscapes, so she concluded that the total number of adverse effects is seven. *Tr. Day 40/Afternoon Session*, p. 4.

Two other consultants submitted pre-filed testimony on the issue of historic resources. Scott Newman of 106 Associates of Burlington, Vermont provided his assessment of adverse effects to two historic districts in the town of Deerfield, based on his review of the materials that had been filed by the Applicant for historic resources in that town. As described more fully above, Ms. O'Donnell of Heritage Landscapes did her own inventory of locations on behalf of CFP, totaling nearly 13,000 in number, that she believes are historic sites, or, at least, sites that should be reviewed and assessed. In contrast to the careful assessment of historic resources completed for the entire route by the Applicants' experts, and the specific assessment of only two properties by Mr. Newman, Ms. O'Donnell's approach simply was to list thousands of properties, without doing any assessment whatsoever of (1) whether they are eligible for listing on the National Register (including an assessment of significance and integrity of the property) or (2) whether they would be affected in any way by the Project.

Three other intervenors also addressed this issue. Dr. More provided her observations on the Project's effects on the Weeks Estate in Lancaster, Weeks State Park as a whole, and a broad recommended cultural landscape covering hundreds of square miles extending from the top of

Mt. Washington to the Connecticut River that she recommended. Ms. Lise Moran testified about a handful of properties in Whitefield, and John Petrofsky spoke of effects in the Bear Rock Road area of Stewartstown.

As discussed below, their testimony about adverse effects is fully refuted by the extensive record of analysis of historic sites by the Applicants and reviewing government agencies.

i. The Project Will Not Cause an Unreasonable Adverse Effect to Historic Resources

Pursuant to RSA 162-H:16, IV(c) and Site 301.14(b), the SEC's determination of unreasonable adverse effects is to be assessed for the Project as a whole rather than applied to individual resources. The statutory requirements in the SEC's enabling law underscore this focus -- the SEC must determine whether the "site and facility" will have an unreasonable adverse effect on historic resources. The legislative focus is on the facility itself (here a transmission line falling under the definition of "energy facility" in RSA 162-H:2,VII) and its location. RSA 162-H:16,IV(c). The statute does not require the SEC to look at every individual possible effect to determine whether it alone is unreasonable.

The SEC's rules likewise do not require the Applicant to determine whether every potential adverse effect would be unreasonably adverse. Rather, the focus of the rules is on the effects from an entire project, as is evident in the language of Site 301.14(b). In making its determination, the Subcommittee must consider the following:

- "[A]ll of the" above-ground and archeological resources potentially affected by the proposed facility. Site 301.14(b)(1);
- The "number and significance of" adversely affected historic resources. Site 301.14(b)(2);
- The size, scale and nature of the proposed project. *Id.*;

- The “extent, nature and duration” of any potential adverse effects. Site 301.14(b)(3);
- The findings and determinations of the DHR and the federal agency leading the Section 106 process, the DOE in this case. Site 301.14(b)(4); and
- The effectiveness of avoidance, minimization and mitigation measures proposed by the Applicant. Site 301.14(b)(5)

These criteria, taken together, direct the SEC to consider a project holistically. Nowhere in Site 301.14(b) is there a bright-line test related to unreasonable adverse effects on any single site.<sup>268</sup> Instead, the criteria require the SEC to consider many factors – all at the project scale, not at the discrete property scale. Also, SEC review of historic sites, as with the assessment of aesthetics, has focused on the region. *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 53 (May 6, 2011)(“In order to issue a Certificate...the Subcommittee must decide that the Project will not have an unreasonable adverse effect on historic sites in the region.”)

The Applicants’ experts have demonstrated that taken together, as well as on an individual basis, the adverse effects are not substantial. *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, p. 14 (stating that while six individual resources may be indirectly adversely affected, the adverse effects to those sites are not substantial or of an unusual or disproportionate degree). The Applicants have properly identified where there will be adverse

---

<sup>268</sup>The Joint Municipal Group claims that Ms. Widell assessed effects to the Project as a whole in order to “dilute her opinion” of whether the Project will result in an unreasonable adverse effect. *Post-Hearing Memorandum filed by Municipal Groups 1 South, 2, 3 South and 3 North*, Docket No. 2015-06, p. 107. The group implies that Ms. Widell believes that “the bigger the project, the less likely that adverse effects identified to historic sites along the route could ever be deemed ‘unreasonable.’” *Id.* This is false. Ms. Widell never said that and in response to a question from Mr. Whitley she specifically denied “diluting” her opinion that way. *Tr. Day 28/Afternoon Session*, pp. 68-69. She also twice denied that she used a “mathematical calculation” in determining whether the Project will have an unreasonable adverse effect on historic sites. *Id.*, at 73-74. Moreover, Ms. Widell explained her reasons in detail in her Pre-filed Testimony and her Supplemental Pre-filed Testimony. *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, pp. 9-12; *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, pp. 14-16.

effects and carefully assessed the extent and significance of those effects. *Id.* at 14-15; *Tr. Day 28/Afternoon Session*, pp. 26-28 (Ms. Widell explaining her process of closely assessing the potential effect on each identified individual property within the APE and then determining, based on her years of professional experience, whether the individual adverse effects found constituted an unreasonable adverse effect). Ms. Widell's conclusion that the Project will not have an unreasonable adverse effect on historic sites is fully supported by the extensive documentary record and analysis on this issue.

- ii. Weeks State Park, the Weeks Estate, and the Mt. Prospect-Martin Meadow Pond Cultural Landscape (Lancaster and environs)

Weeks State Park, the Weeks Estate, and the Mt. Prospect-Martin Meadow Pond Cultural Landscape are associated with John Wingate Weeks and his family. These properties were thoroughly evaluated by the Applicants, and they are also the subject of the Pre-filed and Supplemental Pre-filed Testimony of Rebecca More.

In assessing the historic significance of Weeks State Park and related historic resources, the record demonstrates that the Applicants prepared a historic resources assessment form for Weeks State Park, recommending eligibility far beyond what had already been listed for the National Register as the Weeks Estate property (*Weeks Estate-Weeks State Park Historic Resource Assessment Form*, App. Ex. 118, pp. 1-34), and they subsequently completed a cultural landscape report for the Mount Prospect-Mountain Meadow Pond Cultural Landscape. *Great North Woods Cultural Landscape Study Volume II*, App. Ex. 211. This is in addition to the work performed by the DOE through its contractor SEARCH in preparing the PAF for the Great North Woods. App. Ex. 111, Bates APP57948, APP57963 and APP58075. The DHR reviewed all of these documents and concurred in their recommendation regarding the Mount Prospect-

Mountain Meadow Pond Cultural Landscape. App. Ex. 112c, Bates APP88954).<sup>269</sup> The potential adverse effects on these properties from the construction of the Project within the existing right-of-way were carefully and thoroughly examined. The Applicants' experts concluded that the entirety of Weeks State Park should be considered eligible for listing on the National Register as well as the entire Mount Prospect Mountain Meadow Pond cultural landscape. *Weeks Estate-Weeks State Park Historic Resource Assessment Form*, App. Ex. 118, p. 3.

That led to the preparation of effects tables as prescribed by the DHR and endorsed by the DOE. These include a review for adverse effects for the Weeks Estate proper at the top of Mount Prospect. App. Ex. 196b, Bates APP83010-83025 and a separate effects review for the Mount Prospect-Mountain Meadow Pond cultural landscape, which includes Weeks State Park. App. Ex. 196b, Bates APP83097-83134. Ms. Widell concluded, based on her own assessment and in collaboration with the Applicants' consulting team, that there would be an adverse effect on the cultural landscape. *Id.* at Bates APP83098. That effect is caused principally by the views of the ROW from the East Overlook along the access road to the top of Mt. Prospect. *Id.* at Bates APP83101. This finding was made originally in 2015 for Weeks State Park when the historic resources assessment form was first submitted, and it formed the basis of the adverse effect conclusion that was reached in the effects table for the Mount Prospect-Mountain Meadow Pond cultural landscape. *Weeks Estate-Weeks State Park Historic Resource Assessment Form*, App. Ex. 118, p. 4.

That adverse effect, however, is not substantial. As explained in the assessment submitted by the Applicants, the views of the Project will be limited and are additive to the existing

---

<sup>269</sup>The Weeks Estate site is already listed on the NR. *Weeks Estate-Weeks State Park Historic Resource Assessment Form*, App. Ex. 118, p. 1.

transmission line corridor that has been in place for many decades. The views from the top of Mount Prospect – from the Observation Tower at the Weeks Estate looking north along what is an existing transmission corridor-- are limited and at a long distance. The visual effect of the transmission line was reduced by replacing the original lattice structures with the monopole design for those structures in view from that location in Weeks State Park. The DeWan and TJ Boyle visual assessments both focused on the East Overlook as the key observation point, and neither expert concluded that the visual impact on that property was substantial. Heritage did not do an assessment of the eligibility of these properties, and it did not assess adverse effects for the National Register-listed Weeks Estate at the top of Mt. Prospect, Weeks State Park, or the Mount Prospect-Martin Meadow Pond CL.

Dr. More, however, did provide her assessment of the significance of the properties and potential visual effect of the Northern Pass project on the property. Though she is an expert in the history of the Weeks family (especially as a member herself), she is not a trained visual assessment expert. Nor is she an expert in Section 106 matters. *Tr. Day 48/Afternoon Session*, pp. 220-221. Her statement that there would be 183<sup>270</sup> structures visible from the observation tower weeks State Park is wildly overstated. She indicated that her number was derived simply by counting the number of structures in the project design. *Tr. Day 48/Afternoon Session*, p. 233. She also said they were “clearly visible,” a statement belied by her own photographs from

---

<sup>270</sup>That revised number in her oral testimony is changed again to 203 in the Post-hearing Memorandum filed by the Weeks Lancaster Trust. *Post Hearing Memorandum Submitted on Behalf of the Weeks Lancaster Trust*, Docket No. 2015-06, p. 3. Whichever number she chooses is still orders of magnitude off, especially given that it is based on “bare earth” assumptions. *Id.* Dr. More on behalf of the Weeks Lancaster Trust also repeats her claim that the Applicants did not assess the impact from the Observation Tower at the Weeks Estate. That is obviously wrong, given the photographs from the top of the tower taken by the Applicants’ consultants and included in the assessment of this property. *Weeks Estate-Weeks State Park Historic Resource Assessment Form*, App. Ex. 118, pp. 18-19. (Dr. More’s mistake on this is attributable to her apparent belief that T.J. Boyle’s work was on behalf of the Applicants. *Post Hearing Memorandum Submitted on Behalf of the Weeks Lancaster Trust*, Docket No. 2015-06, p. 2; *see also* p. 6, n. 6.

the top of Mt. Prospect. *Id.* at 234; *see also Rebecca Weeks More Petition to Intervene*, App. Ex. 348, p. 5. Her further suggestion that there would be an “unreasonable adverse” effect to the landscape area 20 miles distant from the ROW to the full extent of the landscape area that includes Mt. Washington is not a rational application of Section 106 principles and the SEC rules.

In its December 21, 2017 letter to the SEC, the DHR included both the Weeks Estate proper (at the summit of Mt. Prospect) and the Mount Prospect-Pond Cultural Landscape in its preliminary list of adverse effects from the Project. The latter assessment is consistent with the Applicants’ experts’ respect for the significance of the Weeks Estate and their adverse effects assessment for this cultural landscape. App Ex. 196b, Bates APP83098. In the December 21, 2017 letter the DHR does not characterize the extent of any adverse effect on this – or any other – property, however. Rather, the DHR states simply that it “is concerned that iconic views from the property will be impacted by the project,” with no additional evaluation of how large an impact it would be. *DHR Finding of Effects*, Docket No. 2015-06, p. 3 (December 21, 2017) The final evaluation of adverse effect by the DHR and the DOE and a determination of what mitigation might be required will be made as the Section 106 process is completed. The record before the Subcommittee on the actual limited effect the Project will have on this important resource includes assessments from the Applicants’ historic resources and visual impact assessment experts, as explained above, as well as the Subcommittee’s direct observations from the site tour to this property. This record demonstrates that the visual effect that Northern Pass will have on the longstanding existing views of the transmission corridor in place now will not be substantial.

iii. Town of Deerfield

In his testimony on the topic of historic sites, Mr. Newman focused exclusively on the Town of Deerfield. *Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 46; *Supplemental Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 47. His conclusion that the Project would have an unreasonable adverse effect is limited only to Deerfield as he did not perform any assessment of the remainder of the Project or other historical resources. Mr. Newman reviewed resources using a 1-mile APE in Deerfield and only considered properties listed in or eligible for listing in the National Register. He does not criticize the methods followed by the Applicants' experts (in contrast to Ms. O'Donnell), but he disagrees with the Applicants' experts conclusion on the Project's effect on two historic districts within the town of Deerfield.

While Ms. Widell concluded that neither effect will be adverse, Mr. Newman testified that the effect on the Deerfield Center Historic District and Nottingham Road Rural Historic District "would be clearly unreasonably adverse." A comparison of his generalized review of potential adverse effects at these two locations against the Applicants' detailed analysis demonstrates that his assertions are greatly overstated. Although in its December 21, 2017 letter to the SEC on its preliminary effects review the DHR identified the two districts as adverse effects, nothing in that letter comes close to suggesting that the effects are "unreasonably adverse," as Mr. Newman has stated. Indeed, the DHR letter does not provide any characterization of the extent of the possible adverse effect.

One of the districts identified by Mr. Newman is the Deerfield Center Historic District. *Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 46, p. 2. Mr. Newman states that the Project will have a "jarring" impact on and "offend the expectations of" the typical viewer. *Id.* at 5. The visual support for his position is depicted on Figure 4 of his PFT, which shows the

back parking area of the Deerfield Community Church. It shows a bold yellow line across the sky and trees, purporting to indicate the height of some part of the new transmission line in that location. While the Deerfield Abutters rely heavily on this visual depiction in support of their claim that the district will be adversely affected, in fact this rudimentary graphic fails entirely to convey any sense of what the Northern Pass facilities will look like in that location. *See Post-Hearing Brief of the Deerfield Abutters*, Docket 2015-06, p. 17. At best it may approximate the height of wires and perhaps the top of a transmission structure; at worst, it grossly overstates the visual impact of the new line. Either way, Figure 4 provides no basis to determine the visual effect on historic resources at all and it comes nowhere close to meeting the requirements of a photosimulation used for a visual impact assessment under the SEC rules. *See requirements for photosimulations at Site 301.05(b)(8)*.

Mr. Newman's evaluation also fails to take into account the historic significance of the Deerfield Center Historic District. It is listed in the National Register for its significance as a town center and for its architecture. *See Effects Tables*, App. Ex. 196a, Bates APP681892. The view away from the town center from the side or rear of the church parking lot is not character-defining or significant, and the new line has no effect at all on the District in that location. Mr. Newman's added comment that the effect looking east to west "for as far the viewer could see" has no meaning without more substance. Nothing in his testimony suggests there is a significant east to west view from the historic district proper, and certainly not from the edge of the corridor somewhere behind the church parking lot as depicted in Figure 4.

Mr. Newman also fails to account at all for pre-existing modern intrusions, including the recent addition at the end of the church shown in Figure 4 (which, ironically, is the only visual simulation tool he uses to suggest there is an adverse effect on the historic district). Moreover,

for the more relevant location in the center of the district, Mr. Newman provides no analysis at all. He does not describe or show graphically what is there now and he entirely ignores the extensive distribution lines and structures that are already quite prominent in the center of the district. Instead, Mr. Newman offers an aerial photo in Figure 3 showing the district adjacent to the existing ROW. He uses none of the three photosimulations developed for this location in front of the Community Center, not even those prepared by CFP and SPNHF's consultants. *See Application*, App. Ex. 1, Appendix 17, pp. 6-28 to 6-31; *see also Pre-Filed Testimony of Michael Buscher, James Palmer, and Jeremy Owens*, CFP Ex. 138, Bates CFP005117 - 005119; *see also Revised Dodson & Flinker Visual Impact Assessment Report*, SPNF 69, Appendix A, p. 76-77.

On the other hand, Applicants' experts provided substantial narrative explanation and graphic support for their finding of no adverse effect to the Deerfield Center Historic District. Ms. Widell and her colleagues acknowledge, of course, that the Northern Pass line is located in an existing ROW that is adjacent to and visible from some locations in the district, such as from the rear of the parking lot behind the new addition to the church. The effects table submitted by the Applicants to DHR also includes photosimulations from 3 different visual assessment experts depicting the limited impact of the new line. The Applicants respect the DHR's preliminary finding of adverse effect for this district, but in its December 21, 2017 letter the DHR does not make any finding of any adverse effect that is substantial and that would hint at unreasonable adverse effects.

Mr. Newman also concluded that the Project would have an unreasonable adverse effect on the NR-eligible Nottingham Road Rural Historic District because of potential views of the Project from discrete locations within the district. While the DHR has indicated in its preliminary findings that this district would be adversely affected, that is not based on anything Mr. Newman

provided to the SEC. His assessment of this historic district is supported again only by broad general descriptions of the property, two technically deficient and misleading graphics, and a belief that vegetated areas throughout the district should be assumed away.<sup>271</sup> He again relies on the rudimentary graphics showing a bold straight line across the horizon in photographs of property at 15 Nottingham Road and 76 Nottingham Rd. *Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 46, Figures 5 and 6. He offered a generalized assessment that the line across the district will increase the height of the existing structures by up to 50% and the “tower profile” (that he does not define) by up to 500%. *Id.* at 2.

As with a similar graphic he used for the Deerfield Center Historic District, the graphics he uses for this property are uninformed at best and misleading at worst. He provides no technical support to justify the location of the bold lines, and they obviously do not accurately depict anything. Aside from these two graphics, Newman provides no specific assessment of any specific location within the district. Newman nevertheless concludes that the effects will be unreasonably adverse based solely on his generalized observations about the new line. *Id.*

In his supplemental testimony, Mr. Newman focuses almost entirely on what he claims to be a significant shift in the boundaries of this district, and that the district as re-configured will now be bisected by the Project. As a result of this perceived shift, Newman asserts that this change will result in a “substantially more severe,” “exponentially greater” visual effect in Deerfield. *Supplemental Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex 47, pp. 1, 3. This conclusion is unsupported, for two fundamental reasons. First, the boundaries for the district as determined by the DHR are different from what Mr. Newman assumed, but the district

---

<sup>271</sup>The Deerfield Abutters again give significant credence to Mr. Newman’s rudimentary and misleading graphics purporting to show the proposed transmission line from the Nottingham Road Rural Historic District. *Post-Hearing Brief of the Deerfield Abutters*, Docket No. 2015-06, p. 19. Mr. Newman’s graphics cannot be relied upon as an accurate depiction of the visual impact of the proposed Project.

area changed only modestly from what was initially identified and assessed in the Applicants' 2015 assessment report. *Compare Application*, App. Ex. 1, Appendix 18, Bates APP14864 (the 2015 recommended map of the district noted in green), *with* App Ex. 110a, Bates APP63524 (the 2017 revised map recommended by the Applicants and approved by the DHR). The most significant change is added land south of the existing transmission corridor, which is comprised mostly of the Menard Family Forest. Visibility is limited to the areas immediately adjacent to the corridor. *Effects Tables*, App. Ex. 196a, Bates APP68172-3. Mr. Newman's alarm over "exponentially" increased effects to this forested area has no supporting factual basis. As fully discussed in the DHR-prescribed Effects Table in 2017, any effect the Project will have on this historic district will be small. *Effects Tables*, App. Ex. 196a, Bates APP68169-70. Moreover, despite Mr. Newman's stated concerns regarding the two districts in Deerfield, he testified that the addition of Northern Pass to the existing corridor will not be a reason for the Nottingham Road Rural Historic District to be taken off the National Register. *Tr. Day 68/Afternoon Session*, p. 201.

Mr. Newman erroneously argues that Site 301.05(b)(1), which requires a VIA to include both bare earth and vegetated maps and descriptions, also "clearly requires" the same approach for the historic resources. *Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 46, Report, p. 3. This misreads the SEC application requirements, which are discrete by topic area. One cannot simply apply the rules pertaining to the development of a VIA onto the analysis for historic resources. If the SEC wished a similar approach to be taken with respect to historic resources, it would be included in the regulations. Moreover, the Applicants' experts did consider leaf off conditions where appropriate, including in the first of two effects assessment they did for this district. *Application*, App. Ex. 1, Appendix 18, Bates APP14844.

He also relies heavily on the assumption that undergrounding the line through this district is feasible. *Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 46, p. 2 (the underground option is “readily available”); *id.* at 7 (the SEC should find that it is a “practical and feasible avoidance measure.”); *id.* at 8 (the effects are “100%” avoidable by undergrounding the line; *see also Supplemental Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 47, p. 4. He does not, however, provide substantial credible evidence for this proposition. He also posits that the potential visual effect on historic sites is influenced by the vote taken at town meeting about the Project and his assessment of the number of signs opposing the project in some residents’ yards. *Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 46, p. 7 (because the Section 106 process is consultative, the agencies and the SEC should consider signs and town votes as relevant input to the effects assessment); *Supplemental Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 47, p. 4 (the effect on the Nottingham Road district is adverse because the line bisects the district “combined with vocal opposition.”) Nothing in the Section 106 regulations and nothing in the SEC rules requires, or even suggests, that public sentiment – even if verified or verifiable – has any place in the evaluation of potential visual effect on historic resources.<sup>272</sup>

In contrast to Mr. Newman’s generalized concerns about possible visible effects to this historic district, the Applicants’ experts have done two focused effects assessments for this property. The first one (completed for the SEC application in 2015) assesses the potential visual effect for what was then recommended as a newly identified historic district. *Application*, App.

---

<sup>272</sup>To the extent Mr. Newman asserts that his independent assessment establishes that the Project will have an unreasonable adverse effect on historic sites and that the application should be denied on that basis, the Deerfield Abutters have not introduced sufficient credible evidence. DHR also mentioned “heightened public concerns and sensitivity of a particular resource” in its 12/21/17 letter. Notwithstanding DHR’s comment, the Applicants are aware of no criterion that bring public sentiment about historic sites into consideration.

Ex. 1, Appendix 18, Bates APP14844-71. The Preservation Company looked at three specific locations in the district where views of the line would be most open, and other secondary areas of the district. *Id.* at APP14844. The conclusion at that time was that while there will be some views of the Project, they are minimal, and they would not impact major vistas. For the “overwhelming majority of the district” there will not be any views of the Project. *Id.* at APP14844-5.

Subsequently, in the DHR prescribed Effects Table for this district (the boundaries of which had been expanded based on further review by the Applicants’ experts and the DHR), the Applicants’ experts agreed that there would be an effect on the district, but again concluded that that effect would not be adverse. *Effects Tables*, App. Ex. 196a, Bates APP68165-6. The assessment of effects comprises 15 pages, of which two full pages are devoted to a location-by-location assessment of potential effects within the district. *Id.* at APP68169-70. The conclusion drawn at the end of the assessment is that views of the Project will be limited to a few locations, and that those views will not appreciably alter the historically significant aspects of the district and its setting. *Id.* at APP68170. This conclusion is further supported by viewshed maps showing the limited area within the district where views may be possible (*Id.* at APP68172-3), and many photographs (with photo keys) depicting the locations where the Project may be visible and describing the likely extent of that visibility. *Id.* at APP 68175-9. In addition, as Ms. Widell has testified, she and her colleagues from Preservation Company relied heavily on computer-aided, Google Earth based modeling to gauge likely visibility of the Northern Pass line. *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, p. 6; *Tr. Day 29/Morning Session*, pp. 42, 69; *Application*, App. Ex. 1, Appendix 18, pp. 12-13.

Mr. Newman concludes his assessment of the two historic districts in Deerfield by saying that the Applicants' conclusion that the Project will not create an unreasonable adverse effect on these properties "strains credulity." *Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 46, Report at 6. To the contrary, Ms. Widell and Preservation Company gave these properties a hard, careful, complete assessment, examined in detail the features that Mr. Newman addresses in a very generalized fashion, and concluded that while there will be an effect on these historic properties, it will not be adverse. Mr. Newman's conclusion that there will be a "severe" and "clearly" unreasonable adverse effects on these properties or to suggest that the Project will have an unreasonable adverse effect on historic sites is wholly unfounded. *Id.* at 5; *see also Supplemental Pre-Filed Testimony of D. Scott Newman*, DFLD-ABTR Ex. 47, p. 1.

Additionally, the DHR's preliminary finding of adverse effect for these two historic districts provides no support for Mr. Newman's opinion that the Project will have an unreasonable adverse effect on historic sites. The DHR again has listed these resources as adverse, with no explanation of how extensive the effects are.<sup>273</sup> The record before the Subcommittee includes all of the effects reviews prepared by the Applicants that document in detail the potential effects on each of these two properties and explain fully the basis for their conclusion that the effects will not be substantial. *Application*, App. Ex 1, Appendix 18, Bates

---

<sup>273</sup>The Deerfield Abutters claim two additional Deerfield properties, the Lindsay-Menard Cabin and 47 Candia Road, will be adversely affected by the Project. *Post-Hearing Brief of the Deerfield Abutters*, pp. 19-20. Mr. Newman did not offer any opinion about these two other resources. DFLD-ABTR Ex. 46; DFLD-ABTR Ex. 47. Ms. Widell and Preservation Company extensively studied these properties and, in fact, agree with the DHR that the Project will have an adverse effect on the Lindsay-Menard Cabin, a remote cabin located less than 250 feet from the existing transmission ROW and inaccessible to the public. App. Ex. 196, Bates APP65413-17. The Applicants' assessment did not agree with the DHR's preliminary review as to the effect of the Project on 47 Candia Road, a resource that has distant and limited views of the Project in the existing corridor from a limited area in a field by the barn. App. Ex. 196, Bates APP65335-43.

APP14844-71 and APP14872-93; *Effects Tables*, App Ex. 196a, Bates APP68165-79, APP68180-94.

iv. Town of Whitefield

Ms. Moran testified that the setting of four properties or areas in Whitefield will be negatively impacted by the Project: the so-called James/Joudin/Moran farm complex, the Mountain View Grand Resort, the King's Square Historic District, and the Major David Burns historic farmstead. *Pre-Filed Testimony of Lise Moran*, JT MUNI Ex. 94, pp. 3-4. She offers no specific assessment of the Project's impact on these properties, but rather offers only generalized and conclusory statements that, where visible, the Project will negatively impact the setting of each property. For example, Ms. Moran states that the Project "would negatively impact the setting" of the King's Square Historic District and that the towers "will be an eyesore" in Whitefield generally. *Id.* at 5. Ms. Moran asserts these generalizations, however, without having performed an assessment of any of the four properties. *See Pre-Filed Testimony of Lise Moran*, JT MUNI Ex. 94; *see also Supplemental Pre-Filed Testimony of Lise Moran*, JT MUNI Ex. 192.<sup>274</sup>

Unlike Ms. Moran, the Applicants' experts reviewed and provided detailed effects assessments for multiple resources throughout Whitefield, including the Major David Burns farmstead (*Effects Tables*, App. Ex. 196a, Bates APP68343), King's Square Historic District (*Effects Tables*, App. Ex. 196a, Bates APP68382) and the Mountain View Grand (*Effects Tables*, App. Ex. 196a, Bates APP65473-95).<sup>275</sup> Ms. Widell and her colleagues found that the small

---

<sup>274</sup> Ms. Moran has no experience in Section 106 effects assessment. She has inventoried two historic properties in the New Hampshire since completing her studies in the field of in 2014. *Supplemental Pre-Filed Testimony of Lise Moran*, JT MUNI Ex. 192, p. 1-2.

<sup>275</sup> The fourth property she identified (the James/Joudin/Moran farm complex) was not a property that the DHR required to be inventoried. *See* App. Ex. 115.

number of possible views and the distance of those views will not adversely affect any of these properties. *Id.* at Bates APP68383, APP68344, APP65474.<sup>276</sup>

v. Clarksville and Stewartstown

Mr. Petrofsky of the Clarksville and Stewartstown Combined Group of intervenors submitted testimony suggesting that several areas in northern Coos County should be evaluated as cultural landscapes, and, that these areas will be adversely impacted by the Project.

*Supplemental Pre-Filed Testimony of John Petrofsky*, CS Ex. 66, p. 1.<sup>277</sup> It is important to note that Mr. Petrofsky has no training in historic resources identification and evaluation. *Tr. Day 67/Afternoon Session*, pp. 72-73. Furthermore, like Ms. Moran, he did no assessment of whether the areas he identifies qualify as historic sites, and, if so, whether they would be affected in any way by the Project. The Applicants' experts, in contrast, have applied their professional experience to perform an extensive assessment of National Register eligibility and potential effects from the Project on the resources he identifies.

Among the eleven cultural landscapes evaluated by the Applicants' consultant, PAL, is the Harvey Swell Cultural Landscape Report that covers an area that includes much of what Mr. Petrofsky mentions. *Great North Woods Cultural Landscape Study Volume V*, App. Ex. 211. This cultural landscape was recommended by the Applicants as eligible for the National Register, and the Applicants' consultants conducted a thorough assessment of the Project's potential effects. *Effects Tables*, App Ex. 196b, Bates APP83088-96. Roughly ninety percent of the Harvey Swell Cultural Landscape falls outside the 1-mile APE, and the areas from which the Project is visible contain no historic structures that contribute to the cultural landscape's

---

<sup>276</sup> DHR also concluded in its December 21, 2017 preliminary findings that none of the Whitefield properties will be adversely affected. *DHR Finding of Effects*, Docket No. 2015-06, Table 1, p. 3 (December 21, 2017).

<sup>277</sup> He does not testify that the Project will have an unreasonable adverse effect on historic sites.

significance. *Id.* at APP83092. Although the DHR in its December 21, 2017 letter listed this cultural landscape as adversely affected, the Applicants’ experts relied on their visual analysis in the Effects Table in concluding that the Project’s effect on the Harvey Swell Cultural Landscape will not be adverse. *Id.*<sup>278</sup>

**d. CFP’s consultant’s analysis is neither reasonable nor rational and her conclusions have no bearing on whether the Project will have an unreasonable adverse effect on historic sites.**

CFP’s consultant offered testimony that there are nearly 13,000 above-ground historic resources that potentially could be impacted by the Project, but failed completely (1) to make an assessment of whether any of the properties she listed in her report have the historic significance and integrity necessary to qualify as a historic site, and (2) if any do qualify as such, to assess whether and to what extent the Project would have an adverse effect on the resource. Ms. O’Donnell simply concludes that because there are thousands of current use parcels and other places “valued by the people of New Hampshire” (*Pre-Filed Testimony of Patricia M. O’Donnell*, CFP Ex. 140, Exhibit B, p. 23), and because these properties are located throughout what she believes to be a twenty-mile area of potential effect, the Project must have an unreasonable adverse effect.<sup>279</sup> This over-simplified, flawed logic fails completely under the Section 106 review process and in the consideration of historic sites in the SEC process. It also fails as a simple matter of reasonable application of any principle of historic resource review.

The O’Donnell eligibility analysis consists entirely of identifying seven categories of properties that she says possess the requisite significance and integrity to qualify as a historic site. She conceded in her oral testimony that she did not do an individual assessment of any of

---

<sup>278</sup>In either event, DHR has not concluded that the adverse effect on this landscape will be substantial.

<sup>279</sup>See also *Tr. Day 54/Afternoon Session*, pp.39-40 (Ms. O’Donnell agreed that she and Heritage Landscapes did no effects assessment.).

the properties. *Tr. Day 54/Morning Session*, p. 58. Rather, she assessed the integrity and historic importance of these groups of sites and landscapes. *Supplemental Pre-Filed Testimony of Patricia M. O'Donnell*, CFP Ex. 141, p. 3. She also did not complete a visual effects analysis. But that is not how resources are assessed under Section 106 or the SEC's criteria established in Site 301.14 for the assessment of the potential effects on historic sites. Absent any assessment of whether any specific property qualifies as a historic site – as opposed to a category of properties – and absent any effects evaluation at all there is simply no basis for any conclusion of potential effect on historic sites from the Project. Merely adding up numbers of properties that may fall within one of the eight categories of resources that might qualify as a historic site wildly and improperly exaggerates the effect of Northern Pass on historic resources.

Heritage Landscapes also did essentially no analysis of any of the 13,000 properties to determine if they would indeed be adversely affected, or even affected at all, by the Project. In her Supplemental Testimony, Ms. O'Donnell did provide viewshed maps showing which of the properties she listed as historic sites (not including current use parcels) would be “visible” under a “bare earth” viewshed model. *Id.* at Exhibits A-C. This is the full extent of her assessment of whether in reality -- and not assuming bare earth conditions -- a property would be visually affected at all by the Project. She did not analyze any resource to determine whether it would be adversely affected. And she did no assessment of unreasonable adverse effects in the aggregate to determine whether the Project would have an unreasonable adverse effect on historic sites. Rather, she peremptorily assumes that within the 10-mile APE there are thousands of historic sites, if not tens of thousands (adding in current use parcels), and because of this pervasiveness, the Project must result in an unreasonable adverse effect. This is not supported by the record. Rather, her research and testimony completely lack support for a conclusion (1) that any one

property she listed is properly considered a historic site as defined by the SEC, and (2) that there will be any effect whatsoever, let alone an adverse effect, to any historic sites.<sup>280</sup>

**e. The Applicants Have Proposed Significant Avoidance, Minimization and Mitigation Measures.**

The Applicants have done substantial work to reduce indirect visual impact and direct effects on historic sites. In her pre-filed testimony Ms. Widell summarized the various ways that the Project design reduces visual impact, starting with the decision to place 60.5 miles of the route underground. *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, p. 8. Additionally, the Applicants were requested by the historic experts to minimize effects at many locations along the route where adjustments would eliminate or reduce the extent of a possible adverse effect, and those requests were accommodated where practicable. *Application*, App. Ex. 1, Appendix 18, p. 19 (table summarizing design changes made for historic properties); *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, pp. 8-9; *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, pp. 10-11; *see also Tr. Day 27/Morning Session*, pp. 111-117; *see also Tr. Day 27/Afternoon Session*, pp. 4-83 (lengthy questioning by CFP on the table of mitigation steps (CFP Ex. 396)). The design modifications include adjusting locations, and modifying structure type to weathering steel monopole in many locations (including in the transmission corridor adjacent to Weeks State Park and in the North Road Agricultural District in Lancaster). *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, p. 11; *see also Tr. Day 27/Afternoon Session*, pp. 5-46 (discussion of use of weathering steel monopoles in various locations); *Tr. Day 30/Morning Session*, pp. 5-6. The most significant issue raised by intervenors on this issue is that the Applicants did not place enough of the line underground, though no witness provided

---

<sup>280</sup> In reliance on the O'Donnell report and testimony, CFP has failed completely to support the proposition that there is an unreasonable adverse effect on historic sites, and does not meet the burden of proof under Site 202.19(a).

any analysis to demonstrate that additional burial is practicable. The record supports the finding that the Applicants have used best practical measures to avoid and minimize impact to historic sites, as required by Site 301.14(b)(5).

The Applicants also have acknowledged the need to mitigate for any adverse effects to historic sites and have discussed conceptual ideas with the DHR. Ms. Widell testified that typical mitigation for adverse effects to historic resources includes various forms of documentation of the historic significance of the resource and funding for historic preservation efforts. *Tr. Day 30/Morning Session*, p. 72. In addition, the Applicants have discussed mitigation ideas with the DHR at two of the Quarterly Meetings prescribed in the December 2015 MOU. These ideas are captured in the October Monthly Report from Northern Pass to the DHR. App. Ex. 113d, Bates APP85070-71. In that report Northern Pass addresses its commitment “to developing a valuable educational tool that would benefit from the substantial research and analysis that underlies the scores of survey documents that have been produced for this Project, if this is the direction provided by the DOE and the DHR.” *Id.* at APP85071. That report continues: “Developing additional New Hampshire-based historical contextual summaries would be one aspect of this work. Another aspect would be developing online content with a focus on a lay audience to increase awareness and interest in cultural resources. The Project also expects that funding support for historic preservation efforts may be part of the package ultimately approved by the DOE and the DHR, depending on input from Consulting Parties, host communities, and the public. We continue to welcome ideas from property owners and the towns along the route for additional site-specific minimization and mitigation ideas.” *Id.* Ms. Widell and Dr. Bunker both addressed this in their responses to Attorney Iacopino’s questions on mitigation. *Tr. Day 41/Afternoon Session*, pp. 53-56.

The Section 106 PA addresses mitigation fully. Stipulation V (Resolution of Adverse Effects) requires that the Applicant prepare a Historic Properties Treatment Plan (“HPTP”) that addresses all direct and indirect adverse effects. *Programmatic Agreement*, App. Ex. 204, p. 27. The HPTP must also include a Training Plan, a Monitoring Plan and an Unanticipated Discovery Plan. *Id.* at 28-30. The HPTP will be developed by the Applicants, but will follow the Section 106 consultative process prescribed in §V of the PA. *Id.* at 30. That will require full involvement of federal agencies, the DHR (and VT SHPO), Section 106 Consulting Parties, and the public. *Id.* The HPTP with the proposed resolution of adverse effects (avoidance, minimization and mitigation) will take effect only after the DOE and all involved federal and state agencies concur. *Id.* at 30-32. The DOE must ensure that the Applicants properly implement the HPTP prior to start of construction. *Id.* at 32. The DHR letter of August 25, 2017 confirms that the PA will address these issues. CFP Ex. 443, Bates CFP012229.

Although the Applicants have not yet been able to finalize a mitigation package because that is addressed in the Section 106 process (*Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, p. 9, and *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, p. 11), the DHR in its 12/21/17 letter provides a lengthy list of mitigation measures that it will look to in determining appropriate mitigation for this Project. This substantial list of mitigation measures recommended by the DHR provides another basis for the Subcommittee to find that any adverse effects will be fully and properly mitigated.

**f. The National Historic Preservation Act Section 106 Review is Well-Advanced, and the Findings by the Federal and State Reviewing Agencies Support the Applicants’ Findings**

As is common in SEC cases, the SEC process and schedule do not coincide with the review required by the lead federal agency under Section 106 of the National Historic Preservation Act (“NHPA”). The SEC has recognized routinely that there is substantial but not

complete congruence between the SEC's review of historic sites and the required federal consideration of historic properties under Section 106. *See e.g., Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 55 (May 6, 2011).

Under Site 301.14(b)(4), the Subcommittee must consider the findings and determinations of the DHR and the DOE, the lead federal agency under Section 106. Review of historic resources under Section 106 and in prior SEC cases generally involves three stages: (1) identification; (2) evaluation; and (3) mitigation, if necessary. *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, p. 56 (March 16, 2017). The identification phase involves the completion and submission to the DHR of Project Area Forms ("PAFs"). *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 54 (May 6, 2011). Identification also includes a survey to identify properties within the APE that are listed or eligible to be listed on the National Register. *Decision Granting Certificate of Site and Facility*, Docket No. 2008-04, p. 44 (July 15, 2009). During the evaluation phase, an applicant completes individual and area inventory forms for properties eligible for the NRHP and submits them to the DHR to determine the properties' eligibility. *Decision and Order Denying Application for Certificate of Site and Facility*, Docket No. 2012-01, p. 56 (September 25, 2013). Finally, if the DHR determines that a particular property or resource will be adversely affected by the project, the DHR may recommend mitigation measures. *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 123 (May 6, 2011).

The identification and eligibility determination of historic sites under Section 106 of the NHPA by the DOE and the DHR is complete. *DHR Finding of Effects*, Docket No. 2015-06, p. 2 (December 21, 2017).

The effects review phase of the Section 106 process is ongoing, but in its letter to the SEC dated December 21, 2017, DHR set forth its preliminary assessment of adverse effects on historic sites (under the Section 106 PA, DHR will be given the opportunity to concur in the DOE's conclusions on adverse effects after Consulting Party and public input and after federal agencies have concurred.). As explained below with respect to specific properties, the DHR has on a preliminary basis identified 39 adverse effects. At first blush, this appears to be a substantially larger number than the Applicants identified, but upon closer examination it is not. The DHR's preliminary findings include two archeological sites and seven above-ground resources that the Applicants recommended as adverse. Of the remaining 30 adverse effects identified by the DHR, 14 are properties along the underground section of the route in the towns of Plymouth, Sugar Hill, Easton, Campton, and Woodstock. For those properties, as the DHR points out in its letter, the Applicants have committed to avoid impacts (or restore as needed). *Id.* at 2. In addition, the DHR has listed 6 railroads in its preliminary findings for which it has requested additional information. *Id.* at 4. For the railroads and for the sites along the underground route, the record indicates that the Project will not cause an adverse effect, and that the DHR has essentially requested more information.

This leaves 10 resources that the DHR has found to be adversely affected that the Applicants did not.<sup>281</sup> The Applicants have addressed these 10 resources in detail in the effects tables for each resource. As noted in those documents, the Applicants have fully explained the Project's visual effect on the resources, and concluded that because of the limited additional

---

<sup>281</sup> CFP improperly states in its Post-hearing Memorandum that DHR found an adverse effect for all 37 properties listed in the DHR letter. *Counsel for the Public's Post-Hearing Brief*, Docket No. 2015-06, p. 109. Removing the 20 underground segment locations and the railroads leaves 17 preliminary adverse effect findings by DHR, which is just over twice the 7 that the Applicants have recommended. The additional DHR preliminary findings are discussed below.

visual impact in each case, a finding of adverse effect is not warranted. Understanding fully the DHR's role and responsibility to reach a final effects finding, the Applicants respect the DHR's differing view in these few cases. Irrespective of whether the Section 106 finding will be determined to be adverse for these properties, though, the overall result remains that the Project does not have an unreasonable adverse effect on historic sites. Ms. Widell's ultimate conclusion on that took full account of all the effects, adverse or not, to the properties identified by the DHR.

Moreover, the December 21, 2017 DHR letter evidences the agency's focus on the appropriate mitigation for the adverse effects caused by the Project, listing mitigation ideas in the last three pages of the letter. *Id.* at 5-7. The DHR has provided no assessment as yet of the extent and nature of the adverse effects. Presumably because its findings are preliminary and the Section 106 review effects process is still ongoing, the DHR provided no explanation of the magnitude of any adverse effect. Rather, the DHR focused largely on the types of mitigation that the Project should be required to provide. The DHR's suggested mitigation approaches are in line with those identified by the Applicants, and they represent "best practical measures" for mitigation of adverse effects called for by the SEC rules. *See supra* Part C, § III, B, e.

The SEC has consistently acknowledged that Section 106 review "is an interactive and ongoing process which often extends beyond the granting of a [Certificate] due to the nature of the process." *Id.* at 24; *see also Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 55 (May 6, 2011). ("the identification and evaluation of historic resources in compliance with §106 and the requirements of the DHR is an iterative process that will continue beyond the time frames set forth [in the statute]"); *Decision Issuing Certificate of Site and Facility with Conditions*, Docket No. 2006-01, p. 29 (June 28, 2007)

(recognizing “that the discovery and identification of historic sites and cultural resources can be a fluid process”). The SEC views the Section 106 process as “slightly different” from its obligations under New Hampshire law; the Section 106 process is designed to preserve historic resources, while the SEC is required by RSA 162-H:16, IV(c) to ensure a project will not have an unreasonable adverse effect on historic resources. *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 56 (May 6, 2011). The SEC has recognized, however, that the comprehensive nature of Section 106 provides assurances that any adverse effect on historic sites will not be unreasonable. *Id.* at 55. The SEC rules adopted in December 2015 do not alter this dynamic between the Section 106 process and SEC the proceeding.

While the interplay between the overlapping state and federal reviews of historic resources can cause confusion, it also provides assurance that these resources are reviewed carefully by government agencies at two levels, and that input from consulting parties in the Section 106 process, intervenors in the SEC proceeding and the public is duly considered. For this Project, the DHR has been fully engaged in the Section 106 process since 2010.

*Application*, App. Ex. 1, Appendix 49, Bates APP27427 – APP27432 (correspondence, meeting notes and preparation notes related to May 2010 meeting between the DHR and Project consultants to discuss survey strategy). The Request for Project Review form required by Site 301.06(a) was filed with the DHR. *Id.* at APP27349 – APP27353. The DOE initiated the consultation process in 2014, and has been engaging with Consulting Parties in the Section 106 process since that time. The Applicants have coordinated extensively with the DHR and the DOE, and Consulting Parties in the Section 106 process. Pursuant to the terms of the Memorandum of Understanding between Northern Pass and the DHR (App. Ex. 38) and since its

execution in December of 2015, the Project has provided monthly reports with updates on the status of its cultural resource evaluation work. *See* App. Ex. 113, 113a-d.

The PA for the Northern Pass Project was not executed until August of 2017, but work began on that document as early as 2014. *Application*, App. Ex. 1, Appendix 49 at APP27377 (2014 meeting minutes showing, in paragraph 20, discussion of the PA). While the Section 106 process is not complete, there is a full record before the Subcommittee that demonstrates that the Project will not cause an unreasonable adverse effect on historic sites. The completion of the Section 106 process following the requirements of the PA provides even greater assurance of that.<sup>282</sup>

**g. The Project will not have an unreasonable adverse effect on historic sites.**

As addressed above, the substantial credible evidence offered by the Applicants demonstrates, by a preponderance of the evidence, that the Project will not have an unreasonable

---

<sup>282</sup>SPNHF, CFP, and the Joint Municipal Group claim that the Applicants are relying “exclusively” on the Section 106 Programmatic Agreement as a “substitute” for the SEC’s determination on whether the Project will have an unreasonable adverse effect on historic sites. *Post-Hearing Memorandum of the Society for the Protection of New Hampshire Forests*, Docket No. 2015-06, p. 31; *see also Counsel for the Public’s Post-Hearing Brief*, Docket No. 2015-06, pp. 114-115; *see also Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, p. 103. It is a mystery how they could conclude that from the record. CFP cites to an exchange between Attorney Plouffe and Ms. Widell in which she eventually agrees that the PA relates to the SEC decision criteria. *Counsel for the Public’s Post-Hearing Brief*, Docket No. 2015-06, pp. 114-115. SPNHF asserts without any record support that the Applicants are relying exclusively on the PA. *Counsel for the Public’s Post-Hearing Brief*, Docket No. 2015-06, p. 31. The Applicants have been abundantly clear that they have met their burden of proof on the issue of historic sites, and their consultant Cherilyn Widell has opined clearly and frequently that considering all of the work that the Applicants have completed in light of the criteria to be applied by the Subcommittee, there will be no unreasonable adverse effect from the Project on historic sites. *Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 18, pp. 9-12; *Supplemental Pre-Filed Testimony of Cherilyn E. Widell*, App. Ex. 95, pp. 14-16. The Applicants are not asking the SEC to defer its decision on unreasonable adverse effect at all. Rather, the Applicants simply ask the Subcommittee to analyze all of the information before it on the eligibility of and effects assessment on historic sites together with the confidence that the Section 106 process, as in projects in prior SEC cases, will proceed effectively to ensure that all adverse effects are identified and mitigated. The December 21, 2017 DHR Letter provides a clear roadmap for this to happen in this case, as well. *DHR Finding of Effects*, Docket No. 2015-06, pp. 4-7 (December 21, 2017).

adverse effect on historic sites. The few intervenor witnesses who testified on specific properties have not shown that the effects of the Project will be substantial, and none has made a case that the Project will cause significant adverse effects to historic resources at all, let alone an unreasonable adverse effect -- in any specific location or in total.

Moreover, the SEC typically recognizes the ongoing nature of the Section 106 process by including in site certificates certain conditions that, in tandem with the Section 106 process, assure the Committee that a project will not have an unreasonable adverse effect on historic sites. *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, pp. 3-4 (March 16, 2017); *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, pp. 55-56 (May 6, 2011). Conditions standard to all Certificates include continued consultation between the applicant and the DHR and a requirement that the applicant report any new information or evidence of a historic site to the DHR. *See Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, pp. 3-4 (March 16, 2017); *see also Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 56 (May 6, 2011); *see also Decision Granting Certificate of Site and Facility*, Docket No. 2008-04, pp. 44-45 (July 15, 2009). Beyond those standard conditions, the Committee conditions Certificates based on the particular status of historic resources review in a given case.

In the application of *Lempster Wind*, for example, the Committee conditioned the issuance of a Certificate upon the completion of Phase 1-A or Phase 1-B surveys. *Decision Issuing Certificate of Site and Facility with Conditions*, Docket No. 2006-01, p. 29 (June 28, 2007). In the application of *Groton Wind*, the Committee granted a Certificate with the condition that, in addition to the standard continued consultation condition, the applicant comply

with all agreements and memoranda of understanding (“MOU”) with the DHR. *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 56 (May 6, 2011). The Committee also delegated to the DHR the authority to monitor compliance with the historic resource-related conditions and to specify the use of any technique, methodology, practice or procedure as to those conditions. *Id.* at 56-57. In the most recent Antrim Wind case, in which a need for mitigation had been determined and a MOU regarding that mitigation had been executed between the applicant and the DHR, the Committee conditioned the Certificate upon compliance with the MOU and upon a similar delegation of authority to the DHR to specify the use of any appropriate technique or procedure associated with resources affected by the project. *Decision and Order Granting Application for Certificate of Site and Facility*, Docket No. 2015-02, pp. 59-60 (March 17, 2017).

The Committee has regularly found that a project will not have an unreasonable adverse effect on historic sites even when the Section 106 and DHR review processes were not complete. *See, e.g., Antrim Wind, Decision and Order Denying Application for Certificate of Site and Facility*, Docket No. 2012-01, pp. 56-57 (April 25, 2013) (the project would not have an unreasonable adverse effect on historic sites despite the incomplete review for eligibility and effects for above ground resources [the certificate was denied on unrelated grounds]); *see also* Groton: *Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 56-57 (May 6, 2011). (conditioning the certificate on continued consultation and compliance with all agreements with the DHR to complete the above ground resources assessment, and entrusting any necessary mitigation requirements to the ongoing Section 106 and DHR processes); *see also* Lempster: *Decision Issuing Certificate of Site and Facility with Conditions*, Docket No. 2006-01, p. 29 (June 28, 2007) (conditioning the certificate on the completion of

Phase I-A and Phase I-B surveys). The Joint Municipal Group attempts to distinguish the decision in *Groton Wind*. At p. 104 of its Post-hearing Memorandum, the Jt. Muni Group explained that in that case the effects on historic sites for that project and any mitigation for them had not been determined. The Group's Memorandum correctly states that CFP in that case argued correctly that the applicants had not met their burden of proof on historic sites. What the Joint Munis fail to mention, however, is that the CFP in *Groton Wind* did not oppose the granting of a Site Certificate on that basis. Rather, CFP requested a condition of approval requiring the SEC to approve the future mitigation plan for that project. *Groton: Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, p. 55 (May 6, 2011). The Subcommittee denied the request. *Id.* at 55-56. The Subcommittee also denied a request from intervenors in that case for specific mitigation for impacts to historic sites, saying "it is premature to identify what, if any, mitigation measures will be appropriate. Mitigation is a component of the ongoing §106 review and of the processes used by DHR. Consistent with the above written conditions, the Subcommittee will, at least at this point, leave mitigation requirements, if any, to those processes." *Id.* at 57.

The SEC rules adopted in December 2015 do not alter this dynamic between the Section 106 process and the SEC proceeding.<sup>283</sup> The DHR has confirmed this in its letter of August 25, 2017, where Dr. Boisvert states that the DHR would expect the SEC to include standard conditions on Section 106 compliance and that the DHR will work with the other agencies and

---

<sup>283</sup>The Joint Municipal Group argues otherwise, concluding that the new rules now make it clear that the Subcommittee must make its own finding of unreasonable adverse impacts." *Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, p. 105. This is an incorrect construct – the SEC statute and rules have always required the SEC/Subcommittee to make that finding. RSA 162-H:16, IV(c) provides: "In order to issue a certificate, the committee shall find that... the site and facility will not have an unreasonable adverse effect on...historic sites." (emphasis added) The new rules now provide some detail on what is required; they do not now for the first time place this requirement on the SEC.

Consulting Parties to determine appropriate mitigation measures. CFP Ex. 443, Bates CFP012229. Dr. Boisvert notes that the DHR's goal is to address issues of local concern and "ensure the ongoing stewardship" of historic resources. *Id.* He concludes that letter to the Subcommittee by affirming the DHR's desire to work with the Subcommittee to ensure that the SEC adopts appropriate conditions addressing historic resources. *Id.*

The more recent letter from the DHR dated December 21, 2017, containing its preliminary effects findings, provides further support for the Subcommittee's decision on historic sites. It confirms that the eligibility phase of the review process is complete, and it has identified those historic properties that it believes will have been adversely affected by the Project. Aside from the 14 properties along the underground route and the six railroads about which the DHR is requesting additional information, there are only ten additional properties along the route not already identified as adverse by the Applicants' experts that the DHR believes might be adversely affected. As described above, the Applicants have analyzed those effects fully, as set forth in the effects table for each one.<sup>284</sup> Moreover, the Subcommittee knows most of these properties first hand from the various site visits. In its preliminary analysis, the DHR has not

---

<sup>284</sup>The effects tables completed for these 10 new properties include the Rocks Estate, Bethlehem, App. Ex. 196b, Bates APP82867-929 (with a lengthy analysis of the effects on the historically significant aspects of the property with a copy of the DeWan photosimulations depicting the new line in the existing corridor at Bates APP82929); Windswept Farm, Canterbury, App. Ex. 196, Bates APP65309-17 (some views of the Project in an existing corridor from a back field that is not historically significant); Oak Hill Agricultural District, Concord, App. Ex. 196a, Bates APP68251-62 (a limited number of views in the existing corridor that were not enough to make the effect on this large, long district adverse); 47 Candia Road, Deerfield, App. Ex. 196, Bates APP65335-43 (distant and limited views of the Project in the existing corridor from a limited area in a field by the barn); Deerfield Center Historic District, Deerfield, App. Ex. 196a, Bates APP68180-94; Nottingham Road Historic District, Deerfield, App. Ex. 196a, Bates APP68165-79; Webster Avenue Historic District, Franklin, App. Ex. 196a, Bates APP68275-84 (very limited views of the Project, and all properties are oriented away from the Project toward Webster Lake); Weeks Estate, Lancaster, App. Ex. 196b, Bates APP83010-025; Harvey Swell Cultural Landscape, App. Ex. 196b, Bates APP83088-96; Buck-Street-Bachelor Road Cultural Landscape, App. Ex. 196b, Bates APP83172-90 (the Project is visible in about 5.5% of this cultural landscape and that area includes the existing corridor, Rt. 28 and late twentieth century houses.)

determined that the effects are substantial at any these locations. As the record shows, they are not. The analysis provided by the Applicants' experts in the effects tables, and further explained by Ms. Widell in her pre-filed and oral testimony,<sup>285</sup> demonstrates that while there are certain adverse effects, they do not in total (or in any given case) constitute an unreasonable adverse effect on historic sites.

---

<sup>285</sup> *Tr. Day 28/Afternoon Session*, pp. 68-75 (Widell replying to Attorney Whitley questions on how she determined whether there is an unreasonable adverse effect); *Tr. Day 30/Afternoon Session*, pp. 32, 39-40 (In replying to Attorney Iacopino questions, Ms. Widell agreed that the Committee should rely on its own criteria in assessing whether there is an unreasonable adverse effect, and she emphasized that the Committee has an "extraordinary amount of work and documentation" to rely on in making its decision).

### **C. Air and Water Quality**

The Applicants have proved sufficient facts, in terms of significant benefits to air quality, for the Subcommittee to find that the Project will not have unreasonable adverse effects. Most important is the Project's contribution to state and regional efforts to reduce greenhouse gas emissions in furtherance of state and regional action plans to address climate change. Rather than creating a source of air pollutant emissions, the Project provides important reductions in carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>), and sulfur dioxide (SO<sub>2</sub>). Indeed, the Project does not require an air quality permit from the DES. *Tr. Day 23/Morning Session*, p. 9 (no air emissions associated with the operation of the Project that requires a site-specific air permit). Furthermore, the Applicants have proved sufficient facts for the Subcommittee to find that the Project will not have an unreasonable adverse effect on water quality. The regulation of water quality in New Hampshire is primarily the province of the DES, with federal authority also exercised under the Clean Water Act. After extensive review and input, the DES has issued approvals for the required wetland, alteration of terrain, and shoreland permits and water quality certificate. Accordingly, the Applicants have provided substantial credible evidence and demonstrated by a preponderance of the evidence that the Project will not have an unreasonable adverse effect on air or water quality.

#### **1. Air Quality**

In determining whether the Project will have an unreasonable adverse effect on air quality, the Subcommittee is required to consider the determinations of DES with respect to applications or permits required for the construction and operation of the Project and other relevant evidence submitted and accepted by the Subcommittee. N.H. Code of Admin. Rules, Site 301.14(c). It is telling that the Project does not require an air quality permit. It is uncontroverted that the Project will improve air quality and result in significant emissions

reductions. The Applicants' air quality expert, Robert Varney of Normandeau,<sup>286</sup> determined "the Project will improve State and regional air quality and certainly will not have an unreasonable adverse effect on air quality." *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 19, p. 10. It will help New Hampshire and the region address issues such as smog, acid rain, regional visibility, and climate change and provide significant long-term benefits to the State and region. *Id.*; *Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 141, p. 1.

Mr. Varney testified that the Project is estimated to reduce CO<sub>2</sub> emissions by 3.5 million tons per year, the equivalent of removing approximately 675,000 passenger vehicles from the road per year. *Tr. Day 23/Morning Session* p. 11; *see also Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 141, p. 1 (referencing 3.2 million metric tons).<sup>287</sup> As Mr. Varney testified in response to a question from Committee Member Wright, this reduction "is as much or more than all of the CO<sub>2</sub> emissions from the electric generation sector in New Hampshire." *Tr. Day 23/Morning Session*, p. 11. Mr. Varney added that it would be "a very significant benefit in terms of achieving the goals for climate change in New England and within New Hampshire." *Id.* at p. 12.

The Applicants have demonstrated the Project will provide other significant emissions reductions in just the first ten years. Specifically, the *Update of the Electricity Market Impacts Associated with the Proposed Northern Pass Transmission Project* report, prepared by London Economics International (App. Ex. 81), modeled significant annual average emission reductions for CO<sub>2</sub>, NO<sub>x</sub>, and SO<sub>2</sub> across New England from 2020 to 2030. *Application*, App. Ex. 1,

---

<sup>286</sup>Mr. Varney is also a former longtime Commissioner of the NH Department of Environmental Services and a former Regional Administrator of US EPA Region 1. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 19, p. 1.

<sup>287</sup>As he indicated, Mr. Varney relied on the testimony of Ms. Frayer for the actual emissions reductions estimates. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 19, p. 4; *Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 141, p. 1.

Appendix 43; *see also Updated LEI Report*, App. Ex. 81. The specific estimated emission reductions during this time period are as follows:

- CO<sub>2</sub> – 3.2 million metric tons;
- NO<sub>x</sub> – 663 short tons; and
- SO<sub>2</sub> – 136 short tons.

*Supplemental Pre-Filed Testimony of Robert W. Varney*, App. Ex. 141, p. 1 (referring to CO<sub>2</sub> emissions reductions); *Tr. Day 16/Morning Session*, p. 76 (relating to NO<sub>x</sub> and SO<sub>2</sub> emissions reductions).

Mr. Varney’s testimony is further supported by DOE in the Final FEIS. DOE concluded that “[t]he reductions resulting from the implementation of the Project could reduce emissions equivalent to several major . . . emission sources, therefore it could have major, long-term beneficial impacts to air quality within the ISO-NE region by reducing annual criteria pollutants and GHG emissions.” *Final EIS*, App. Ex. 205, Air Quality and Greenhouse Gas Technical Report, p. 63.

The Applicants were mindful of potential air emissions associated with construction of the Project, and Mr. Varney concluded that estimated construction emissions are low and would be localized and temporary. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 19, p. 5. As he explained during his testimony, based upon the information in the Draft EIS (App. Ex. 106), emissions for the central New Hampshire nonattainment area where conformity is at issue, “the data indicated that it was well below the de minimis level.” *Tr. Day 23/Morning Session*, p. 6.<sup>288</sup> The Applicants also considered the potential for fugitive dust as a result of Project construction. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 19, p. 5. NPT’s contractors will follow best management practices (“BMPs”) to address this issue, consistent with the DES Fact Sheet on

---

<sup>288</sup> The FEIS supports the same conclusion. *Final EIS*, App. Ex. 205, pp. S-33 to S-34.

BMPs associated with fugitive dust DES rules. *Id.*; *see also Tr. Day 23/Morning Session*, pp. 7-8.

The uncontroverted evidence submitted by the Applicants demonstrates the Project will not have an unreasonable adverse effect on air quality. Quite the contrary, the Project will significantly improve State and regional air quality, and address state and regional climate action goals.

## 2. Water Quality

In determining whether the Project will have an unreasonable adverse effect on water quality, the Subcommittee is required to consider the determinations of DES, the USACE, and other state or federal agencies having permitting or other regulatory authority under state or federal law to regulate any aspect of the construction or operation of the Project, with respect to applications and permits required for the construction and operation of the Project and other relevant evidence submitted and accepted by the Subcommittee. N.H. Code of Admin. Rules, Site 301.14(d).

The Applicants' consultants conducted a comprehensive analysis of wetland and water resources, potential impacts, and potential avoidance and minimization opportunities.<sup>289</sup> The Project design substantially avoids wetland and water quality impacts. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 13; *Pre-Filed Testimony of Jacob Tinus*, App. Ex. 21, p. 13-14 (discussing surface water quality and groundwater quality). For those impacts that are

---

<sup>289</sup> Lee Carbonneau of Normandeau was retained to assess the potential effects of the Project on wetland resources, shoreland permitting, and aquatic resources and offer an opinion regarding whether the Project will cause an unreasonable adverse effect on water quality or the natural environment. Her pre-filed testimony is at App. Ex. 22 (Carbonneau Pre-filed Testimony) and App. Ex. 98 (Carbonneau Supplemental Pre-filed Testimony). Jacob Tinus of Burns & McDonnell assessed the potential effects of the Project on surface water and groundwater quality. His pre-filed testimony is at App. Ex. 21 (Tinus Pre-Filed Testimony) and App. Ex. 97 (Tinus Supplemental Pre-Filed Testimony). Normandeau also prepared a *Wetlands, Rivers, Streams and Vernal Pools Resource Report and Impact Analysis*, App. Ex. 1, Appendix 31, submitted with the Application.

unavoidable, substantial mitigation was proposed and agreed to by the relevant agencies, including approximately 1,628 acres of land conservation and payment of \$3,379,280.59 to the DES Aquatic Resources Mitigation (“ARM”) Fund. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 4; *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, p. 3, 13. As part of the permitting process, the Project also evaluated potential impacts to surface waters, drinking water supplies and groundwater. *See Pre-Filed Testimony of Jacob Tinus* App. Ex. 21.

The Project submitted applications for the following state and federal water quality permits:

- Wetlands Permit from DES Wetlands Bureau, required by RSA 482-A;
- Alteration of Terrain (“AoT”) Permit, required by RSA 485-A:17. This permit process regulates activities affecting New Hampshire surface waters, drinking water supplies and groundwater by requiring the control of soil erosion and management of stormwater runoff from developed areas;
- Section 401 Water Quality Certification, a certification by DES (required by the Clean Water Act) regarding state water quality standards;
- Shoreland Water Quality Protection Act Permit (RSA 483-B), which establishes minimum standards for the use and development of protected shoreland adjacent to the state’s public water bodies; and
- Clean Water Act Section 404 Wetland Permit, to be issued by the USACE.

*Pre-Filed Testimony of Jacob Tinus*, App. Ex. 21, pp. 3-5.

The DES Final Decision of March 1, 2017 (App. Ex. 75) approving the permit applications for Wetlands, Alteration of Terrain, Shoreland, and the Section 401 Water Quality Certification demonstrates the Applicants have satisfied all of the state water quality-related

permitting requirements for the Project.<sup>290</sup> The Project will not have an unreasonable adverse effect on water quality. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 11; *Supplemental Pre-Filed Testimony of Jacob Tinus* App. Ex. 97, p. 4 (noting that the Project will have no adverse effect on surface water quality and groundwater quality).<sup>291</sup>

SPNHF believes “DES erred in recommending approval,” claiming the agency failed to require the Applicants to provide “essential information,” “correct its wetlands assessment,” and “use the least impacting alternative.” SPNHF Brief at p. 143.<sup>292</sup> As discussed below, the record fully supports the permitting decisions and the Committee is required to consider the determinations of DES and other agencies having permitting or regulatory authority. Site 301.14(d).

**a. Wetlands and Vernal Pools**

The Applicants have also satisfied all regulatory requirements regarding wetlands impacts. Potentially affected wetlands were appropriately delineated and the Project design avoided and minimized impacts to the maximum extent practicable. The unavoidable permanent impacts are minimal and all temporary impacts are required to be fully restored. The Applicants

---

<sup>290</sup> Also, the Clean Water Act NPDES Construction General Permit, governing construction activities as they relate to stormwater, will be filed per normal practice prior to the start of construction. *Pre-Filed Testimony of Jacob Tinus*, App. Ex. 21, p. 5.

<sup>291</sup> As Mr. Varney stated in his pre-filed testimony, the reductions of NO<sub>x</sub> and SO<sub>2</sub> emissions will also benefit NH’s lakes and ponds and wetlands. *Pre-Filed Testimony of Robert W. Varney*, App. Ex. 19, pp. 6-7.

<sup>292</sup> In its Brief, SPNHF cites the testimony of Mr. Lew-Smith, who was part of CFP’s environmental panel (Arrowwood), as support for its position. *See e.g.* SPNHF Brief at p. 143, fn 666; p. 156, fn 748. In fact, Mr. Lew-Smith made it clear in his testimony that Arrowwood “analyze[d] vernal pools strictly as wildlife habitat” and “didn’t do an analysis of overall wetland impacts on the Project.” *Tr. Day 56/Afternoon Session*, p. 91. Mr. Lew-Smith likewise confirmed he did not have an opinion on the methodology Normandeau used to assess other water resources and was not in a position to offer an opinion about the wetlands assessment Normandeau did. *Id.* at 95-96. His testimony should be weighed accordingly.

have proposed a mitigation package that exceeds regulatory requirements to address any unavoidable impacts.

- i. The Applicants Accurately Delineated and Assessed Wetlands, Streams and Vernal Pools Potentially Impacted by the Project.

The work by the Applicants' consultants to delineate wetlands, streams and vernal pools followed standard methods required by the DES Wetlands Bureau and USACE. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 2. Specific protocols were discussed with appropriate state and federal regulators prior to field work. *Id.* Delineations were completed during the growing seasons from 2010 through 2015 by, or under the supervision of, New Hampshire Certified Wetland Scientists ("NHCWS"), in conformance with State requirements. *Id.* Quality control field reviews were conducted by Normandeau NHCWS throughout the Project area and by USACE in selected locations.<sup>293</sup> *Id.* at 2-3. One wetlands scientist retained by the City of Concord (see discussion below on Dr. Van de Poll's testimony) questioned the accuracy of Normandeau's delineation, but another wetlands scientist for SPNHF (Mr. Lobdell) did not. Moreover, two wetlands scientists who filed reports for the Towns of Bethlehem and Whitefield stated affirmatively that the wetlands delineations done in those communities were appropriately done. *See e.g., Pre-Filed Testimony of Edwin Mellett*, JT MUNI Ex. 91, Appendix A, Lawson & Severance Report, p. 6 ("[b]ased on previous field work and review of submitted maps, it appears that wetlands were accurately delineated and documented."); *Pre-Filed Testimony of Cassandra Laleme*, JT MUNI Ex. 89, Lawson & Severance Report, p. 5 (noting that the wetlands were accurately delineated and documented by the Applicants).

---

<sup>293</sup> Normandeau performed additional mapping beyond the Project ROW/property in compliance with new SEC rules and addressed specific comments and requests from NHDES. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 2.

The Joint Municipal Group of intervenors attempt to discredit Normandeau's delineation largely based on a very limited and superficial analysis done by Dr. Van de Poll, a consultant retained by the City of Concord to address wetlands impacts. Dr. Van de Poll claimed that Normandeau failed to accurately identify wetlands in the Concord area and, therefore, the wetlands impact. *Pre-Filed Testimony of Rick Van de Poll*, JT MUNI Ex. 141, p. 2-3. Dr. Van de Poll and the Joint Municipal Group go so far as to argue that because Dr. Van de Poll found alleged inaccuracies in Concord, it is therefore sufficient to conclude that the Applicants' wetlands delineations are likely inaccurate elsewhere along the route. JT MUNI Brief, pp. 115-16. Not only is that conclusory leap inappropriate and unsupported, but it is fatally flawed. As described below, Dr. Van de Poll's own conclusions are simply that – conclusions without sufficient evidence to support his own “delineations” upon which he challenges those of Normandeau.

Dr. Van de Poll initially based his opinion on infrared aerial photos and “[s]omewhat randomized site checks” at five sites outside of the growing season. *Id.*; *see also Supplemental Pre-Filed Testimony of Rick Van de Poll*, JT MUNI Ex. 142, p. 5, Exhibit C, 1-4. He concluded that in four of the five test areas he checked, there were errors to the wetland mapping done by Normandeau. *Supplemental Pre-Filed Testimony of Rick Van de Poll*, JT MUNI Ex. 142, p. 5, Exhibit C, p. 4. In June 2017, Dr. Van de Poll went back to the five sites he identified in his supplemental testimony to verify whether they indeed were wetlands areas Normandeau had missed. *Tr. Day 60/Morning Session*, p. 116. Dr. Van de Poll's methodology did not conform with wetlands delineation methods required for permitting purposes. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 5-6. His initial review was done in the wrong season, his use of infrared aerial photography, by his own admission, is not an accepted way to

delineate wetlands,<sup>294</sup> and the hand-held GPS unit he used is not nearly as accurate as the equipment used by Normandeau.<sup>295</sup>

Most importantly, Dr. Van de Poll did not provide any maps showing the precise boundaries or locations of the purported additional wetlands, or any other documentation to indicate how the purported additional wetlands would be impacted. He provided references to the aerial infrared photographs he reviewed, but he did not provide copies of the photographs marked up to show where he claims additional wetland boundaries are located. *Tr. Day 70/Morning Session*, pp. 26-27. Even the large scale maps he provided with his field reports do not show the precise locations or boundaries of the wetlands he contends Normandeau missed and, as a result, Normandeau could not review or challenge Dr. Van De Poll's delineations or his claim that the Applicants misidentified 2,830 square feet of temporary wetlands impacts. *Tr. Day 60/Morning Session*, p. 118. In essence, Dr. Van de Poll contends that he found inaccuracies with Normandeau's delineations and leaves the Applicants and the Committee to take his word for it.<sup>296</sup>

On the other hand, Normandeau delineated wetlands using standard methods with more accurate field equipment than Dr. Van de Poll used, and provided maps showing the precise boundaries of the delineated wetlands. Additionally, the USACE field checked certain of the delineations performed by Normandeau and verified Normandeau's findings. *Id.* at 6.

---

<sup>294</sup> *Tr. Day 70/Morning Session*, pp. 9-10.

<sup>295</sup> *Id.* at 20.

<sup>296</sup> The Joint Municipal Group's assertion that the Applicants should have verified Dr. Van de Poll's June report is mystifying; the Group and the City of Concord did not disclose the existence of that report until November 15, 2017, five months after his field check and too late in the year to do any verification. *See Tr. Day 60/Morning Session*, p. 59. The Joint Municipal Group's claim that the Applicants were on proper notice is equally mystifying; in support of that odd assertion they inexplicably cite to Mrs. Lee's cross-examination of Ms. Carbonneau. *Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, pp. 116-17.

Notwithstanding his belief that there is a “reasonable doubt about the accuracy of the wetlands” (*Tr. Day 70/Morning Session*, p. 18), the voluminous record of wetlands assessment by Normandeau, verification by the USACE, and approval by DES demonstrates otherwise.<sup>297</sup>

Counsel for the Public’s consultant, Arrowwood, criticized Normandeau's selection and application of the Calhoun and Klemens (2002) vernal pool assessment method. *Independent Review of Significant Wildlife Habitats and Rare, Threatened and Endangered Species*, CFP Ex. 136, Exhibit E, p. 21; *Tr. Day 57/Morning Session*, p. 31 (Michael Lew-Smith of Arrowwood testifying his criticism relates to the methodology used to rank the quality of the vernal pools.)<sup>298</sup> That criticism is unfounded. Arrowwood did not do any field work with respect to vernal pools and Mr. Lew-Smith testified he had “minimal” experience assessing vernal pools in New Hampshire prior to this project. *Tr. Day 56/Afternoon Session*, pp. 158-159.<sup>299</sup> Moreover, Lew-Smith conceded that neither federal nor state regulators required the Applicants to use a particular methodology and neither the EPA nor any other agency has taken issue with the methodology used. *Tr. Day 57/Morning Session*, p. 31. He also acknowledged that DES approved the wetlands permit application, which included vernal pool identification and impact assessment details. *Id.* at 31-32.

As Ms. Carbonneau explained, the method Normandeau used was the most relevant and appropriate method available in New England at the time the work was done and it was acceptable to the State and federal wetland regulators. Normandeau appropriately modified the

---

<sup>297</sup> The City of Concord has not satisfied its burden of proof on this assertion. *See* Site 202.19(a).

<sup>298</sup> Notably, Arrowwood only analyzed vernal pools as wildlife habitat. *Tr. Day 56/Afternoon Session*, p. 91. They did not do an analysis of overall wetland impacts on the Project or otherwise consider the methodology the Applicants used to assess other water resources. *Id.* at 91, 95, 158.

<sup>299</sup> Mr. Lew-Smith also testified he has never filed a wetlands permit application in New Hampshire or assisted with the preparation of an application. *Tr. Day 56/Afternoon Session*, pp. 159-160.

results based on field observations as warranted. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 8, *citing* App. Ex. 1, Appendix 31, pp. 2-8.

SPNHF's consultant, Ray Lobdell, argued Normandeau misapplied the USACE highway wetland assessment methodology because Normandeau identified high quality wetlands and the highway methodology does not recommend ranking wetlands. *Pre-Filed Testimony of Raymond Lobdell*, SPNF Ex. 63, pp. 15-16. The results of the highway methodology for all wetlands in the Project area without rankings is included in Appendix B of the Wetlands, Rivers, Streams, and Vernal Pools Assessment and Impact Report. *Application*, App. Ex. 1, Appendix 31, Appendix B. The use of rankings was a separate analysis used primarily for selecting wetlands to describe in the narrative report and for evaluating impact avoidance trade-offs. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 6. As Ms. Carbonneau explained, "[t]he primary purpose" for Normandeau using a ranking approach "was to make sure that in our descriptions, our narrative descriptions in our wetlands report, that we included wetlands that really were outstanding and that were worthy of a good discussion. . . [and] . . if there was an opportunity to minimize impacts to that wetland that had to be at the expense of another, that we would make the right choice in that situation." *TR. Day 18/Morning Session*, p. 44. She further confirmed this rankings analysis "didn't supplant or replace the actual functions and values assessment that we use that meets all of the federal and state criteria. It was an added step for a very limited purpose. . . ." *Id.*<sup>300</sup>

Mr. Lobdell also took the position the wetland functions and values assessment should have extended to the entire wetlands, not just portions within the ROW, even though he acknowledged DES did not require the Applicants to amend their assessment to include the

---

<sup>300</sup> Given Ms. Carbonneau's testimony, SPNHFs continued claim that this approach reflects an inadequate assessment of wetland functions and values is disingenuous. SPNHF Brief at p. 152-53.

entire wetland. *Supplemental Pre-Filed Testimony of Raymond Lobdell*, SPNF Ex. 67, p. 7; *see Pre-Filed Testimony of Raymond Lobdell*, SPNF Ex. 63, p. 16. As explained by Lee Carbonneau, the methodology for assessing wetlands requires field visits. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 6. Since trespassing off the ROW was not allowed for wetlands delineation or assessment, Normandeau applied the methodology from within the ROW. *Id.* Large wetlands clearly extending beyond the ROW and those associated with a visible waterbody were noted and considered in the functions and values assessment. *Id.* Further, the primary focus of the functions and values assessment appropriately “was on the portion of the wetland within the ROW where the essential biological and physical conditions specified [in the method] could be observed.” *Id.* Moreover, “wetland impacts will be confined to the ROW and development sites, and the impact assessment should accurately identify the quantity and quality of the actual wetland impacts so that appropriate in-kind compensatory mitigation can be developed. *Id.*

In its Brief, SPNHF claims Ms. Carbonneau admitted “assessing only a portion of wetland complex might not represent the complete set of wetland functions and values for that whole system.” SPNHF Brief at p. 153. That partial citation misrepresents the more complete perspective Ms. Carbonneau was offering. She also pointed out that “there are certainly occasions where you want to assess the functions and values of a particular portion of wetland, and that is an acceptable way to assess functions and value of a wetland” based on the Army Corps of Engineers manual. *Tr. Day 17/Afternoon Session*, p. 114-15.

Several intervenors take the position that because wetlands are hydrologically connected to other wetlands and waterbodies upstream and downstream of the ROW, Normandeau surveys and impact assessments also should have extended beyond the ROW. *See, e.g., Pre-Filed*

*Testimony of Cheryl K. Jensen*, JT MUNI Ex. 96, p. 9-10. While the Applicants understand the connectivity of wetlands and waterways, BMPs are developed to prevent adverse impacts to hydrology, soils and vegetation beyond the ROW. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 7. The permit requirements for the Project also include detailed conditions regarding the restoration of temporary wetland impact areas that are expected to prevent such impacts beyond the ROW. *See DES Final Decision with Conditions*, App. Ex. 75, p. 4-5 (Conditions 33-36). Also, given that permanent wetland impacts along the ROW are so small, resulting functional changes to an extensive wetland system would not be measureable. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 7. This Subcommittee already has recognized “[i]t is unlikely that the Project will have any impact on surface waters or wetlands beyond ¼ mile of the Project.” *Order on Applicant’s Request for Partial Waivers Under the Newly Adopted SEC Rules*, Docket No. 2015-06, p. 22 (June 23, 2016).

Some intervenors also claimed that the impact assessment was incomplete because additional laydown areas or staging areas were not included. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 7. While the Application includes those areas known at the time of the Application, the Applicants recognize that additional laydown sites may be necessary and plan to prioritize locations without jurisdictional or sensitive resources. *Id.* Should development of additional laydown areas (or any other project design modification) require impacts to jurisdictional wetland resources, those impacts would require review and approval by state and federal wetland agencies. *Id.*

ii. The Wetlands Impacts Will be Minimal

Overall, there are approximately 2.5 acres of permanent wetlands impact that could not be avoided. *Tr. Day 17/Morning Session*, p. 44; *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 5. Temporary wetland impacts, primarily associated with construction of access paths

or roads and crane pads, will total approximately 138 acres. *Tr. Day 17/Morning Session*, p. 45. To the extent practicable, these areas will be worked on in winter during frozen conditions or in late summer when ground saturation is generally lowest in order to minimize impacts. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 5; *see also DES Final Decision with Conditions*, App. Ex. 75, p. 5 (Condition 40, “[w]ork shall be done during frozen conditions whenever possible to minimize temporary impacts to wetland areas; otherwise timber matting or specialized low ground pressure equipment shall be used.”). Access to these areas during other times of the year may be necessary, and if so, timber mats and other minimization techniques will be used. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 5. All temporary wetland resource impacts will be restored. *Id.*; *see also Tr. Day 17/Morning Session*, p. 45 (Carbonneau testifying “the Project is required to restore all temporary impacts to the satisfaction of [DES], and they have standards in place” and the permit approvals “require” that restoration occur); *see DES Final Decision with Conditions*, App. Ex. 75, p. 4-5 (Conditions 32-34, 38-39 discussing requirements for restoring temporary wetlands). Pursuant to Condition 76 in the DES Final Decision, “[f]ailure to complete the restoration of temporarily impacted wetlands/stream and bank/vernal pool areas in accordance with plans constitutes a violation of RSA 482-A.” *DES Final Decision with Conditions*, App. Ex. 75, p. 8. All temporary impacts will be restored, pursuant to State and federal regulations.

Secondary impacts include the permanent removal of tree canopy from forested wetlands, tree clearing in uplands near vernal pools and streams, and the placement of temporary timber matting on organic soils. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 5. These impacts total approximately 180 acres and are highest in the northern portion of the Project route where a new ROW will be cleared. *Id.*; *see also Tr. Day 17/Morning Session*, pp. 48-49

(discussing secondary impacts). While some replanting is planned to address these impacts, tree growth in the ROW would be a hazard, so compensatory mitigation (discussed below) addresses these impacts. *Tr. Day 17/Morning Session*, p. 49.

The Town of Bethlehem Conservation Commission argued the Project will have an adverse impact on wetland diversity, quality and function upstream and downstream of the ROW. *Pre-Filed Testimony of Cheryl K. Jensen*, JT MUNI Ex. 96, p. 10. The record demonstrates, however, that all but 2.53 acres of wetlands impacts are temporary and will be restored with native vegetation, including whatever is rooted in the soil, the existing soil seed bank, seed from the adjacent ROW, and native seed mix as needed. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 7. BMPs to control invasive species are permit requirements and important to maintaining biodiversity. *Id.*; *see also DES Final Decision with Conditions*, App. Ex. 75, p. 6 (Condition 54). Conditions similar to the preconstruction conditions will become reestablished in this existing ROW and continue to provide scarce early successional habitat, which supports biodiversity. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 6.

Dr. Van de Poll for the City of Concord suggested that the temporary wetland impacts will permanently impact wetlands function due to placing fill at work pads and regrading and filling access roads. *Pre-Filed testimony of Dr. Rick Van de Poll*, JT MUNI Ex 141, p. 4. Normandeau's classification of temporary impacts followed the guidance of the DES, EPA and USACE in calculating permanent, temporary and secondary impacts. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 7. As discussed above, the DES permit conditions require all temporary wetlands impacts to be restored. *Final DES Decision with Conditions*, App. Ex. 75, p. 11 (Condition 20). In addition, permanent tree removal from

forested wetlands, stream buffers and vernal pool buffers, as well as compression of organic soils, are secondary impacts for which compensatory mitigation has been provided.

*Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 7-8; *see Tr. Day 18/Morning Session*, p. 11 (discussing federal requirement that mitigation be included for possibility of deep organic soil compaction).

Mr. Lobdell suggested the Project should have provided detailed “site by site existing condition information” for each of the “over 800 restoration sites,” including site elevations, topography, photos, test pits, soil borings, and vegetative inventories. *Pre-Filed Testimony of Raymond Lobdell*, SPNF Ex. 63, p. 13. While the Project does have soil, vegetation and photo documentation for all wetlands in the Project area, individual restoration plans are unnecessary. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 8. Almost all of the temporary wetland impacts are associated with the placement of timber mats, which, upon removal, typically require only minor active restoration efforts. *Id.* The extent of restoration activities necessary at each location will depend in part on the season and duration of temporary construction mat placement, and will benefit from the input of the environmental monitors. *Id.* Grading, where necessary, will blend into the surrounding, un-impacted wetlands which, in almost all cases, will be only several feet away. *Id.* Revegetation will be from the existing seed bank, supplemented as needed with native seed mix appropriate for New Hampshire wetlands. *Id.* Again, the DES permit includes specific requirements regarding restoration that must be followed. *See Final DES Decision with Conditions*, App. Ex. 75, p. 4 (Condition 32, “[t]he contractor shall re-grade temporary wetland impacts to pre-construction conditions and seed native plant species similar to those within the wetland prior to impact. The Permittee shall implement corrective measures if needed to ensure the plantings survive.”); (Condition 34,

describing the seed mix to be used). Furthermore, Condition 36 in the Final DES Decision requires that the Applicants submit a report on restoration efforts, including photographs of all stages of construction. *Id.* at 5.

The record fully supports the finding that the Applicants' wetlands scientists conducted a thorough review of the Project area, including an examination of soil, hydrology and vegetation in the field, as required, and appropriately delineated wetland boundaries and vernal pools. After considerable consultation and interaction with the DES, the DES approved the wetland permit application, which included vernal pool identification and impact assessment details.

iii. The Applicants Engaged in Substantial Avoidance and Minimization Efforts

The Project was planned, routed, designed and engineered to protect water quality by avoiding resource impacts and minimizing impacts where total avoidance is not possible. *Pre-Filed Testimony of Jacob Tinus*, App. Ex. 21, p. 6. Avoidance and minimization of impacts to wetlands, streams, and vernal pools has been an essential element of route selection, Project design, and the construction management plan. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 3. Importantly, the decision to place an additional 52 miles of the Project underground along state highways from Bethlehem to Bridgewater reduced direct, permanent wetland impacts by approximately 0.6 acres, reduced temporary wetland impacts by over 30 acres, and reduced secondary impacts to wetlands, streams and vernal pools by over 70 acres. *Id.*

Other examples of avoidance and minimization efforts include adjustments to structure locations, access roads and work pads and engaging in constructability walk downs to further reduce permanent and temporary resource impacts. *See Applicants' Response to DES Request for Wetlands and Shoreland Information 1/25/17*, App. Ex. 74. As the DES Decision recognized, the Applicants "submitted revised plans that further reduce[d] wetlands impacts as

requested by DES.” *Final DES Decision with Condition*, App. Ex. 75, p. 10 (Finding 9).

“Overall temporary wetland impacts were reduced by 76,009 square feet (which includes avoiding 2 high value vernal pools) and permanent wetland impacts were reduced by 732 square feet.” *Id.*

Mr. Lobdell testified that the overhead route was not the least impacting alternative and, therefore, only complete burial should be permitted. *Pre-Filed Testimony of Raymond Lobdell*, SPNHF Ex. 63, pp. 5-6. He did not consider economic practicability in reaching this position, however,<sup>301</sup> and his position in this proceeding is entirely different than the one he took on behalf of the Applicant in the Granite Reliable Wind SEC proceeding.<sup>302</sup> Moreover, the Final DES Decision specifically found the Applicants had provided evidence demonstrating the Project “is the alternative with the least adverse impact to areas and environments” under its jurisdiction. *Final DES Decision with Condition*, App. Ex. 75, p. 8 (Finding 5).<sup>303</sup> SPNHF contends that the Applicants should have done full wetlands delineations for any full burial option. Post-hearing Memorandum, p. 149-151. This wrongly suggests that a full assessment should have been done

---

<sup>301</sup> *Tr. Day 70/Morning Session*, p. 111.

<sup>302</sup> In that case, Mr. Lobdell did not even suggest that an underground alternative for the transmission line for that project should have been considered. *Tr. Day 70/Morning Session*, p. 116.

<sup>303</sup> SPNHF takes issue with the Applicants’ position (and the DES decision) that the proposed route is the least impacting practicable alternative, saying that its expert witness (Mr. Lobdell) – but apparently not DES or Normandeau Associates – has a deep enough understanding to make this judgment. SPNHF Post-hearing Memorandum, p. 143. This is the same witness who admitted he failed to comply with SEC rules when he testified that he did not take cost into account in making his judgment that the proposed route is not the least impacting practicable alternative. *Tr. Day 70/Morning Session*, p. 111. Practicability, including cost considerations, is very important in this case, as the Applicants have explained in detail to DES (App Ex. 62, Response to DES request for information) and to the federal agencies (App Ex. 225, Letter to the USACE, with copies to EPA, DOE and DES, with accompanying report CFP Ex. 8.)

for I-93, Rt. 3, and any other burial option SPNHF believes ought to be reviewed, irrespective of practicability.<sup>304</sup>

Mr. Lew-Smith of Arrowwood testified he believed there still are a number of vernal pools that could have been avoided and were not. *Tr. Day 56/Afternoon Session*, p. 86. During cross-examination, however, Lew-Smith conceded he did not disagree with the DES Finding 14 regarding the amount of impacts to vernal pools. *Tr. Day 57/Morning Session*, p. 33.

The record demonstrates that the Applicants have followed best practical measures to minimize impacts to wetlands resources.

iv. The Compensatory Mitigation Package Accepted by DES for Unavoidable Wetlands Impacts Exceeds Regulatory Requirements

The plan for mitigating unavoidable permanent and secondary impacts to wetlands, stream buffers, and vernal pool buffers was developed in accordance with the New Hampshire Wetlands Rules (Env-Wt 800) and federal regulations for mitigation in New England under Section 404 of the Clean Water Act (40 C.F.R. Part 230).<sup>305</sup> *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 6. To identify mitigation opportunities that were regionally or locally important, the Applicants researched local and regional planning documents, including the Wildlife Action Plan, for important conservation objectives. *Id.* They conducted extensive outreach to seven local/regional land trusts operating in the Project area, five local river advisory committees, 15 municipalities (with the majority of wetland impacts), and several regional

---

<sup>304</sup> SPNHF's references to EPA letters on the issue of practicability are misleading. While EPA does say in both its June 14, 2016 and September 26, 2017 letters that 32 more mile so undergrounding "appears practicable," EPA did not conclude that at all. Rather, as the letters make clear, EPA was simply recommending further consideration of more underground construction to the deciding agency, USACE. SPNHF 43, p. 3 (2016 letter); SPNHF 268, p. 3 (2017 letter).

<sup>305</sup> The mitigation plan also was meant to address unavoidable impacts to rare, threatened and endangered plant species and wildlife. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 6.

conservation organizations. *Id.* Suggested conservation and restoration projects were considered by the Project team and the state and federal regulators. *Id.* Numerous discussions were held with potential conservation easement holders. *Id.*

Normandeau submitted the updated Natural Resource Compensatory Mitigation Plan to DES in December 2016. *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, p. 3. This plan has been discussed with the DES Wetlands Bureau, the USACE, the EPA, F&G, NHB, and UFWWS during meetings, correspondence and calls. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 6; *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 4-5 (discussing changes included in the final mitigation package); *see also* App. Ex. 124; *see also* App. Ex. 124a.

For temporary wetland impacts, Project restoration is planned, including re-seeding with wetland seed mix, or in some locations, minor regrading. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 7. The DES permit conditions include specific restoration requirements. *See e.g. DES Final Decision with Conditions*, App. Ex. 75, p. 4 (Conditions 32-34). Locations with rare plants will require special treatment. The routinely-accepted agency expectation is that if wetland hydrology and soils are in place and vegetation is restored, then wetland functions will become re-established in these areas over time. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 7.

The largest component of the Project's mitigation plan is preservation of upland buffers around good quality wetlands, one of DES's preferred mitigation methods and one which will also provide in-kind mitigation for wildlife habitat impacts. *Id.* The proposed mitigation package includes the preservation of approximately 1,628 acres of land in Pittsburg, Clarksville, Stewartstown, Dixville, Columbia, Concord, and Pembroke. *Supplemental Pre-Filed Testimony*

of Lee Carbonneau, App. Ex. 98, p. 4; *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, p. 3. This land includes forested and shrub wetlands, low elevation spruce-fir forest, high elevation spruce-fir forest, perennial, intermittent and ephemeral streams, vernal pools, and some field and old field habitats. *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 4. It also contains a 6.9 acre parcel within the Concord Pine Barrens that will be conserved to increase the Karner blue butterfly (“Kbb”) habitat. *Id.* The total commitment to land preservation is over 8 times greater than the new recommended federal multiplier of 20 for wetland mitigation through preservation, and more than 17 times greater than the DES preservation ratio of 10:1. *Id.*

In addition, the Project will be making an ARM Fund payment of \$3,379,280.59, *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, p. 16, and has partnered with the National Fish and Wildlife Foundation to provide \$3,000,000 of funding over a three year period for science-based conservation projects with the goal of restoring and sustaining healthy forests and rivers in the state. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 8.

**b. Stormwater**

The principal water quality issue for the Project is stormwater management, as it has the potential to translocate sediments eroded from disturbed lands to wetlands and aquatic resources, affecting their quality. *Pre-Filed Testimony of Jacob Tinus*, App. Ex. 21, p. 6. As required in the DES approvals of the AoT permit and Section 401 water Quality Certification applications, construction activities will be carefully monitored throughout the construction process and BMPs will be used to minimize erosion and sedimentation, stabilize soils, and restore disturbed areas once construction activities have been completed. *Id.* These BMPs comply with state and federal requirements, and they are the standard practices used on construction projects, including transmission projects. *Supplemental Pre-Filed Testimony of Jacob Tinus*, App. Ex. 97, p. 3. The

Applicants must also meet all requirements of the federal Construction General Permit for Stormwater. Furthermore, the DES Final Decision includes many permit conditions related to water quality and stormwater management that must be followed by the Project and its contractor. *See, e.g., DES Final Decision with Conditions*, App. Ex. 75, p. 4 (Condition 19), p. 24 (Condition 8).<sup>306</sup> As with the other environmental issues, environmental monitors will be retained during construction to ensure Project contractors abide by the conditions of the Project's environmental permits and other impact and avoidance measures. *Supplemental Pre-Filed Testimony of Jacob Tinus*, App. Ex. 97, p. 1; *Tr. Day 18/Afternoon Session*, 76-77. There will be ongoing monitoring meetings with contractors to manage construction activities. Furthermore, DES will have a prominent role in monitoring and enforcing the water quality permit requirements. *Pemigewasset River Local Advisory Committee's Response to Data Requests Made at the January 27, 2017 Technical Session*, PEMI Ex. 5, p. 17; *Tr. Day 70/Afternoon Session*, p. 121.<sup>307</sup>

Several intervenors testified that erosion and sedimentation will be a significant impact on wetlands and water quality. As discussed above, the Applicants have identified appropriate BMPs for limiting the risk of erosion and sedimentation, and must provide water quality monitoring during construction activities, consistent with Project permit conditions. The methods proposed have been developed by experts in the construction and regulatory

---

<sup>306</sup> DES included 77 conditions in its wetlands approval *DES Final Decision with Conditions*, App. Ex. 75, pp. 2-8, 14 additional conditions in its AoT approval and 30 more in the Section 401 Water Quality Certificate approval. *Id.* at 30-31, 23-29). I

<sup>307</sup> In a brief section of its Post-hearing Memorandum, CFP asserts that "independent environmental monitors are critical." *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, pp.130-131. The Applicants concur that properly qualified monitors who have authority to stop work are needed. *Tr. Day 19/Morning Session*, p. 28. The conditions in DES's final approval require the requisite qualifications and advance notification to DES. *DES Final Decision with Conditions*, App. Ex. 75, pp. 4-5, Conditions 35 and 36. Nothing in the record supports CFP's request that the SEC and other agencies must approve the monitors and that the monitors "should answer to an entity other than the Applicant."

community, comply with State and federal requirements, and are standard practices commonly used on construction projects. Furthermore, as with any other construction project, there are regulatory consequences for failing to comply with these requirements or violating water quality standards.

The Pemigewasset River Local Advisory Committee ("PRLAC") witnesses also testified that the existing ROW crossings of the Pemigewasset River have erosion problems. *See generally Pre-Filed Testimony of Max Stamp*, PEMI Ex. 2; *Supplemental Pre-Filed Testimony of Max Stamp*, PEMI Ex. 6; *Pre-Filed Testimony of Barry Draper*, PEMI Ex. 3; *Supplemental Pre-Filed Testimony of Barry Draper*, PEMI Ex. 7; *Pre-Filed Testimony of Gretchen Draper*, PEMI Ex. 4; *Supplemental Pre-Filed Testimony of Gretchen Draper*, PEMI Ex. 8; *see also Tr. Day 70/Afternoon Session*, pp. 74-5, 92-96.<sup>308</sup> Eversource conducted an inspection of these five crossings in 2016 and prepared a report. *Pemigewasset River Crossing Erosion Assessment*, App. Ex. 125. While no serious erosion-related water quality issues were observed at the time of the assessments and most of the riverbanks at the ROW crossing showed no erosion issues at all, Eversource still recommended vegetation management steps at several locations. The PRLAC witnesses testified that those measures seemed appropriate. *Tr. Day 70/Afternoon Session*, pp. 76, 124. In sum, PRLAC has failed to show any adverse effect from the Project on water quality.<sup>309</sup>

---

<sup>308</sup> Notwithstanding the focus on erosion concerns in their pre-filed and oral testimony, there is no mention at all in PRLAC's Pemigewasset River Corridor Management Plan of erosion concerns at the existing Pemigewasset River and Blake Brook crossings along the existing corridor or any concern about Northern Pass. *Tr. Day 70/Afternoon Session*, pp. 111-117.

<sup>309</sup> In addressing a question from Mr. Wright, Mr. Stamp suggested that the Project is exempt from the Shoreland Protection Act. *Tr. Day 70/Afternoon Session*, p. 88. As the record shows, however, the Applicants submitted 33 separate applications under the Comprehensive Water Quality and Shoreland Protection Act. DES's Final Decision approved them all with conditions, including several at Pemigewasset River crossings. *DES Final Decision with Conditions*, App. Ex. 75, pp. 13-22.

**c. Conclusion**

The Project will not have an unreasonable adverse effect on air quality. As a renewable energy project providing substantial CO<sub>2</sub> emissions reductions, Northern Pass helps address state and regional climate change action plans -- perhaps the most significant air quality challenge in the State and region. The Project offers additional and widespread air and water quality benefits by reducing substantially the emissions of other air pollutants, most importantly SO<sub>2</sub> and NO<sub>x</sub>.

The Project will not have an unreasonable adverse effect on water quality. The Applicants have performed extensive work to analyze wetland resources, assess potential impacts to wetlands, surface waters, drinking water supplies and groundwater, and design the Project to minimize and avoid impacts where practicable. They have satisfied or will satisfy all state and federal water quality-related permit requirements for the Project. They have implemented best practical measures to avoid wetlands impacts, so that there will be some minimal permanent impacts (2.53 acres) and some temporary impacts (approximately 140 acres). Moreover, the Applicants have provided a substantial compensatory mitigation plan exceeds federal and state requirements.

#### **D. Natural Environment**

The Applicants have proved sufficient facts for the Subcommittee to find that the Project will not have an unreasonable adverse effect on the natural environment. After conducting an exhaustive study and coordinating with the applicable regulatory agencies to agree on appropriate protective measures, the Applicants have satisfied the rigorous requirements of Site 301.14(e) and demonstrated by a preponderance of the evidence that the Project will not have an unreasonable adverse effect on the natural environment. Site 301.14(e) sets forth a series of criteria the SEC must consider in its review of a proposed project's impact on the natural environment.<sup>310</sup> Site 301.14(e) and Site 301.07(c) (setting forth the application requirements) identify three main categories of natural resources to be considered –wildlife, rare plants and natural communities, and significant wildlife habitat. As set forth below, the Applicants have satisfied all of the requirements prescribed by those rules. No party to these proceedings provided credible evidence that challenges the Applicants' considerable efforts to ensure the Project will have, at most, minimal permanent and temporary impacts on the natural environment.

---

<sup>310</sup> Site 301.14(e) requires the Subcommittee consider: (1) The significance of the affected resident and migratory fish and wildlife species, rare plants, rare natural communities, and other exemplary natural communities, including the size, prevalence, dispersal, migration, and viability of the populations in or using the area; (2) The nature, extent, and duration of the potential effects on the affected resident and migratory fish and wildlife species, rare plants, rare natural communities, and other exemplary natural communities; (3) The nature, extent, and duration of the potential fragmentation or other alteration of terrestrial or aquatic significant habitat resources or migration corridors; (4) The analyses and recommendations, if any, of the department of fish and game, the natural heritage bureau, the United States Fish and Wildlife Service, and other agencies authorized to identify and manage significant wildlife species, rare plants, rare natural communities, and other exemplary natural communities; (5) The effectiveness of measures undertaken or planned to avoid, minimize, or mitigate potential adverse effects on the affected wildlife species, rare plants, rare natural communities, and other exemplary natural communities, and the extent to which such measures represent best practical measures; (6) The effectiveness of measures undertaken or planned to avoid, minimize, or mitigate potential adverse effects on terrestrial or aquatic significant habitat resources, and the extent to which such measures represent best practical measures; and (7) Whether conditions should be included in the certificate for post-construction monitoring and reporting and for adaptive management to address potential adverse effects that cannot reliably be predicted at the time of application.

For the most part, the expert testimony on the topic of plants and wildlife is from CFP's consultant team, led by the Vermont firm Arrowwood Environmental, LLC ("Arrowwood"). Dr. David Publicover of the AMC was the only other expert to testify on this issue, principally with respect to exemplary natural communities and habitat fragmentation in the new ROW segment of the route. Arrowwood's review covered every aspect of the Applicants' experts' (Normandeu) studies and testimony, noting its observations for each. Arrowwood said a number of species would be adversely affected, and a small number would have unreasonable and adverse,<sup>311</sup> or unreasonably adverse,<sup>312</sup> or unreasonable adverse<sup>313</sup> effects. Arrowwood does not conclude that there will be an unreasonable adverse effect on the natural environment. Further, even focusing on individual species, almost all are addressed in the avoidance and minimization measures developed with the resource agencies.

While the coverage of Arrowwood's testimony is broad, the principal focus of concern for plants and wildlife are the federally protected species and the species addressed in the avoidance and minimization measures ("AMMs") negotiated with F&G and NHB. Further, the Arrowwood witnesses identified certain areas of the study that they would have done differently, mentioned ideas that they believed might have been better than Normandeu's, or indicated there was not sufficient information upon which to base a conclusion of effect on the species. In contrast, the Applicants conducted a comprehensive review and assessment of the environmental resources along the Project route, working closely with state and federal regulatory agencies, including F&G, NHB, USF&W, and the USFS. The Applicants analyzed the potential impacts

---

<sup>311</sup> *Supplemental Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds, CFP Ex. 137*, p. 2. (licorice goldenrod).

<sup>312</sup> *Id.* at 3 (wild lupine).

<sup>313</sup> *Id.* at 2 (red threeawn); *Id.* at 7 (vernal pools); *id.* at 8 (deer and moose yards); *id.* at 9 (marten); *id.* at 17 (lupine and Kbb).

of the Project on these resources and worked diligently with the relevant regulatory agencies to develop detailed plans for avoiding, minimizing and mitigating these impacts, to those agencies' satisfaction. The Applicants obtained approval from every agency charged with stewarding New Hampshire's natural environment. The preponderance of the evidence confirms that the potential impact on the natural environment will be minimal and will be appropriately offset – in some instances enhanced in the long term -- by the significant mitigation the Applicants have proposed. The input from these agencies and their approval supports the conclusion the Project will not have an unreasonable adverse effect on the natural environment.

Much of the planning for the Project has focused on minimizing the Project's impact on the natural environment. The Applicants made decisions regarding route selection, siting and design of the Project that avoids and minimizes these impacts. Significantly, sixty miles of the proposed route will be placed underground, "and greater than 80 percent of the overall project is located within existing transmission corridors or underground in public roadways." *DES Final Decision with Conditions*, App. Ex. 75, pp. 8-10 (Finding 5(i), Finding 5 (c)-(h)) (discussing the Project's evaluation of route selection to avoid and minimize impacts to natural resources). Only 32 miles of the 192-mile transmission line is in new ROW, and 24 of those 32 miles are in a working forest that is managed for timber harvesting. *Application*, App. Ex. 1, p. ES-11. This design substantially reduces potential impacts to wildlife and plant species, habitats, and communities. The Applicants intend to continue avoidance and minimization measures during the construction phase of the Project by instituting best practical measures to limit temporary impacts to all habitat types and employing environmental monitors who will review

implementation of all BMPs on-site to ensure compliance.<sup>314</sup> Further, for certain impacts, such as to the Kbb and deer wintering areas, the Project's planned preservation efforts actually provide a greater benefit than the expected impact.

The Applicants retained Normandeau to evaluate the potential impact of the Project on wildlife, rare plants, and rare or exemplary natural communities.<sup>315</sup> Following a thorough review of potentially impacted wildlife resources, Dr. Sarah Barnum concluded the Project will not have a substantial negative effect on wildlife and their habitats. *Pre-Filed Testimony of Sarah Barnum*, App. Ex. 23, pp. 11-12; *see also Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 7. The most significant species along the Project route are the Kbb and the wild lupine plant patches the Kbb rely on, which are located in the Concord Pine Barrens. The Applicants have successfully minimized impact to these species and the state and federal natural resource agencies have approved the proposed mitigation plan, which includes the preservation of a 6.9 acre parcel adjacent to the USF&W Kbb refuge. *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 6. According to USF&W, this mitigation will outweigh the temporary impacts to Kbb from construction. App. Ex. 124a, Bates APP85604. CFP's consultant generally agrees that "adverse effects [to Kbb] from the construction of the [P]roject can be offset through compensatory mitigation. . . ." *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, Appendix A, p. A-1.

---

<sup>314</sup>Condition 70 of DES's Final Decision on the wetlands permit application requires ongoing, continual efforts to further minimize impacts. *DES Final Decision with Conditions*, App. Ex. 75, p. 7.

<sup>315</sup>Specifically, Dr. Sarah Barnum assessed wildlife species and Mr. Dennis Magee considered rare plants and rare or exemplary natural communities. Ms. Lee Carbonneau assessed potential impacts to wetlands resources, shoreland permitting, and aquatic resources. *Tr. Day 16/Morning Session*, pp. 73-80.

Normandeau concluded the Project will not have a substantial negative effect on rare, threatened or endangered (RTE) plants and rare or exemplary natural communities. *Pre-Filed Testimony of Dennis Magee*, App. Ex. 24, pp. 7-9. To reiterate, 60 miles of the route avoids any impact on RTE plants by using public roadways and the northern 32 miles of the Project will be overhead line that traverses forested land, where forest management and timber cutting regularly occur. *Id.* at 7. While the Applicants acknowledge there will be minor temporary and permanent impacts to RTE species, S3 communities and exemplary natural communities, the proposed mitigation measures address any such impacts. *Id.* at 7-8.

In addition, Ms. Carbonneau concluded that the Project will have nominal impacts on aquatic resources and any minor, permanent impacts to wetlands, streams and vernal pools are addressed by the Applicants' proposed mitigation package. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, pp. 10-13. As a consequence, Ms. Carbonneau concluded the Project will not have an unreasonable adverse effect on the natural environment. *Id.* at 13-14; *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98, p. 11. Ms. Carbonneau's opinion finds strong support in Normandeau's analysis and importantly, the analyses and recommendations of the state and regulatory agencies involved in evaluating and approving the Project.

1. The Applicants Worked Extensively with the Regulatory Agencies to Formulate Survey Methods and Avoidance and Minimization Measures

The Applicants worked closely and communicated extensively with State and federal regulatory agencies regarding plant and wildlife RTE species as part of the application process and related permitting. *See* App. Ex. 124; *see also* App. Ex. 124a; *see also* App. Ex. 124b; *see also* App. Ex. 62 (Applicants' 7/12/16 submission to DES); *see also* App. Ex. 67 (Applicants' 7/28/16 submission to DES); *see also* App. Ex. 69 (Applicants' 8/11/16 submission to DES); *see*

also App. Ex. 72 (Applicants' 12/14/16 submission to DES). The Applicants regularly solicited and received input from the various agencies, including agency review and comment on the methodology to be used to evaluate natural environment resources. The Applicants also made requests to agencies for additional information about a particular resource and engaged in discussions with the relevant agencies regarding the appropriate avoidance, minimization and mitigation measures and the agencies' analyses and recommendations. Significant agency decisions and recommendations to date include the following:

The October 19, 2017 Biological Opinion issued by USF&W (Biological Opinion).

In this review under Section 7 of the federal Endangered Species Act, USF&W concurred with DOE that the Project is not likely to adversely affect five of the six federally threatened or endangered species covered in the opinion (small whorled pogonia, Canada lynx, Northern long-eared bat, Indiana bat, and dwarf wedge mussel). App. Ex. 124a, Bates APP85585. For the sixth species it reviewed -- the Kbb -- USF&W concluded that while the Project is likely to adversely affect Kbb, that adverse effect consists of "minor, temporary, adverse effects on the species and its habitat." *Id.* at Bates APP85605. Importantly, USF&W determined the Project's "conservation of approximately 7 acres of undeveloped habitat in the Concord metapopulation" is expected "to have long-term benefits to the Karner blue butterfly." *Id.*<sup>316</sup> CFP's consultant agrees with the USF&W's conclusions. *Tr. Day 57/Morning Session*, pp. 12-13. In addition, the

---

<sup>316</sup> The Kbb impact estimate noted in the Biological Opinion is based on a 1,043 square feet lupine impact total, an estimate that was reported incorrectly to the USF&W by the Applicants. On December 18, 2017, the Applicants submitted corrected information to USF&W, F&G, NHB, and DES explaining the total estimated temporary impact to wild lupine patches in Concord is 3,219 square feet. App. Ex. 124b (CONFIDENTIAL), Bates APP88756-57; *see also* App. Ex. 124b (CONFIDENTIAL), Bates APP88758-59. Though obviously a higher impact number, this amount still reflects a substantial impact reduction compared to the 17,039 square feet of lupine impacts identified in the October 2015 permit application. *See* App. Ex. 124b (CONFIDENTIAL), Bates APP88756. USF&W will now determine, under the terms of the Biological Opinion, whether this change will necessitate further consultation. App. Ex. 124a, Bates APP85607. In addition, the USF&W reference to 20 square feet of permanent impact is incorrect, an oversight on its part. *See id.* at Bates APP85604.

Biological Opinion relies in part on the “Applicant Proposed Measures” (APMs) that the Project proposed in the federal permitting process to avoid and minimize environmental impacts to Kbb and other species during construction and operation of the Project. App. Ex. 124a, Bates APP85592 (noting the APMs are included as Appendix H of the FEIS).

DES’s March 1, 2017 Final Decision with Conditions (“DES Final Decision”).

As part of its decision recommending the Project be approved, with conditions, DES unequivocally concluded the Project “is the alternative with the least adverse impact to areas and environments under the department’s jurisdiction.” *DES Final Decision with Conditions*, App. Ex. 75, p. 8 (Finding 5). Further, DES recognized the Applicants have coordinated directly with NHB and F&G regarding potential impacts to sensitive species and will continue to do so to minimize other potential impacts. *Id.* at 10-11 (Findings 13, 17).

Condition 2 of the DES Final Decision requires the work on the Project to follow the construction and operational standards and time of year restrictions (“TOYS”). *Id.* at 2. The Applicants also must “notify and coordinate with [NHB] regarding the need for any additional monitoring requirements or avoidance measures that may be necessary to minimize potential impacts to sensitive species.” *Id.* at 3 (Condition 9).

The DES Final Decision further requires the Project to finalize the wildlife AMMs in consultation with F&G prior to construction and to implement them during construction. *Id.* at 2, 3 (Conditions 2, 7).

(“AMMs”) – Plants.

The Project developed extensive RTE species and exemplary natural communities impact avoidance, minimization, and mitigation measures in consultation with NHB and DES, who first approved them on March 1, 2017. App. Ex. 124, pp. 971-75. Following further discussion

regarding the wildlife AMMs, the Applicants revised the plant AMMs to make them consistent with the final wildlife AMMs on topics that overlap. App. Ex. 124b, Bates APP88760, APP88777-81 (December 6, 2017 email from L. Carbonneau to DES, F&G, and NHB submitting final wildlife and plant AMMs). The plant AMMs require locations of known rare plants to be resurveyed and flagged by a qualified botanist prior to construction, protective fencing, seasonal work restrictions to the extent practicable, soil protection measures, invasive species controls, and additional species-specific methods and restoration monitoring requirements. *Id.*; *see also Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 3. The plant AMMs also require the Applicants to continue to coordinate with NHB regarding the treatment of RTE species and restoration work. *See, e.g., id.* at Bates APP88778-79 (the “construction team will consult with NHB prior to work in rare plant locations to identify practicable measures to limit the duration, extent, and magnitude of impacts from construction matting and earth disturbance”); *see also id.* at Bates APP88778 (Applicants to “[c]ontact NHB prior to controlling invasive species within or adjacent to rare plant populations.”); *see also id.* at Bates APP88781 (need to consult with NHB “regarding restoration activities in RTE plant locations”).

#### AMMs – Wildlife.

The Applicants submitted detailed wildlife AMMs on March 1, 2017 (App. Ex. 124, pp. 971-75) and revised and re-submitted them following further discussions with F&G, most recently on December 6, 2017.<sup>317</sup> App. Ex. 124b, Bates APP88760, APP88766-76. This last set of AMMs addresses all of F&G’s comments on the AMMs.

---

<sup>317</sup>In its Brief, CFP incorrectly references a previous version of the AMMs as the most recent version in the record. CFP Brief at p. 120.

2. The Applicants Thoroughly Surveyed RTE Species and Natural Communities

Site 301.07 specifies the information to be included in the Application “regarding the effects of, and plans for avoiding, minimizing, or mitigating potential adverse effects” of the Project on the natural environment. It requires that the Applicants identify “significant wildlife species, rare plants, rare natural communities, and other exemplary natural communities” potentially affected by the Project, as well as “critical wildlife habitat and significant habitat resources,” and describe their methodology. Site 301.07(c)(1)-(3). To comply with these requirements, the Applicants conducted a thorough evaluation of the RTE species along the Project route, and, as mentioned, consulted with the regulatory agencies regarding their approach and the appropriate methodologies.<sup>318</sup> To the extent CFP or other intervenors raised issues with respect to a methodology for a particular species, habitat or community, these issues are discussed below in Section C in the context of the particular species, habitat, or community.

**a. Wildlife**

Threatened and endangered wildlife species, as well as species of special concern (“SSC”), are regulated by F&G and tracked at the state level by NHB. *Application*, App. Ex. 1,

---

<sup>318</sup>This work is detailed in the appendices to the Application and the Applicants’ extensive communications with the agencies, including but not limited to: *Application*, App. Ex. 1, Appendix 31 (Wetlands and Vernal Pools Report); *Application*, App. Ex. 1, Appendix 33 (Fisheries and Aquatic Invertebrates Report); *Application*, App. Ex. 1, Appendix 34 (Vegetation and Ecological Communities); *Application*, App. Ex. 1, Appendix 35 (RTE Plants Report – Confidential); *Application*, App. Ex. 1, Appendix 36 (Wildlife Report - Confidential); *Application*, App. Ex. 1, Appendix 48 (Regulatory Agency Consultation Summary) App. Ex. 124, App. Ex. 124a, and App. Ex. 124b (Updates to Appendix 48). In addition, the Applicants have provided numerous responses to DES requests for information: App. Ex. 62 (7/12/16 submission); App. Ex. 67 (7/28/16 submission); App. Ex. 69 (8/11/16 submission); App. Ex. 72 (12/14/16 submission). The pre-filed testimony of the Applicants’ consultants further explains this work: *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22; *Pre-Filed Testimony of Sarah Barnum*, App. Ex. 23; and *Pre-Filed Testimony of Dennis Magee*, App. Ex. 24. In addition, supplemental testimony was submitted supporting this work, *Supplemental Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 98; *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99; and *Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100.

Appendix 36, p. 2-1. Species considered threatened or endangered at the federal level are regulated by USF&W. *Id.* In addition, USF&W recognizes a number of Forest Service Sensitive species within the White Mountain National Forest. *Id.* Accordingly, the wildlife resources assessed for the Project were developed based on input from F&G, USF&W, the USFS, and the resources required for review by Site 301.07. *Id.* at 1-3.

Methodologically, the Applicants proceeded by initially screening all state-listed wildlife species (State Threatened and State Endangered), federally-listed wildlife species (Federally Threatened and Federally Endangered), and WMNF Forest Service Sensitive species for their potential to be present in the Project area. *Pre-Filed Testimony of Sarah Barnum*, App. Ex. 23, p. 3. F&G also requested the Project evaluate the distribution of Deer Wintering Areas (“DWAs”), Moose Concentration Areas (“MCAs”), and high value mast areas (forest stands with nut or fruit trees). *Id.* In addition, USF&W requested the Applicants consider forest nesting birds as a group and all SSC listed by the State of New Hampshire. *Id.* The agencies generally agreed with the Applicants’ methodology and approach to evaluate each resource. *Id.*<sup>319</sup> The Applicants completed all of the studies and analyses these agencies requested. *See Application*, App. Ex. 1, Appendix 36, p. 2-1 (summarizing species and habitats considered for assessment based on agency input); *see also Pre-Filed Testimony of Sarah Barnum*, App. Ex. 23, pp. 2-3 (agency input regarding Normandeau’s work); *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, pp. 1-2 (discussing additional work performed).

#### **b. Aquatic Resources**

The Applicants also considered the potential impact of the Project on state or federally listed fish and aquatic invertebrates, cold water fisheries, and Essential Fish Habitat (“EFH”).

---

<sup>319</sup> In some cases, the agencies did not respond to the methods Normandeau proposed.

*Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 10; *Application*, App. Ex. 1, Appendix 33. As of the date of the Fisheries and Aquatic Invertebrates Report, New Hampshire listed three fish species as threatened or endangered, including one that is federally threatened. These included the shortnose sturgeon (state endangered, federally threatened), American brook lamprey (state endangered), and the bridle shiner (state threatened). *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 10. Since there were no known occurrences of these species in the Project area, the Applicants did not conduct surveys for these rare fish species. *Id.*

New Hampshire also listed three species of aquatic invertebrates as endangered – the cobblestone tiger beetle, the dwarf wedge mussel, and the brook floater. *Application*, App. Ex. 1, Appendix 33, p. 13. The dwarf wedge mussel also was listed as federally endangered and the brook floater was “under review” at the federal level. *Id.* The cobblestone tiger beetle has not been documented in the Project area and accordingly, was not surveyed. *Id.* In conjunction with F&G and USF&W, the Applicants developed a work plan to assess mussels and mussel habitat characteristics. *Application*, App. Ex 1, Appendix 33, Appendix E, p. E-1, *et seq.* (11/22/13 Memo to USF&W and F&G). At the request of F&G, the Applicants also surveyed rivers and streams with habitat that may support eastern pearlshell. *Id.*

EFH is designated for all river segments that were historically or are currently accessible to migrating fish. *Application*, App. Ex 1, Appendix 33, Appendix A, p. 6 (Essential Fish Habitat Assessment). Atlantic salmon is the only species with a freshwater EFH designation within any portion of the proposed ROW. *Id.* The Applicants evaluated each river or stream that crosses the ROW and is listed as EFH for Atlantic Salmon. *Id.* at 7. The EFH assessment was

conducted following standard protocols developed by the National Marine Fisheries Service.

*Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 10.<sup>320</sup>

**c. Plants and Natural Communities**

RTE plant species and state watch or indeterminate plants species (collectively, “RTE plant species”) are tracked at the state level by NHB and at the federal level by USFS and USF&W. *See Pre-Filed Testimony of Dennis Magee*, App. Ex. 24, pp. 2-3. NHB also tracks Exemplary Natural Communities. *Id.* at 3. The Applicants worked with NHB, USFS and USF&W to develop approved work plans for their review and analysis of resources in the Project area. *Id.*; *see also Application*, App. Ex 1, Appendix 35, Appendix A, Bates APP21847-50 (memo of June 23, 2010 meeting with USFS); *see also* App. Ex. 124, pp. 152-154 (May 12, 2014 email from NHB (formerly DRED) stating “no concerns with [the consultant] proceeding with the surveys as described”).<sup>321</sup>

The Applicants began with a desktop analysis to identify relevant Project locations for field work, establishing survey locations, habitat requirements, and best timing for identification. *Pre-Filed Testimony of Dennis Magee*, App. Ex. 24, p. 3. This work included compiling database information from NHB for documented occurrences of RTE species and exemplary natural communities within a mile of the Project area for state-listed plants and within five miles for federally listed plants. *Id.* The Applicants requested updated NHB data annually to ensure they considered any new Element Occurrences (areas of land and/or water in which a listed

---

<sup>320</sup>The Lamprey River is the only EFH river within the ROW that is currently accessible to Atlantic salmon. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 10. The Applicants considered the potential for temporary construction related effects on the Atlantic salmon EFH and concluded they will be negligible. *Id.* at 11. “[C]onstruction access paths were modified to avoid crossing this waterbody, tree clearing near the stream will be along the ROW margins only and done with BMPS in place, and the closest earthwork will now be over 200 feet from the stream.” *Id.*

<sup>321</sup>The work plans are attached as Appendix B to the RTE Plants Report. *Application*, App. Ex. 1, Appendix 35, Appendix B, p. B-1, *et seq.*

species or natural community is, or was, present) and performed additional field work. *Id.* The Applicants also reviewed a significant volume of additional data in selecting survey locations, including: a list of species for evaluation in the White Mountain National Forest from the USFS; aerial photographs; U.S. Geological Survey topographic maps; surface water and National Wetlands Inventory maps; soils data; information regarding roads, political boundaries and conservation lands; wildlife habitat maps; and NHB natural community and natural community system classifications. *See id.*; *see also Application*, App. Ex. 1, Appendix 35, pp. 5-6. In addition, the Applicants evaluated field data from wetland delineation work by its consultant's wetland scientists to help focus the searches. *Pre-Filed Testimony of Dennis Magee*, App. Ex. 24, p. 3.

Normandeau finalized its work plans with NHB, USF&W and USFS, including protocols for field and survey methodology. *See id.*; *see also Application*, App. Ex. 1, Appendix 35, Appendix B, p. B-1, *et seq.* Normandeau searched the existing and proposed ROW, facility sites, and off –ROW access road locations for RTE plant species and exemplary natural communities as detailed in their work plans. *Pre-Filed Testimony of Dennis Magee*, App. Ex. 24, p. 3. In addition to known locations for RTE species and exemplary communities, Normandeau gave high search priority to calcium-rich bedrock locations, cedar swamps, pine barrens, and other specific habitat or soil types with the potential for rare plant occurrences. *Id.* at 3-4. Normandeau also reviewed the Project corridor for the occurrence of S3 ranked plant communities, defined by NHB as “either very rare and local throughout its range. . . or found locally. . . in a restricted range, or vulnerable to extinction because of other factors.” *Id.* at 4. The Applicants performed additional survey work regarding RTE plants and natural communities, including botanical surveys of the potential mitigation parcels to address questions

raised by NHB and DES, as well as additional surveys of two potential Exemplary Natural Communities along the new overhead route as requested by NHB. *Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 1; *see* App. Ex. 124 (CONFIDENTIAL), pp. 750, 754-67 (email to NHB regarding exemplary natural community survey, assessment and mitigation); *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP36687-APP37138 (Attachment A, Mitigation Baseline Documentation Reports).

In sum, the Applicants' survey work was thorough and painstaking, they performed the work in accordance with agency guidance, and it meets the requirements of the SEC's rules.

Despite these efforts, CFP questioned the adequacy of the Applicants' survey and took issue with the Applicants' methodology and the scope of the review. *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, pp. 84-86. Specifically, Arrowwood claimed the Applicants conducted field inventories for only "medium" or "high" ranked species. *Id.* at 84. CFP, however, based its contention on a misunderstanding of the Applicants' methodology. In fact, the searches at each ROW segment with an element (listed species) occurrence within one mile of the ROW included those species ranked low, as well as all other listed species that are not known element occurrences for this Project area. *Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 3. In addition, the searches included element occurrences beyond one mile for State listed species and five miles for federally listed species, as well as searches for species along the off-ROW access roads. *Id.* at 3-4. Contrary to Arrowwood's assertion, the Applicants conducted a full rare plant survey at each area that received a field visit. *Id.* at 4.

Arrowwood also challenged certain of the Applicants' assumptions regarding the proximity of rare plants to known populations of those species in performing the RTE survey

work. *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, p. 84. The Applicants' expert, however, explained these assumptions in his supplemental pre-filed testimony, stating "[r]are plants have a higher probability of occurring near other known populations of that species" and "[s]earching near known locations is a reasonable and typical approach for sampling adjacent ROW segments." *Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 4. Normandeau also searched in other habitats that may support rare plants and conducted additional surveys at locations of new element occurrences based on information provided by NHB. *Id.*

The fact that Arrowwood identified five State indeterminate and one watch species after inventorying five miles of the route not surveyed by the Applicants does not demonstrate the Applicants' methodology was flawed. *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, pp. 84-5. "The list of State Watch and Indeterminate species is voluminous, and occurrences of species in these categories throughout the [S]tate are widespread and common." *Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 4.

The Applicants' comprehensive, detailed review of natural environment resources potentially impacted by the Project addressed all of the data requirements in Site 301.07(c)(1-3), and forms a strong basis for the Subcommittee's assessment of the potential adverse effects to those resources it must consider under Site 301.14(e)(1-7). The Applicants worked closely with all relevant agencies to develop their methodologies for evaluating these resources and criticisms by the intervenors fall short of raising any credible question as to the reliability or thoroughness of the Applicants' methodologies.

3. Potential Impacts to RTE Species, Significant Wildlife Habitat, and Natural Communities, Will Be Minimal

The plant and wildlife surveys done by the Applicants and reviewed by the resource agencies demonstrate that impacts to RTE wildlife species, significant wildlife habitat, and RTE plants and communities will be minimal, and that the Project will not have an unreasonable adverse effect on the natural environment.

Site 301.07 requires that the Application include an assessment of the Project's potential impact on the identified "significant wildlife species, rare plants, rare natural communities, and other exemplary natural communities," as well as "on critical wildlife habitat and significant habit resources, including fragmentation or other alteration of terrestrial or aquatic significant habitat resources." Site 301.07(c) (4). The Applicants conducted a detailed analysis of the potential impacts on each identified species, natural community, and habitat. This work, summarized below, is included in the reports of the Applicants' consultants, the consultants' pre-filed testimony, and communications with the relevant agencies. *See e.g. Application*, App. Ex. 1, Appendix 31 (Wetlands and Vernal Pools Report); *see also Application*, App. Ex. 1, Appendix 33 (Fisheries and Aquatic Invertebrates Report); *see also Application*, App. Ex. 1, Appendix 35 (RTE Plants Report); *see also Application*, App. Ex. 1, Appendix 36 (Wildlife Report).<sup>322</sup>

The agencies also evaluated the potential impacts of the Project on these natural environment resources, providing comments and input to the Applicants regarding possible

---

<sup>322</sup> Arrowwood suggested the Applicants improperly failed to consider the upland sandpiper and the three-toed woodpecker in its analysis of potential impacts from the Project. *Pre-Filed Testimony of Michael Lew-Smith, Jeff Parsons, Michal Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, pp. 41-42. Dr. Barnum addressed this in her supplemental pre-filed testimony. *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 4. The only known breeding population of the upland sandpiper in New Hampshire is in Portsmouth and the only potential habitat for this grassland species in the Project area is a large, heavily grazed pasture in Lancaster where there are no records of this species at this site. *Id.* Similarly, no potential habitat for the American three-toed woodpecker was observed within the Project ROW. *Id.*

impacts and potential avoidance and minimization measures. App. Ex. 124, 124a, 124b (agency communications). The DES Final Decision includes findings regarding potential impacts and the Biological Opinion contains the USF&W impact analysis for the federally-regulated species. *See DES Final Decision with Conditions*, App. Ex. 75; App. Ex. 124a, Bates APP85584-612. The final AMMs demonstrate F&G and NHB also have thoroughly considered RTE species impacts. App. Ex. 124b, Bates APP88760-81.

**a. Federally-Regulated Species**

The Applicants considered the following federally-regulated species: the federally endangered Kbb, dwarf wedgemussel and Indiana bat, and the federally threatened Canada lynx, and northern long-eared bat. *See Application*, App. Ex. 1, Appendix 36 (Kbb, Canada lynx, northern long-eared bat); App. Ex. 126 (Addendum – Zero Crossing Re-Analysis of 2015 Acoustic Survey Data, including Indiana Bat); *Application*, App. Ex. 1, Appendix 33 (Fisheries and Aquatic Invertebrates Report) (dwarf wedgemussel). The Applicants also surveyed for the federally threatened small whorled pogonia. *Application*, App. Ex. 1, Appendix 35.

The Applicants have acknowledged the Project will adversely impact the Kbb, but their significant proposed mitigation efforts – the preservation of 6.9 acres of nearby habitat for Kbb and lupine – is a substantial net benefit for this species. In fact, the USF&W Biological Opinion concludes the benefit of conserving the proposed mitigation parcel outweighs the cost of the temporary habitat loss. App. Ex. 124a, Bates APP85604. CFP’s consultant agrees with this conclusion. *Tr. Day 57/Morning Session*, pp. 13-14.

The Project is not expected to have a substantial negative effect on the five other federally-regulated species (the Canada lynx, the northern long-eared bat, the dwarf wedgemussel, the Indiana bat, and the small whorled pogonia). The Biological Opinion supports Normandeau’s conclusions. App. Ex. 124a, Bates APP85585-85589 (discussing the five

species). CFP's consultants testified they do not disagree with the USF&W findings, leaving no dispute the impact to these species will be minimal, if any. *Tr. Day 57/Morning Session*, pp. 5-7.

i. Kbb

The Applicants, the resource agencies and parties in this proceeding recognize the significance of the Kbb and the wild lupine plants they rely on. As described below, the Applicants have designed the Project and have developed AMMs to avoid and minimize impacts to these species as much as practicable, and the preservation parcel provided in the final mitigation package more than compensates for the unavoidable impact. USF&W and CFP's Kbb expert, Mr. Amaral, generally concur with this conclusion. In fact, Mr. Amaral testified the Project "is not likely to have an unreasonable adverse effect on the [Kbb], provided that the terms and conditions stipulated in the [Biological Opinion] on [p]age 25 are affirmatively implemented." *Tr. Day 57/Morning Session*, p. 17.

The Kbb was federally and State-listed as endangered in 1992. In 2000, the known Kbb population in Concord, NH was extirpated, meaning the subpopulation was completely gone. *Tr. Day 16/Morning Session*, p. 110. The following year, the species was reintroduced, with F&G, USF&W, the Army National Guard and the City of Concord participating in the restoration efforts. *Id at pp. 110-11; Application*, App. Ex. 1, Appendix 36, p. 12-1. Kbb and their larva depend upon wild lupine, a state-threatened plant. *Tr. Day 16/Morning Session*, pp. 113-14; *see also Application*, App. Ex. 1, Appendix 36, p. 12-1. Lupine is the only species of plant the larvae eat. *Tr. Day 16/Morning Session*, pp. 114-115 (discussing life cycle of Kbb and reliance on wild lupine).

Kbbs are known to be present in Concord, in and around the Concord Airport, on what is primarily an industrial and residential area located on remnants of pine barrens habitat. *See Application*, App. Ex. 1, Appendix 36, p. 12-1. Within the Project area, Kbbs are known to be

present in a section of the existing ROW. Standard ROW maintenance practices have created suitable growing conditions for wild lupine in this portion of the Pine Barrens and Eversource adjusts its management practices in the occupied portion of the ROW to benefit the Kbb.<sup>323</sup> *Id.*

The Applicants acknowledge there will be some impacts to Kbb as a result of the Project, including direct mortality due to construction activity and habitat loss. *Tr. Day 16/Morning Session*, pp. 111-12.<sup>324</sup> The Applicants, therefore, propose significant steps to minimize the impacts to the Kbb habitat -- wild lupine. As Ms. Carbonneau explained in her testimony, in the Winter of 2017, “shifts in the work pads and the access roads in the larger lupine population in Concord were made,” reducing impacts by approximately 1600 square feet. *Tr. Day 16/Morning Session*, p. 87; *see Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 5; App. Ex. 124 (CONFIDENTIAL), pp. 770-73 (January 30, 2017 email to NHB including RTE Plant impact changes).<sup>325</sup> In a September 1, 2017 submittal to F&G, NHB and USF&W, the Applicants identified another design change in the vicinity of the Concord wild lupine/Kbb population, further reducing the temporary impacts to wild lupine and eliminating the permanent impacts. App. Ex. 124a, Bates 86179 (relocation of an entire structure and its work pad); App. Ex. 124a (CONFIDENTIAL), Bates APP86353-54 (attaching revised plan sheet).

---

<sup>323</sup>Two areas of wild lupine in the Project area were documented by the Applicants’ consultant – one in Concord and one in Pembroke. *Application*, App Ex. 1, Appendix 35, p. 40. There are no records of Kbb at the Pembroke site. *Tr. Day 16/Morning Session*, p. 136.

<sup>324</sup>The Joint Municipal Group mischaracterize Dr. Barnum’s testimony on this important topic. *Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, p. 125-26. Their brief states that Dr. Barnum was not able to say whether the Kbb would be self-sustaining if the Project were approved. That is not what Dr. Barnum said on cross-examination at the pages of the transcript cited in the Jt. Muni Memorandum. Dr. Barnum was addressing a sub-population – one of many – in the Concord Airport area, not the entire population as the Jt. Muni Memorandum suggests.

<sup>325</sup>The Applicants also considered avoidance and minimization measures for the wild lupine at the Pembroke site and were able to reduce impacts. App. Ex. 124 (CONFIDENTIAL), pp. 750-52.

The September 1, 2017 submittal reported the temporary impact reduction to wild lupine incorrectly. On December 18, 2017 the Applicants submitted further information to USF&W, F&G, NHB, and DES explaining that the total estimated temporary impact to wild lupine patches in Concord is currently 3,219 square feet. App. Ex. 124b (CONFIDENTIAL), Bates APP88756-59.<sup>326</sup> This reduction is substantial, compared to the 17,039 square feet of impacts identified in the October 2015 permit application. *Id.* The significant reductions in impacts to wild lupine also will reduce impacts to Kbb. *Tr. Day 57/Morning Session*, pp. 15-16 (testimony of CFP expert, Michael Amaral).

In addition, the Applicants have proposed AMMs for Kbb and wild lupine that include: installing temporary fencing to contain any disturbance to within the construction footprint; using construction matting and pads to minimize soil disturbance and harm to root systems; if leveling is needed, using fill on geotextile, rather than a cut that would damage root systems, to the extent practicable; and in wild lupine areas, working outside of the April 1 – August 31 growing season. App. Ex. 124b, Bates APP88760, Bates APP88770 (December 6, 2017 wildlife AMMs).<sup>327</sup> CFP takes the position construction activities should be limited to “true winter conditions with snow” and there should be a limit on the length of time timber mats are allowed to cover Kbb habitat. CFP Brief at pp. 124-25, p. 164 (requesting proposed conditions for Kbb and wild lupine). The AMMs as written are sufficiently protective and they are the product of extensive discussions with NHB, F&G, and USF&W about what is appropriate and required. Further, CFP does not provide any basis for the timber mat restriction. Their own expert, Mr.

---

<sup>326</sup> CFP’s claim that there is “uncertainty” over the estimated habitat loss should be rejected. CFP Brief at p. 124. The December 18<sup>th</sup> communication reflects the Project’s estimate of total temporary impacts to wild lupine patches.

<sup>327</sup> Further, wild lupine actually thrives in open disturbed conditions like maintained transmission corridors. *Tr. Day 16/Morning Session*, p. 101 (Magee testimony); *Tr. Day 16/Afternoon Session*, p. 6 (Carbonneau testimony).

Lew-Smith, testified if timber mats are used during the winter, “it’s not going to matter how long they’re there.” *Tr. Day 57/Morning Session*, p. 94. With respect to the growing season, he was unable to offer a proposed restriction, testifying he would “have to look into it.” *Id.* Further, given that Kbb use wild lupine as a habitat year round, presumably moving and replacing mats creates the potential for Kbb to lay eggs in a location where a mat has been removed and will be replaced, risking creating additional impact to the species. There is no basis for this requested condition.

Perhaps most significant, the Applicants propose a preservation effort that is designed not just to mitigate temporary Project impacts, but to promote the success of Kbb in the Concord area. In the natural resources mitigation package, the Applicants included a 6.9 acre parcel for management as pine barrens habitat, adjacent to the USF&W Kbb refuge.<sup>328</sup> *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP36679 (Site Z1); App. Ex. 124a, Bates APP85593. This parcel is intended to increase habitat for Kbb and other Lepidoptera, including the *Persius dusky wing skipper* and *frosted elfin*. *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP36679. F&G and USF&W agree this parcel is suitable compensation for construction impacts to Kbb (*Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 1) and CFP’s consultant, Mr. Amaral, testified it is an “excellent parcel” to benefit Kbb and wild lupine. *Tr. Day 57/Morning Session*, pp. 12-13.<sup>329</sup> The Applicants also

---

<sup>328</sup> CFP takes the position the Applicants should be required to fund the restoration of this parcel and develop a restoration plan for it. CFP Brief at p. 125. The Applicants expect to work with F&G regarding the funding issue. Any restoration plan, however, is more properly done by F&G and the other entities involved in the restoration work already occurring at the adjacent site. Their request for a condition on these issues should be rejected. CFP Brief at p. 164.

<sup>329</sup> Despite Mr. Amaral’s testimony (*Tr. Day 57/Morning Session*, pp. 12-13) and the statements in the Biological Opinion recognizing the benefits of conserving this parcel, Concord remains opposed to its use for conservation purposes. Jt. Muni Brief at p. 127. The City’s desire for potential tax revenue on a parcel they acknowledge had been on the market and not sold is difficult to reconcile with their alleged concerns regarding impacts to the Kbb. Further, to the extent the Joint Municipal Group raises concerns

have prepared a management plan to manage portions of the ROW in the Concord area as pine barrens habitat to benefit Kbbbs and wild lupine in the long term. *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 2; *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP37141, *et. seq.* (Attachment C, Best Management Practices: ROW Vegetation Management in Pitch Pine/Scrub Oak Barrens Habitat).<sup>330</sup>

Significantly, in its Biological Opinion, USF&W found that on balance, the Project will benefit the Kbb. While there will be “minor, temporary, adverse effects” on the Kbb and its habitat (wild lupine), the benefits of conserving the 6.9 acre parcel outweigh the costs of minor temporary habitat loss. App. Ex. 124a, Bates APP85604-5.<sup>331</sup> CFP’s consultant agreed. *Tr. Day 57/Morning Session*, pp. 13-14.<sup>332</sup>

ii. Canada Lynx

Canada lynx are listed as federally threatened and as endangered by the State. *Application*, App. Ex. 1, Appendix 36, p. 11-1. At the request of F&G, the Applicants conducted snow-tracking surveys to assess the presence of lynx in the Project area. *Id.* at 11-3. Lynx tracks were observed only once, in 2011. *Id.* At the request of USF&W, the Applicants also considered potential lynx denning habitat and identified potential habitat in five locations within the Project area. *Id.* at 11-3 to 11-4. They avoided two of these locations by shifting the ROW alignment. *Id.* at 11-3.

---

regarding the efficacy of the planned mitigation (Jt. Muni Brief at pp. 126-27), these concerns are not shared by CFP’s expert or by the federal agencies, as reflected in the Biological Opinion.

<sup>330</sup> CFP’s request for a ROW management plan (CFP Brief at p. 125, p. 164 (requested condition)) fails to recognize that the Applicants already submitted one.

<sup>331</sup> The Biological Opinion incorrectly refers to a permanent habitat loss of 20 square feet. App. Ex. 124a, Bates APP85604. As noted earlier in the Opinion, however, there no longer are any permanent impacts. App. Ex. 124a, Bates APP85589.

<sup>332</sup> The Biological Opinion and Mr. Amaral’s testimony refer to the 1,043 square feet of temporary habitat loss reported incorrectly. The corrected wild lupine temporary impact figure is 3,219 square feet.

The Applicants have proposed AMMs to address the three areas of potential denning habitat. App. Ex. 124b, Bates APP88767. These include having environmental monitors survey the areas prior to clearing or construction if these activities will occur between May 1 and July 15. *Id.* If the habitat is occupied, the area will not be cleared and construction activities will be limited. *Id.*<sup>333</sup> Accordingly, impacts to Canada lynx are expected to be minimal, given the amount of habitat available for lynx, as well as the Applicants' mitigation plans, the temporary nature of the construction disturbance, and the fact access roads will not be maintained. *Application*, App. Ex. 1, Appendix 36, pp. 11-4 to 11-5.

In its Biological Opinion, USF&W concurred in the DOE's determination the Project is not likely to adversely affect the Canada lynx. App. Ex. 124a, Bates APP85586. USF&W reasoned that approximately 72.9% of the transmission line in the northern and central sections of the Project where lynx are most likely to occur will be installed either underground or in existing ROW, minimizing habitat disturbance. *Id.* USF&W concluded "the amount of habitat altered is a very small percentage of the habitat used by an individual lynx." *Id.* USF&W also recognized the use of APMs to limit potential impacts. *Id.*

Even CFP acknowledges "the effect of the Project clearing on lynx is likely to be minor." *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, p. 32. CFP's criticism focuses on what it characterizes as a failure to mitigate post-construction use of the ROW by recreational vehicles and a lack of detail

---

<sup>333</sup> CFP's request for a condition prohibiting tree clearing between May 1<sup>st</sup> and July 15<sup>th</sup> in locations where lynx are discovered is not necessary. CFP Brief at p. 165. The AMMs already provide this protection. App. Ex. 124b, Bates APP88767. CFP also requests a condition requiring the Applicants to file AMMs that describe how they will survey for lynx denning sites. CFP Brief at p. 165. The AMMs provide that an environmental monitor will conduct the survey, and F&G did not require more detail. The generalized concern Mr. Parsons raised that any survey had the potential to disrupt denning lynx is not a sufficient basis to require this additional condition. Moreover, Mr. Parsons did not offer any specific suggestions for the survey. *Tr. Day 56/Afternoon Session*, p. 71.

regarding the proposed survey methods and non-construction buffers. *Supplemental Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 137, p. 9. The Project has agreed, however, to measures to prevent unauthorized ATV activity in the new ROW, as reflected in the DES Final Decision. *DES Final Decision with Conditions*, App. Ex. 75, p. 7 (Condition 74) (“Appropriate barriers and signage shall be placed at locations along the new ROW where it intersects with roads to discourage unauthorized ATV activity in jurisdictional areas.”). Further, the AMMs were developed with F&G and reflect their input, including with respect to lynx. These measures address CFP’s concerns.

iii. Northern Long-Eared Bat

The northern long-eared bat is State- and federally-listed as threatened. *Application*, App. Ex. 1, Appendix 36, p. 10-1. It is non-migratory and overwinters in caves or mines and spends the summer in local forests. *Id.* at 10-3. “The population of northern long-eared bats in New England has declined dramatically due to the effects of white nose syndrome, but the species still occurs in small numbers in a variety of forested and woodland habitats.” App. Ex. 124a, Bates APP85586. The Applicants assessed potential impacts on northern long-eared bats by identifying suitable habitat along the Project route and conducting direct surveys using acoustic detectors and following USF&W guidelines. *Application*, App. Ex. 1, Appendix 36, pp 10-4 to 10-5.

The Project footprint does not include any known or potential hibernacula for northern long-eared bat. *Id.* at 10-8. NHB records indicate there are three known hibernacula within 5 miles of the Project area. *Id.* Two of the three hibernacula are located in the vicinity of the underground portion of the ROW and none of these hibernacula will be affected by the Project. *Id.* Summer habitat for the northern long-eared bats likely includes most forested areas in the Project. *Id.*

The Applicants worked with F&G and USF&W to minimize impacts to any potential northern long-eared bats, proposing AMMs that limit tree cutting from April 15<sup>th</sup> to September 30<sup>th</sup> in locations where project-specific surveys detected northern long-eared bat, as well as in locations where no survey data is available or where results were inconclusive. App. Ex. 124b, Bates APP88769.<sup>334</sup> The USF&W determined the Project is not likely to adversely affect the northern long-eared bat because of the APMs, the planned use of environmental monitors, and the fact habitat loss is not a substantial threat to this species. App. Ex. 124a, Bates APP85587.

CFP raised concerns regarding the Applicants' methodology to assess northern long-eared bats, but ultimately concluded "that, in the context of appropriate construction and post-construction monitoring plans, there will be no unreasonable adverse effect" on the northern-long-eared bat. *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, Appendix B, p. B-1; *see also Tr. Day 57/Morning Session*, pp. 25-26 (Reynolds confirming his written opinion and agreeing with the conclusions in the Biological Opinion). CFP further acknowledged USF&W has determined that "incidental take attributable to maintenance, development and rights-of-way expansion is not prohibited" and the AMMs proposed by the Applicants are consistent with federal guidance. *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, Appendix B, p. B-8.<sup>335</sup>

---

<sup>334</sup> CFP seeks a condition requiring the Applicants to conduct additional acoustic monitoring prior to tree clearing to verify the absence of bats. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 164. This condition is completely impractical. The Applicants have agreed to AMMs prohibiting tree cutting during the active season for this species at known locations, as well as at locations where no survey data is available. The AMMs as written are protective and appropriate.

<sup>335</sup> In its Brief, CFP focuses on tree clearing at the known Bristol mine hibernaculum (*Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 122) and requests a condition prohibiting tree removal activity at known "long-eared bat sites," with specific reference to the Bristol mine, between August 1 and May 31. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p.164. The Bristol hibernaculum is not within the Project footprint. *Application*, App. Ex. 1, Appendix 35, p. 10-8.

iv. Indiana Bat

The Indiana bat is a federal endangered species and has no state protected status. App. Ex. 126, Bates APP62125. According to the F&G Wildlife Action Plan, the Indiana bat does not regularly occur in New Hampshire. App. Ex. 124a, Bates APP85587; *see* App. Ex. 126, Bates APP62125 (regulatory agencies do not consider the Indiana bat to be resident in New Hampshire); *see also* *Tr. Day 56/Afternoon Session*, p. 25.<sup>336</sup> Similar to the northern long-eared bat, the Indiana bat's population "has declined dramatically due to the effects of white nose syndrome, but the species still occurs in a variety of forested habitats in western New England." App. Ex. 124a, Bates APP85587. Theoretically, the Project could impact this species through clearing trees, blasting and drilling, or other construction noise. *Id.* USF&W concluded, however, that the Project is not likely to actually adversely affect the Indiana bat because "the likelihood of Indiana bats occurring in the project area and the Project affecting the species is discountable," "habitat loss is not a substantial threat to the Indiana bat" in New England, and the Project would employ qualified monitors to ensure avoidance and minimization measures are implemented. *Id.* at Bates APP85587-88. Mr. Reynolds, CFP's consultant, testified he agreed with USF&W's conclusion. *Tr. Day 57/Morning Session*, p. 25.<sup>337</sup>

---

Furthermore, the final 4(d) rule for northern long-eared bats reduces the no tree cutting buffer for areas affected by white nose syndrome to the areas within ¼ mile of a known hibernaculum. 50 CFR §17.40(o). The Bristol mine hibernaculum is well outside that buffer area. The condition CFP requests is therefore unnecessary.

<sup>336</sup> CFP incorrectly claims the Applicants' Northern Long-Eared Bat Acoustic Survey, App. Ex. 124a, Bates APP85629, confirmed the presence of Indiana bats in all but two segments of the ROW. CFP Brief at p. 123. Normandeau's Indiana Bat survey work, *Addendum – Zero-Crossing Re-Analysis of 2015 Acoustic Survey Data, including Indiana Bat*, is at App. Ex. 126. As reflected in this report, the automated analysis of the data determined, 27 segments had potential Indiana bat calls. Follow-up manual analysis ruled out Indiana bats at four of these segments, but could not rule them out at the remaining 23. App. Ex. 126, Bates APP62125.

<sup>337</sup> Given that F&G does not consider this species to be resident in New Hampshire, there is no basis to require AMMs. CFP's requested condition (*Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 164) on this issue should be rejected.

v. Dwarf Wedgemussel

The Applicants did not document the presence of the dwarf wedgemussel, a State and federally endangered species, in the Project area; thus, no impacts are expected. *Application*, App. Ex. 1, Appendix 33, p. 45; *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 12 (no listed mussels observed). Similarly, USF&W determined the Project is not likely to adversely affect the dwarf wedgemussel since in DOE's assessment of 34 waterbodies, DOE did not observe any of the species and the Project would follow APMs to minimize any minor indirect temporary impacts. App. Ex. 124a, Bates APP85588. In addition, USF&W observed project activities at river crossings "would be relatively small scale." *Id.*

vi. Small Whorled Pogonia

The small whorled pogonia is a federal threatened species that was carefully considered in the Applicants' surveys, but not observed in the Project area. *Application*, App. Ex. 1, Appendix 35, p. 15 (discussing survey protocol). Hence, no impacts are expected. DOE likewise did not observe any small whorled pogonia and the USF&W determined "the likelihood of the species occurring in the project area is small." App. Ex. 124a, Bates APP85585. Given this conclusion, and the procedures in place if this species is found during construction, USF&W agreed with the DOE's determination the Project is not likely to adversely impact this species. *Id.* The DES Final Decision likewise requires the Applicants to notify and coordinate with NHB regarding additional monitoring requirements or avoidance measures that may be necessary to minimize potential impacts to sensitive species, both prior to and during construction. *DES Final Decision, with Conditions*, App. Ex. 75, pp. 3, 10 (Condition 9, Finding 13).

CFP argued the Applicants failed to conduct an adequate inventory for this species. *See Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, p. 11. NHB, however, approved the Applicants' survey methodology.

*Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 4. DOE likewise did not document this species in its surveys. App. Ex. 124a, Bates APP85585. CFP did not offer any credible basis to challenge the findings of the DOE and the Applicants.<sup>338</sup>

**b. State Listed Wildlife and Plants**

**i. Wildlife**

**Bats**

Separate from the northern long-eared and Indiana bats described above, the Applicants considered the potential impact of the Project on four New Hampshire bat species of special concern (SSC): the eastern red bat, the hoary bat, the silver-haired bat and the tricolored bat. *Application*, App. Ex. 1, Appendix 36, p. 10-1. The tricolored bat is non-migratory and hibernates locally. The other three SSC bats fly south for the winter. The Applicants concluded no significant habitat impacts are expected for these species. *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 6. CFP agrees “it is unlikely [the Project] will have any population-level impact” on the four SSC bat species “if construction activities are conducted in accordance with best management practices targeted towards the conservation and recovery of the [northern long-eared bat].” *See Pre-Filed Testimony of Michael Lew-Smith, Jeff Parsons, Michal Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, Appendix B, p. B-17 (tricolored bat), p. B-19 (eastern red bat), p. B-21 (hoary bat), and p. B-23 (silver-haired bat).

The Applicants also surveyed small footed bats, a non-migratory State-endangered species that overwinter in caves and mines, and also may use rocky outcrops. *Application*, App. Ex. 1, Appendix 36, p. 10-2. The Project footprint does not include any known or potential hibernacula for small footed bats. *Id.* at 10-6. Thus, no direct impacts to known hibernacula will

---

<sup>338</sup>CFP has requested a condition that requires the Applicants to re-survey the ROW for this plant and file AMMs, as well. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 165. CFP provides no basis in the record for this request, and there is none.

occur. *Id.* at 10-9. The Applicants identified four locations of potentially suitable habitat within the ROW that may be impacted by the placement of a structure. *Tr. Day 16/Afternoon Session*, p. 17. Structure placement at the Deerfield location has been modified to avoid direct impacts to that potential roosting location. *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, pp. 6-7.

The Applicants consulted with F&G regarding AMMs for small footed bats. App. Ex. 124b, Bates APP88770. The AMMs provide that, where a structure will be built on a rocky outcrop, a survey to determine whether bats are present must be conducted prior to construction, with the methodology and timing reviewed and approved by F&G. *Id.* If the survey confirms bats are present, the Applicants are required to consult with F&G. *Id.*<sup>339</sup> CFP recommended the Applicants develop monitoring plans to ensure any construction activities address potential impacts to crevice-nesting small footed bats. *Pre-Filed Testimony of Michael Lew-Smith, Jeff Parsons, Michal Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, Appendix B, p. B-1. The revised AMMs address this concern directly, eliminating any basis to claim the Project will have an unreasonable adverse impact on small footed bats.

#### Marten

CFP's consultants claimed in their pre-filed testimony that the Project will have an unreasonable adverse effect on marten, a state threatened species. *Supplemental Pre-Filed Testimony of Michael Lew-Smith, Jeff Parsons, Michal Amaral and Scott Reynolds*, CFP Ex.

---

<sup>339</sup> F&G's involvement, both in providing input on the AMMs and with respect to its specific role in avoiding and minimizing potential impacts to small-footed bats, addresses the concerns raised by CFP regarding this species. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 121 (concern regarding the survey process and potential blasting). CFP's request for a condition that requires the Applicants to "avoid any blasting and/or construction activities on or adjacent to any rocky outcrops unless it has been conclusively established that small-footed bats are not present" should be rejected. *Id.* at 122. This condition is not supported by the record. The AMMs already require the Applicants to obtain F&G approval for the survey and to consult with F&G if bats are present.

137, p. 9. CFP provides an insufficient basis to show an adverse effect on the marten, let alone an unreasonable adverse effect on the natural environment.

NHB records indicate marten are present in the vicinity of the Project area from Whitefield north to Dixville and marten tracks were observed in the area of the existing ROW and the new proposed ROW. *Application*, App. Ex. 1, Appendix 36, p. 11-2,11-4. Construction in the existing ROW may temporarily displace wildlife, including marten, but these impacts will be temporary. *Id.* at 11-6. In the new ROW, clearing will remove forest cover types, but travel cover is not considered an important part of marten habitat needs, as they are not known to travel long distances on a regular basis *Id.* at 11-2, 11-6. In addition, given the total amount of habitat available to marten in northern New Hampshire, this conversion of habitat is not significant and the forest habitat marten's require will remain widely available. *Id.* At 11-6. To the extent there is concern regarding improved human access to previously remote habitats (for marten and other wildlife), the Project has agreed to measures to prevent unauthorized ATV activity in the new ROW. *DES Final Decision with Conditions*, App. Ex. 75, p. 7 (Condition 74). In addition, the mitigation package proposed by the Applicants includes high quality marten habitat. *See Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP36676-77, 79; *Pre-Filed Testimony of Michael Lew-Smith, Jeff Parsons, Michal Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, p. 38. Also, Mr. Parsons for Arrowwood agreed the AMMs for high elevation habitat "could certainly help preserve habitat or preserve the American marten." *Tr. Day 57/Morning Session*, p. 68.

## Birds

- Grassland Birds

Six grassland bird species with a state RTE designation are potentially present in the Project area: the northern harrier (State endangered); American kestrel (SSC); Grasshopper sparrow (State threatened); Horned lark (SSC); Vesper sparrow (SSC); and Eastern meadowlark (SSC). *Application*, App. Ex. 1, Appendix 36, p. 4-1. Grassland species are rare in New Hampshire because suitable habitat for them is scarce. *Id.* Four of the species (grasshopper sparrow, vesper sparrow, horned lark, and eastern meadowlark) are unlikely to be present in the Project area and accordingly, no impacts are expected. *Id.* at 4-6.

F&G requested a survey for northern harriers, but an assessment of habitat suitability by the Applicants did not identify any suitable grasslands. *Id.* at 4-3. Since only a small amount of grassland habitat will be permanently lost as a result of the Project (<.10%) the Project is not expected to impact grassland species. *Id.* at 4-5. CFP agreed the habitat loss would be “minimal” and further concluded “general habitat impacts for grassland nesting species are likely to be insignificant as a result of the Project.” *Pre-Filed Testimony of Michael Lew-Smith, Jeff Parsons, Michal Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E. p. 45.

Northern harriers have not been reported or observed, but may nest within the vicinity of the Project. *Application*, App. Ex. 1, Appendix 36, p. 4-6. In order to avoid and minimize any unlikely but potential impacts to this species, the Applicants proposed AMMs requiring the environmental monitors to survey for active nests prior to construction during the nesting season. App. Ex. 124b, Bates APP88768. If a northern harrier nest is identified, the Project is required to consult with F&G for buffer size and avoidance dates. *Id.* American kestrels were observed in the existing ROW on two occasions in 2013 and there are reports of this species in the vicinity of

the Project. *Application*, App. Ex. 1, Appendix 36, p. 4-6. Direct impacts to this species are not expected, as kestrels are mobile and can avoid disturbed areas and active disturbance. *Id.*

- Nesting Raptors

The Applicants also considered the Project's potential impact on certain raptor species known to nest in New Hampshire, including bald eagles (state threatened), osprey (SSC), red-tailed hawks, and ravens. These species are known to place nests on power line structures, although this occurs more commonly in treeless habitats of the western United States.

*Application*, App. Ex. 1, Appendix 36, p. 8-1. Osprey are known to nest on power line poles in New Hampshire and F&G specifically requested the Project area be surveyed for osprey nests.

*Id.* The Applicants reviewed NHB data, which shows no reported current or historic bald eagle nests and no reported osprey nests currently within the Project area. *Id.* In addition, the Applicants conducted an aerial survey of the existing ROW that confirmed the absence of raptor or raven nests on power line structures or in trees adjacent to the ROW. *Id.* at 8-1 to 8-2.

The Applicants' survey did identify great blue heron nests outside the ROW, but close enough to potentially be disturbed during the nesting season by construction activities. *Id.* at 8-2 to 8-3. The Migratory Bird Treaty Act ("MBTA") prohibits disturbing migratory birds on the nest, including great blue herons, during the active nesting season. *Id.* at 8-3. Accordingly, the Applicants proposed AMMs for active bald eagle nests, active raptor nests, and active great blue heron nests. App. Ex. 124a, Bates APP88768-69. These AMMs require that prior to work during the species' nesting season, the Applicants will survey for active nests and re-survey if there is a break during the work during the nesting season. *Id.*<sup>340</sup> If an active nest is identified,

---

<sup>340</sup> CFP argues the Applicants should be required to perform aerial surveys to locate great blue heron, active raptor, and bald eagle nests. CFP Brief at p. 126, pp. 164-65 (requested conditions). While aerial surveys may be appropriate in some circumstances, if there are known active nests or other species

applicable buffer areas will be established to prevent disturbances. *Id.*<sup>341</sup> The AMMs also provide the Applicants may not remove inactive nests without agency approval. *Id.* With respect to active bald eagle nests, all work will comply with the National Bald Eagle Management Guidelines unless discussed with USF&W and F&G. *Id.* at Bates APP88768. The AMMs for nesting raptors (as well as other wildlife) resulted from lengthy discussions with F&G and DES regarding best practical measures. *See DES Final Decision with Conditions*, App. Ex. 75, p. 3 (Condition 7) (recognizing the AMMs “provide the best resource protection timing requirements practicable as agreed to by the agency and in consideration of the seasonal temperature variations, logistics, and project schedule.”).

CFP agreed the potential impact to nesting raptors is disturbance due to construction activity and conceded any direct impacts “are likely to be short-term only,” and further, that nesting birds likely will return in the season following construction. *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, p. 56.

- Wetland Dependent Birds

The Applicants considered six State designated wetland bird species potentially present in the Project area: pied-billed grebe (threatened); least bittern (SSC); sora (SSC); common gallinule (SSC); sedge wren (endangered); and rusty blackbird (SSC). The Applicants reviewed

---

considerations, other survey methods may be more suitable. Again, the AMMs worked out with F&G address surveys; requiring these suggested conditions has no support in the record. In addition, the concern CFP raises regarding re-surveying (*id.*) is addressed in the AMMs.

<sup>341</sup> CFP takes the position the Applicants should be required to utilize a quarter-mile buffer zone for active great blue heron nests, instead of the 330 feet buffer contained in the AMMs. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 126. The buffer in the AMMs, however, is from the *Good Forestry Guide in the Granite State: Recommended Voluntary Forest Management Practices for New Hampshire* (App. Ex. 385), a fact Mr. Parsons was not aware of when he testified. *Tr. Day 57/Morning Session*, pp. 43-45. The Applicants used a buffer recognized as appropriate in New Hampshire and agreed to by F&G. CFP’s request for a condition requiring a different buffer should be rejected.

NHB and eBird<sup>342</sup> data to assess the likely presence/absence of each species based upon their known distribution in New Hampshire and evaluated potentially suitable habitat in the Project area. *Application*, App. Ex. 1, Appendix 36, pp. 7-1 to 7-2. F&G agreed this was an acceptable approach given the presumed scarcity of the species -- there are no NHB records of any of these species in the Project area. *Id.* at 7-2.

With respect to three of these species – the least bittern, common gallinule, and sedge wren – the Project area contains little to no suitable habitat in the Project area and the known distribution of the species suggests they are unlikely to be present in the Project area. *Id.* at 7-7. Accordingly, the Project is not expected to impact these species. *Id.* There is a small amount of potentially suitable habitat for the sora and a “small chance” it could be present in the Project area. *Id.* The available data for the pied-billed grebe suggests “there is a small chance that this species could nest within the proposed Project area.” *Id.* Potential impacts to the habitat for the sora and pied-billed grebe (i.e. wetlands), however, largely will be temporary. *Id.* Finally, the Project does contain suitable habitat for the rusty blackbird and this species was observed in one location within the Project area. *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 5. While the Project could theoretically impact wetlands suitable for rusty blackbirds, all temporary impacts to wetlands will be restored and the mitigation package proposed by the Applicants includes “suitable wetland habitats within the known breeding range of the rusty blackbird in New Hampshire.” *Id.*

CFP focused on three of the wetland species and specifically raised issues regarding the habitat suitability analysis performed for pied-billed grebe and the sedge wren, and the lack of a

---

<sup>342</sup>eBird is a searchable, real-time, online data portal established by the Cornell Lab of Ornithology and the National Audubon Society that allows anyone to record the location of species observed. This database also includes historical data. <http://ebird.org/content/ebird>.

survey along the new ROW for rusty blackbird. *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, pp. 48-49. The Applicants conducted a desktop habitat analysis for these species, “augmented with extensive field observations.” *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 5. CFP ultimately agreed that construction within the existing ROW is a temporary impact and that the forested wetland in the new ROW are not habitat types used by wetland dependent RTE listed birds. *Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit E, pp. 49-50.

- Common Nighthawk and Eastern Whip-poor-will

The common nighthawk is a State endangered species and the subject of an ongoing study coordinated by New Hampshire Audubon which shows the nighthawk breeds in the vicinity of, or even within, the existing ROW in Concord. *Application*, App. Ex. 1, Appendix 36, p. 5-1. By surveying portions of the ROW in Concord, the Applicants confirmed the presence of nighthawks, as well as the eastern whip-poor-will (listed at the time of the survey as a SSC). *Id.* at 5-1 to 5-2. The Project could potentially impact the nighthawk through construction during the breeding season. *Id.* at 5-3. The Applicants proposed AMMs for nighthawks that consist of surveying for active nests during the nesting season prior to construction and, if active nests are identified, determining an appropriate buffer with F&G. App. Ex. 124b, Bates APP88769. While CFP’s expert took issue with the lack of a defined buffer (*Tr. Day 56/Afternoon Session*, pp. 69-70), he admitted he did not have a recommendation for an appropriate buffer zone. *Tr. Day 57/Morning Session*, p. 64. Accordingly, the AMMs as written are appropriate; they will minimize potential impacts to these species. CFP’s request for an additional condition requiring the Applicants to file AMMs that “describe the methodology to

‘predetermine’ the buffer area around nests” is not supported by the record and should be rejected. CFP Brief at p. 164.

- Bicknell’s Thrush

New Hampshire has classified Bicknell’s thrush as a SSC that breeds in high elevation spruce/fir cover types. *Application*, App. Ex. 1, Appendix 36, p. 6-1. The Applicants developed a work plan for surveying this species in consultation with F&G and USF&W. *Id.* No Bicknell’s thrush were detected during the survey and therefore, no impacts to this species are expected. *Id.* at 6-3 to 6-4.

#### Fresh water mussels

The state endangered brook floater mussel and eastern pearlshell mussels were found in the Soucook River area of the Project. *Pre-Filed Testimony of Lee Carbonneau*, App. Ex. 22, p. 12. A structure will be installed within 20 feet of the edge of the Soucook River in the existing ROW. *Id.* Due to the geometry of the river, the structure cannot be moved further from the river. *Id.* The potential impact to these species is temporary construction-related sedimentation and water quality concerns. *Id.* To address these issues, the Applicants have proposed AMMs that require BMPs be employed, and, to the extent practicable, that limit ground disturbing activities to periods of low flow or winter conditions to minimize the potential for sedimentation. App. Ex. 124b, Bates APP88767-68.

Arrowwood claims the AMMs lack specificity. *Supplemental Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 137, p. 7. These AMMs, however, are the product of numerous discussions with and input by F&G. *See* App. Ex. 124b, Bates APP88760. Moreover, at the hearing, Mr. Lew-Smith for Arrowwood acknowledged it is DES’s responsibility to review the sediment control and erosion control

plans. *Tr. Day 57/Morning Session*, p. 73. Given DES's role, Lew-Smith agreed the conditions of the DES permit alone are "likely sufficient" to ensure there is no harm to these mussel species. *Id.* at 73-74.

#### Insects

In addition to the Kbb, the Applicants considered eight species of insects listed as state threatened or endangered. *Application*, App. Ex. 1, Appendix 36, p. 12-3. Based on data from NHB and the habitat requirements for these species, the Applicants determined only three of these species have the potential to be present in the Project area, all in the Concord Pine Barrens portion of the Project: the frosted elfin (State endangered); the persius duskywing skipper (State endangered); and the pine pinion moth (State threatened). *Id.* The frosted elfin and persius duskywing skipper require similar larval food and adult habitat as the Kbb. *Id.* at 12-4. Seven other SSC insects use barrens-type habitat similar to Concord Pine Barrens habitat and have the potential to be present.<sup>343</sup> The avoidance and minimization measures detailed above with respect to Kbb and wild lupine will similarly protect these species, and the ROW maintenance practices post-construction will continue to promote pine barrens vegetation. *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 5; *see also Tr. Day 16/Afternoon Session*, p. 5 (Carbonneau testimony); *cf. Tr. Day 56, Afternoon Session*, pp. 43-44; *Tr. Day 57, Morning Session*, pp. 65-67 (Mr. Parsons of Arrowwood questioned the lack of a specific survey for

---

<sup>343</sup> Contrary to CFP's claim (*Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 125), Dr. Barnum did consider the potential impact to these species, acknowledging "[s]ome impact to these species is likely to occur as a result of construction." *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 5. To the extent CFP and other intervenors take issue with Normandeau not conducting a survey for these other insects *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 125, *Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, pp. 124-25), as Dr. Barnum testified, she followed the guidance of the agencies, which did not request such a survey. *Tr. Day 16/Morning Session*, pp. 123, 135. While the Joint Municipal Group make the remarkable argument that the Applicants are not entitled to rely on agency guidance (Jt. Muni Brief p. 125), Site 301.14(e)(4) specifically requires the Committee to consider the analyses and recommendations of F&G.

insects, but indicated the AMMs for Kbb and lupine will also help these insects and added that it is a “roll of the dice” as to which lupine plants the frosted elfin will choose in any given year.)<sup>344</sup>

#### Snakes and Salamanders

Based on NHB data, the eastern hog-nosed snake (State endangered), smooth green snake (SSC), and northern black racer (State threatened) are known to be present in or around the existing ROW. *Application*, App. Ex. 1, Appendix 36, p. 3-1. The Applicants developed survey plans based on recommendations from F&G. *Id.* Through the survey, the Applicants observed three northern black racers in the ROW in Allenstown. *Id.* at 3-4. No other special status snakes were observed. *Id.*

Potential temporary impacts to snakes can occur due to construction activities. *Id.* at 3-5. The Applicants have proposed detailed AMMs to minimize impacts on any potential northern black racer and eastern hognose snakes. These AMMs require installing temporary work zone fencing to confine equipment and disturbance to the construction footprint, clearing of snakes from work pads and construction access roads from April 15- October 30<sup>th</sup>, and precluding ground disturbing activities in any location known by F&G to host hibernaculum from October 1 – May 7<sup>th</sup>. App. Ex. 124b, Bates 88770-71. The AMMs also include “requirements for fencing to exclude snakes and turtles and for handling listed species” that detail how this work must be done. *Id.* at Bates APP88774-76. CFP agrees that long-term impacts to the habitats for the hog-nosed snake and northern black racer “are not likely to be adverse” (*Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 136, Exhibit

---

<sup>344</sup> Mr. Parsons’ conclusion that the risk to these insects has not been “eliminated” illustrates again that while Arrowwood did an assessment of the Applicants’ extensive wildlife survey, it did not apply the “unreasonable adverse effect” standard properly. Eliminating risk to wildlife is not the test to be applied by the Subcommittee.

E, p. 79) and Mr. Lew-Smith testified the proposed AMMs are sufficient “to protect [these] two species of snake in the [ROW].” *Tr. Day 56/Afternoon Session*, p. 65.

The Applicants also considered potential impacts on the blue-spotted/Jefferson salamander. *Application*, App. Ex. 1, Appendix 36, p. 3-1. Blue-spotted egg masses were observed in two separate vernal pools. *Id.* at 3-4. Neither of these pools will be impacted by the Project. *Id.* at 3-5. Moreover, direct permanent impacts to vernal pools are expected to be minimal.

#### Turtles

Blanding’s turtle, the spotted turtle, and the wood turtle are known to be present in and around the existing ROW based on NHB data. *Application*, App. Ex. 1, Appendix 36, p. 3-1. Surveyed areas of the existing ROW appeared to offer low quality habitat for nesting turtles and no depredated turtle nests of any species were observed during the survey. *Id.* at 3-4. Impacts to turtles may occur if they or their eggs are crushed by construction activities, or if nesting females are harassed by construction activities during egg laying. *Id.* at 3-5. Accordingly, the Applicants developed AMMs with F&G to minimize potential impacts, including: avoiding and minimizing impacts to streams, open water and mucky substrates in all seasons to the greatest extent practicable; installing temporary fencing around work pads in mapped turtle habitat to confine construction equipment and disturbance; surveying the mapped habitat areas from April 15 to October 30 prior to work taking place and removing any turtles to a safe location; searching work pads and clearing construction access roads daily from April 15 to October 30, or fencing work pads to prevent entry by turtles after the initial search and clearing takes place; identifying potential nesting habitat in the work area and fencing it prior to May 25 to prevent turtle access during the nesting season. App. Ex. 124b, Bates APP88771-72. The AMMs also include

specific “requirements for fencing to exclude snakes and turtles and for handling listed species.”  
*Id.* at Bates APP88774-76.

Arrowwood has acknowledged the Applicants have taken “positive steps” with respect to the turtle AMMs. *Tr. Day 56/Afternoon Session*, pp. 59-62 (specifically referencing the temporary fencing around work pads as “a really positive step” and the fencing off of identified nests as “really good”). To the extent they have “lingering concerns” regarding the AMMs (*Supplemental Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 137, p. 5), such concerns do not constitute a conclusion the species will be adversely affected, much less a determination there will be an unreasonable adverse effect to the natural environment.<sup>345</sup>

ii. Plants and Natural Communities

Butterfly Milkweed

Butterfly milkweed is a State endangered plant. *Application*, App. Ex. 1, Appendix 35, p. 40. One population of this species, consisting of a single plant, was observed in Concord within the Project area. *Id.* The Applicants have shifted work pads and access roads to avoid impacts to this population. *Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 4. CFP agrees that if the AMMs for threatened and endangered plants are followed, the Applicants “will have taken practicable measures to avoid impacts to this species.” *Supplemental Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds*, CFP Ex. 137, p. 4.

---

<sup>345</sup>The Deerfield Abutters raised issues regarding the impact of the Project on the turtle population in Deerfield. *See e.g. Tr. Day 65/Afternoon Session*, pp. 166-178; *Pre-Filed Testimony of Jeanne Menard on Behalf of Menard Forest Family Partnership*, DFLD-ABTR Ex. 8, p. 3 (discussing habitat for Blandings turtles). These individuals, however, are not experts. The wildlife AMMs, including the AMMs for turtles, were developed in consultation with F&G. As Ms. Menard conceded, both F&G and DES have more expertise regarding turtle protection than the Deerfield Abutters. *Tr. Day 66/Afternoon Session*, pp. 46-47.

### Blunt Leaved Milkweed

Blunt leaved milkweed is a State threatened plant. *Application*, App. Ex. 1, Appendix 35, p. 40. One population of this species, consisting of two patches of plants, was observed within the Project area. *Id.* Neither patch of plants is within proposed impact areas. *Id.* at 62.

### Spiked Needle Grass

Three populations of State endangered spiked needlegrass (red threeawn) were found within the ROW in Concord and Pembroke. App. Ex. 1, Appendix 35, p. 40. No permanent direct impacts will occur. *Id.* at 63. Instead, any impacts will be temporary from access roads, a work pad, and disturbance around the work pad. *Id.* The Applicants proposed AMMs for threatened and endangered species that have been accepted by the agencies. App. Ex. 124, pp. 971-975; *see also* App. Ex. 124b, Bates APP88760, 88778-80) (plant AMMs re-submitted in December 2017). These plant AMMs include specific avoidance and minimization measures for spiked needlegrass/red threeawn, including a preferred seasonal work window to allow the plant to complete its reproductive cycle and provisions regarding stockpiling soil and re-spreading it to redistribute the seedbank. App. Ex. 124b, Bates APP88779.<sup>346</sup>

### Licorice Goldenrod

The Project will impact one population of State endangered licorice goldenrod in Pembroke. *Application*, App. Ex. 1, Appendix 35, p. 62. Approximately 28 square feet within this population area will be permanently impacted from the installation of a structure. This impact area is approximately 0.01% of the total area occupied by the population and one or no specimens of licorice goldenrod are anticipated to be affected. *Id.* An approximately 10-18% of

---

<sup>346</sup>Contrary to the statement in CFP's Brief (*Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 129), there are AMMs for this species that have been agreed to by NHB. There is no need for a further condition on this issue. *Id.* at p. 165 (requested condition).

this population may be temporarily impacted due to a temporary access road, works pads, and areas of disturbance. *Id.* at 63. The plant AMMs include specific provisions for this species, requiring matting on work pads unless the ground is frozen and, if working when the ground is not frozen, the work should be performed after September 30 and before June 1 to the extent practicable. App. Ex. 124b, Bates APP88779-80.<sup>347</sup> Further, as Lee Carbonneau testified, at the outset of construction the Project will consider whether it is possible to further minimize impacts to this population by moving the access road. *Tr. Day 17/Morning Session CONFIDENTIAL*, pp. 90-94.

#### Exemplary Natural Communities

The Applicants surveyed the Project area for exemplary natural communities and other natural communities ranked as S1, S2, or S3. In the northern segment (Pittsburg to Dummer), several S2 and S3 communities, four of which Normandeau identified as potential exemplary natural communities, were identified. *Pre-Filed Testimony of Dennis Magee*, App. Ex. 24, p. 4. One of the potentially exemplary natural communities is state-ranked as S3 and was identified as Northern Hardwood Seepage Forest (“NHSF”) based on consultation with NHB (referred to as NHSF1). *Id.* This community was later confirmed as an exemplary natural community by NHB. App. Ex. 124 CONFIDENTIAL, pp. 310-315 (May 9, 2016 email from NHB). Approximately 24% of the known area of this community was estimated to be impacted by tree clearing for the new ROW.<sup>348</sup> *Pre-Filed Testimony of Dennis Magee*, App. Ex. 24, p. 4. Two other S3

---

<sup>347</sup> Again, CFP’s Brief incorrectly states there are no AMMs for this species. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 128. There is no need for a condition on this issue. *Id.* at 165 (requested condition).

<sup>348</sup> The NGO intervenors suggest the full impact to NHSF1 cannot be assessed because “[t]he full boundaries of [NHSF1] have not been determined.” *Post-Hearing Memorandum of Non-Governmental Organization Intervenors*, Docket No. 2015-06, p. 38 (citing the RTE Plants Report). This position has no merit. The RTE Plants report includes information regarding the location and size of the NHSF1, as

communities identified by Normandeau were re-examined at the request of NHB and NHB found one of the two also qualifies as exemplary (referred to as NHSF4). *See* App. Ex. 124 (CONFIDENTIAL), pp. 750-767 (January 30, 2017 Correspondence to NHB) and pp. 779 (NHB response on February 17, 2017). The Applicants have addressed permanent impacts to exemplary natural communities in their mitigation package and the mitigation package includes a NHSF. *Tr. Day 17/Morning Session* CONFIDENTIAL, pp. 140-141; *Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP36679 (discussing mitigation for uncommon plant communities, including Site B which includes a NHSF (S3)).

David Publicover, an expert presented and employed by the Appalachian Mountain Club (“AMC”), claims the impact of the Project on NHSF1 is an unreasonable adverse effect and notes NHB “has documented only thirteen exemplary occurrences of this natural community type in the state.” *Pre-Filed Testimony of Dr. David Publicover*, NGO Ex. 101, p. 2. Dr. Publicover’s claim is unfounded. The NHB list is not exhaustive -- this community type is common throughout northern New Hampshire and occurs in many more than the 13 documented locations relied upon by Dr. Publicover. *Supplemental Pre-Filed Testimony of Dennis Magee*, App. Ex. 100, p. 6; *see also* App. Ex. 384. Further, approximately 50% of this exemplary natural community was recently logged. App. Ex. 124, p. 980.<sup>349</sup>

---

well as a map of the area with potential impacts and NHSF1 delineated on it. NGO Ex. 121. In addition, Normandeau provided impact information for NHSF1 to NHB, App. Ex. 124 (CONFIDENTIAL), p. 755 (January 30, 2017 Correspondence to NHB), and NHB did not request any further survey work for this exemplary natural community.

<sup>349</sup> The NGO Brief also incorrectly asserts the Applicants failed to consider the impact of edge effects on NHSF1 and NHSF4. As Mr. Magee testified, Normandeau “qualitatively considered” edge effects on these exemplary natural communities, recognizing there would be changes in light and wind. *Tr. Day 17 (Environmental) CONFIDENTIAL SESSION*, pp. 137-38.

**c. Significant Habitat**

**i. Deer Wintering Areas and Moose Concentration Areas**

In their Supplemental Pre-Filed Testimony, Arrowwood concluded the project will have an unreasonable adverse effect on deer and moose yards, based largely on criticism of the AMMs. *Supplemental Pre-Filed Testimony of Michael Lew-Smith and Jeff Parsons, Michael Amaral and Scott Reynolds, CFP Ex. 137*, pp. 7-9. CFP's faulty premise that the Project is to be judged on whether there is an unreasonable adverse effect on one specific natural resource should be rejected. Moreover, Arrowwood's position is refuted by the full record on these habitats and their own testimony at the hearing.

The Applicants considered potential impacts to DWA and moose concentration areas ("MCA") in their review. *Application*, App. Ex. 1, Appendix 36, p. 13-1. Approximately 28.3 acres of known deer yards will be cleared and disturbance of deer using DWAs adjacent to the ROW also may occur. *Id.* at 13-8 to 13-9. Construction in the new ROW will remove approximately 47 acres of forest cover that provide MCAs. *Id.* at 13-13. Like deer, moose using MCAs within or adjacent to the ROW also are susceptible to potential disturbance. *Id.* The Applicants have worked closely with F&G to develop comprehensive AMMs to minimize the impacts of construction on deer and moose. App. Ex. 124b, Bates APP88767. These measures include directives to leave twiggy debris/slash as browse for deer when clearing in winter conditions and time of year restrictions for site preparation and construction activities. *Id.* Mr. Parsons of Arrowwood generally agreed these AMMs would provide adequate protection. *Tr. Day 56/Afternoon Session*, pp. 73-74. He testified he "applaud[ed]" the limitations on construction included in the AMMs and while he expected some displacement of deer from DWAs due to the use of chainsaws, he described this as "a slight loss in functional deer yard

use” which he was “not that concerned about.” *Id.* Parsons further testified he was “less concerned for [MCAs],” given that moose have more mobility than deer in deep snow because their stomach is much higher. *Id.* at 74. While Parsons did express “concerns” for deer with respect to potential unmapped deer yards (*Tr. Day 57/Morning Session*, p. 62), this testimony does not support any finding of unreasonable adverse effect.

The Applicants have properly minimized impacts to these habitats and F&G has imposed AMMs. In addition, the mitigation plan includes significantly more DWA acreage than will be impacted and also includes a substantial MCA. *Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, p. 3 (DWAs, parcels B and C; MCAs, parcels B and K); *see also Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP36676-80.

ii. Fragmentation

The Project will not cause substantial forest fragmentation. *See* Site 301(c)(14). Fragmentation occurs when large, contiguous forests are divided into smaller patches by development, roads, agriculture, and in some cases, timber harvesting. *Application*, App. Ex. 1, Appendix 36, p. 9-3. The Applicants are mindful of this habitat issue. USF&W requested that the Applicants consider the effect of forest fragmentation on forest-nesting birds with respect to the new ROW. *Pre-Filed Testimony of Sarah Barnum*, App. Ex. 23, p. 9. Clearing forest can potentially impact forest-nesting birds through edge effects, habitat conversion, and the creation of habitat fragments. *Application*, App. Ex. 1, Appendix 36, p. 9-3. The Applicants determined that while the new ROW creates additional forest edge, it only creates a small increase in fragmentation and, correspondingly, only a small impact. *Pre-Filed Testimony of Sarah Barnum*, App. Ex. 23, p. 9. As Dr. Barnum noted in her testimony, the forest being affected by the new ROW is a “working forest” that has “been logged continuously for the last 150 years” and includes large sections which recently were clear cut. *Tr. Day 17/Morning Session*, p. 108;

see App. Ex. 175 (data showing an average 8,324 acres of timber annually harvested in new ROW towns, versus 467 acres proposed to be cut by the Project); see also *Tr. Day 20/Afternoon Session*, pp. 149-150.<sup>350</sup> In addition, the AMMs provide for vegetated pathways “across the full width of the ROW comprised of taller woody vegetation left intact to the extent practicable during clearing and during future ROW maintenance.” App. Ex. 124b, Bates APP88780 (plant AMMs), Bates APP88772-73 (wildlife AMMs). These pathways should minimize fragmentation impacts.

Ignoring the fact that this is a “working forest,” Dr. Publicover claimed the fragmentation impact of the new ROW will constitute an unreasonable adverse effect. *Pre-Filed Testimony of Dr. David Publicover*, NGO Ex. 101, pp. 7-10. He conceded, however, that “any quantitative assessment of fragmentation will be inconclusive” and that “an assessment of the severity of this impact will remain a judgment call.” *Id.* at 10. As Dr. Barnum explained, edge effect relates to the quality of the habitat -- the habitat is not being removed. *Tr. Day 17/Morning Session*, p. 119. The “effect will be greatest at the edge, and then it will subside as you move away. And quantifying exactly what that curve will be would be very difficult” – the same point Dr. Publicover conceded. *Id.* at 119-120. Dr. Barnum concluded the impact to forest nesting birds would be minimal. *Id.* at 114-118. “[F]orest-nesting birds use areas near edges all the time. It doesn’t make it a completely unsuitable habitat for them.” *Id.* at 120. Dr. Publicover provided no credible opposition to Dr. Barnum’s conclusion.

---

<sup>350</sup> The NGO Intervenors claim Dr. Barnum’s fragmentation analysis is flawed. *Post-Hearing Memorandum of Non-Governmental Organization Intervenors*, Docket No. 2015-06, p. 40. There is no issue with Dr. Barnum’s methodology – the intervenors simply do not like the result. As she explained, in light of Dr. Publicover’s criticisms she repeated her analysis using other forest interior bird species, one of which Dr. Publicover had suggested, and reached the same conclusion. *Tr. Day 17/Morning Session*, pp. 114-118. Adding the new ROW to the landscape will have a minimal impact on the available habitat for these species. *Id.* at 117-18.

4. The Applicants Have Proposed Comprehensive Avoidance and Minimization Measures and Submitted a Substantial Mitigation Package With Significant Land Conservation

As evidenced by the DES Final Decision<sup>351</sup> and the plant and wildlife AMMs, the Applicants have designed the Project to effectively avoid and minimize impacts to the natural environment. As noted, sixty miles of the proposed route will be placed underground along public roadways and in all, more than 80 percent of the Project is located within existing transmission or roadway corridors. Only 32 miles of the 192-mile transmission line is in new ROW and 24 of those 32 miles are in a working forest. This design substantially reduces potential impacts to wildlife and plant species, habitats, and communities.

As detailed above, the Applicants worked with the relevant agencies to develop comprehensive AMMs for specific RTE wildlife and plant species, and for significant habitat. *See* App. Ex. 124, pp. 971-975 (March 1, 2017 approval of plant AMMs; App. Ex. 124a, Bates APP85726 (November 1, 2017 submittal of wildlife AMMs); App Ex. 124b, Bates APP88760-81 (December 6, 2017 submittal of final AMMs for wildlife and plants). These AMMs, in conjunction with the use of environmental monitors and BMPs, represent the best practical measures to avoid, minimize and mitigate potential adverse effects. Site 301.14(e)(5)-(6); *see DES Final Decision with Conditions*, App. Ex. 75, p. 3 (Condition 7) (recognizing the wildlife AMMs “provide the best resource protection timing requirements practicable as agreed to by the agency and in consideration of the seasonal temperature variations, logistics, and project schedule.”). Further, the Applicants will continue to work to minimize potential impacts to

---

<sup>351</sup> *DES Final Decision with Conditions*, App. Ex. 75, pp. 8-10 (Finding 5, concluding the Project “is the alternative with the least adverse impact”); (Finding 5 (c)-(h)) (discussing the Project’s evaluation of route selection to avoid and minimize impacts to natural resources).

sensitive species, as required by the DES Final Decision. *DES Final Decision with Conditions*, App. Ex. 75, pp. 10-11 (Findings 13, 17).

As a result of the AMMs, any unavoidable impacts to natural environment resources will be mitigated through habitat restoration, conservation, and protection. The proposed mitigation package includes the preservation of approximately 1,627 acres of land. *See Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP36673-74. In addition to the Kbb parcel, these sites provide corridors for lynx, marten and other wildlife, large forest blocks for forest breeding birds, high elevation habitat, potential marsh bird habitat, potential northern long-eared bat habitat, beaver flowage, DWAs and MCAs. *Id.* at Bates APP36673-80. In addition, the Applicants will make a payment of \$3,379,281 to the ARM Fund and they have partnered with the National Fish and Wildlife Foundation (“NFWF”) to provide \$3,000,000 of funding over a three-year period for science based conservation projects with the goal of restoring and sustaining healthy forests and rivers in the state. *See id.* at Bates APP36683; *DES Final Decision with Conditions*, App. Ex. 75, p. 2.

The Applicants have properly developed and will implement best practical measures to avoid, minimize and mitigate impacts to the natural environment..

#### 5. Conditions for Post-Construction Monitoring and Reporting

Site 301 .14(e)(7) requires the Subcommittee to consider post-construction monitoring to address potential future impacts to the natural environment. The March 1, 2017 DES Final Permit Decision (*DES Final Decision with Conditions*, App. Ex. 75) addresses this in several ways:

- Wetlands Permit Condition 2 requires that the Applicants follow the plant and wildlife avoidance and minimization measures specified in the plan sheets (*Id.* at 2;)

- Wetlands Permit Condition 7 requires avoidance and minimization measures to be agreed on by NHF&G (*Id.* at 3);
- Wetlands Permit Condition 9 requires continuing coordination with NHB to consider additional monitoring requirements or avoidance measures that may be necessary (*Id.*);
- Wetlands Permit Condition 33 requires monitoring of restored wetland impact areas and remediation if restoration fails (*Id.* at 4);
- Wetlands Permit Condition 36 requires monitoring and reporting of work during construction and inspection and reporting for three full growing seasons after construction at each restoration site (*Id.* at 5);
- Wetlands Permit Condition 13 requires that the Applicants develop a water quality monitoring program (*Id.* at 3);
- Water Quality Certification Condition 10 requires a Monitoring and Operations Plan for Installation of Underground Cable at Surface Water Crossings (*Id.* at 25);
- Water Quality Certification Condition 12 requires a Turbidity Sampling and Sediment Deposition Inspection Plan that requires compliance with the monitoring requirements applicable to NHDOT projects (*Id.*); and
- Water Quality Certification Condition 13 requires a Water Quality Monitoring Plan to Assess Operation that includes pre- as well as post-construction monitoring (*Id.* at 25-26).

In addition, the AMMs include a program to maintain vegetated pathways across the new ROW that will be maintained over time. App. Ex. 124b, Bates APP88780 (plant AMMs), Bates APP88772-73 (wildlife AMMs).

For Kbb, as discussed, the Applicants' mitigation package includes a 6.9-acre parcel that will be managed (and monitored) as pine barrens habitat, adjacent to the USF&W Kbb refuge. *See Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP36679; App. Ex. 124a, APP85593. The Applicants also have adopted a management plan to manage portions of the ROW in the Concord area as Pine Barrens habitat to benefit Kbbs and wild lupine.

*Supplemental Pre-Filed Testimony of Sarah Barnum*, App. Ex. 99, pp. 1-2; *see Natural Resource Compensatory Mitigation Plan*, App. Ex. 72, Bates APP37141, *et. seq.* (Attachment C).

These and other proposed conditions and delegated authority to state agencies are set forth in Part E of this Brief.

6. Conclusion

The Applicants have provided substantial credible evidence that the Project will have minimal to no substantial negative impact on wildlife and their habitats, or on plants and natural communities. Consequently, they have demonstrated by a preponderance of the evidence that the Project will not have an unreasonable adverse effect on the natural environment. Working closely with relevant agencies and complying with their various requests, the Applicants conducted a thorough study of the plants and natural communities, wildlife, and wildlife habitat in the Project area, identifying significant species and critical habitat potentially affected by the construction and operation of the Project. The Applicants assessed potential impacts, even remote impacts, and detailed the measures through which the Project will avoid, minimize and mitigate potential adverse impacts. They worked with the relevant agencies, including F&G, NHB and USF&W, to ensure the scope of their wildlife review and the methodology they employed was satisfactory.

As a result of this comprehensive effort, the Applicants proposed a Project design that effectively avoids and minimizes impacts to the natural environment. The Applicants have worked with various regulatory agencies to develop extensive, protective AMMs/TOYS to further minimize potential impacts to wildlife. The Applicants are also committed to following AMMs to limit impacts to habitats, and environmental monitors will be on site to ensure compliance. Moreover, DES and DOE have approved the permit applications under their authority, establishing clear conditions requiring adherence to the approved AMMs. Finally, the

Applicants have proposed significant land conservation and have committed to providing a payment of \$3.3 million to the ARM Fund and partnering with the NFWF, providing an anticipated benefit the natural environment resources in New Hampshire.

## **E. Public Health and Safety**

The Applicants have proved sufficient facts for the Subcommittee to find that the Project will not have an unreasonable adverse effect on public health and safety. The Applicants have provided substantial credible evidence from some of the same witnesses who testified in the Merrimack Valley proceeding and will employ best practical measures in the manner that led to the SEC's finding that the Merrimack Valley Reliability Project would not have an unreasonable adverse effect on public health and safety. As explained below in light of what the Subcommittee must consider pursuant to Site 301.14 (f), the preponderance of the evidence demonstrates that there will not be an unreasonable adverse effect on public health and safety. As required by Site 301.08 (b), relative to electric transmission facilities, the Applicants filed assessments of the electric and magnetic fields generated by the Project and the risks of collapse of Project structures. In addition, as required by Site 301.08 (d), relative to all energy facilities, the Applicants filed an assessment of operational sound, plans for decommissioning, fire safety and emergency response, and descriptions of additional measures planned to avoid, minimize or mitigate public health and safety impacts relative to blasting, aviation, local roads, traffic control, and co-location with natural gas pipelines.

### 1) Electric and Magnetic Fields

In its August, 2017 Final EIS, the DOE concluded that electric and magnetic fields ("EMF") "generated by underground portions of the Project would be below accepted limits. Overhead portions of the line, including HVDC and HVAC portions, would generate EMFs which would have no impact outside of the transmission route, and minimal impacts within the transmission route. There is no authoritative evidence that exposure to EMFs could increase or create a public health risk." *Final EIS*, App. Ex. 205, p. S-27.

Electric and magnetic fields are produced by natural and man-made sources. Wherever electric current is flowing in any device or a transmission or distribution line, there is both an electric field and a magnetic field present. Northern Pass will be a source of these fields for both the DC and AC portions of the Project. Typical sources of AC EMF include power lines, building wiring, home and office appliances, tools, and electric currents flowing on water pipes. The importance of these sources to overall exposure varies considerably. For example, if a residence is very close to a power line, that source could be the dominant, but not necessarily the only, source of magnetic fields in the home because EMF levels decrease rapidly with distance from a transmission or distribution line. That description also applies to the static magnetic field, static electric field and air ions associated with the operation of portions of the DC line.

Dr. Gary Johnson calculated field levels associated with the Project. *See Pre-Filed Testimony of Gary Johnson, App. Ex. 26; see also Application, App. Ex. 1, Appendix 38.* He used algorithms developed by the Electric Power Research Institute at the High Voltage Transmission Research Center and incorporated by the United States Department of Energy, as well as models developed by the Bonneville Power Administration. His calculations show that the levels of AC magnetic and electric fields are highest under the conductors of the overhead lines within the right-of-way and the static magnetic field is highest above the underground DC line, and the fields in all cases decrease with distance from the respective lines. *Pre-Filed Testimony of Gary Johnson, App. Ex. 26, p. 7-9.*

For the DC portion of the Project, the static magnetic-field level is calculated to be 79 mG or less at the edge of the right-of-way along the Project route under full loading conditions for the Project. For the AC portion of the Project, at the edge of the right-of-way the magnetic-field level was calculated to vary between 0.1 and 92 mG except for a short distance,

approximately 2,000 feet, where it will be 127 mG or less under full loading conditions for the Project. *See Application, App. Ex. 1, Appendix 38.*

At the edge of the right-of-way and beyond, the static electric-field levels from the DC overhead line are 8.8 kV/m or less in foul weather and 5.7 kV/m or less in fair weather. At the edge of the right-of-way, the AC electric-field level due to the AC lines is calculated to vary between 0.0 and 1.7 kV/m along the Project's route except for a short distance of right-of-way, approximately 2,000 feet, where it will be 2.7 kV/m or less. *See Application, App. Ex. 1, Appendix 38.*

Two internationally recognized bodies, the International Commission on Non-Ionizing Radiation Protection ("ICNIRP") and the International Committee on Electromagnetic Safety ("ICES"), a committee of the Institute of Electrical and Electronics Engineers ("IEEE"), have developed guidelines designed to protect the public from the effects of electric and magnetic fields that occur at high exposure levels. The most recent limits on AC internal electric fields within the body (basic restrictions) produced by exposure to AC electric and magnetic fields were set by ICNIRP in 2010. The lowest calculated external field exposures that would cause either of those limits to be exceeded are 9,146 mG for the magnetic field and 26.8 kV/m for the electric fields, which correspond to the ICES basic restrictions and are significantly greater than the fields calculated for the Project.

ICNIRP (2009) and the FDA (2003) have limits on exposure of the public to static magnetic fields and the Project levels will be thousands of times lower and similar to the earth's geomagnetic field. Although there are no limits on static electric fields, the exposures to static electric fields under the overhead portion of the DC line will be below 25kV/m, a level at which the NRPB (2004) noted that annoyance from perception of surface charge on the skin might

occur. The maximum field levels Dr. Johnson calculated for the Project and associated existing lines are below the limits set by the ICNIRP and the ICES. His calculations and the associated evidence clearly shows that the electric and magnetic fields resulting from the Project will not come close to, let alone exceed, any established standard and therefore will not have an unreasonable adverse effect on public health and safety.

Moreover, the Applicants retained Dr. William Bailey to undertake an assessment of the most current scientific literature on health research regarding exposure to these fields. He concluded that the Project will not have an unreasonable adverse effect on public health and safety as a result of electric and magnetic fields. His summary of the scientific research further supports the conclusion of scientific and public health agencies that there are no established effects of EMF on public health and safety at the levels associated with the Project. *See Application, App. Ex. 1, Appendix 37.* Dr. Bailey's conclusion is also fully consistent with the DOE's conclusions.

Since the 1970s, a large number of scientific studies have examined the potential for either short or long-term environmental and health effects of EMFs, and expert panels on behalf of scientific, health, and government agencies have evaluated the available scientific literature on potential EMF effects. These agencies include the US National Institute on Environmental Health in 1998, the International Agency for Research on Cancer ("IARC") in 2002, the National Radiological Protection Board ("NRPB") in 2004, the World Health Organization ("WHO") in 2007, ICNIRP in 2010, and the Scientific Committee on Emerging and Newly Identified Health Risks ("SCENIHR") in 2015. Furthermore, there are currently no known biophysical mechanisms that could explain an effect of long-term exposure on cancer or other disease. With respect to the overall evidence on potential long-term effects, the WHO concluded that current

evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields. None of these agencies conclude that the overall evidence suggests the existence of any adverse long-term health effects from exposure to EMF below scientifically-established guidelines. With respect to both the electric and magnetic fields for the Project, Northern Pass is well below any of the established guidelines discussed above.

2) Tower Collapse

The Applicants have provided substantial credible evidence demonstrating that there is minimal risk of tower collapse. As explained in the Applicants' supplement to their Application filed on February 26, 2106, to comply with the SEC's newly adopted rules, as a matter of practice Eversource addresses the potential risks associated with the collapse or failure of overhead transmission line elements during the course of engineering and throughout the facilities' lifecycle. Because such events are rare, the potential for adverse impacts is minimal.<sup>352</sup>

Eversource employs best practical measures to minimize risks should the failure of a structural element occur, including application of the American Society of Civil Engineers ("ASCE") Manual and Report on Engineering Practice No. 74 "Guidelines for Electrical Transmission Line Structural Loadings" which has several recommendations, such as, the installation of structures designed to withstand heavy longitudinal loads at periodic intervals along the length of a line to limit the potential length of cascading failures, designing suspension structures to withstand differential or broken wire cases, and using historic weather data and events to create specific loading conditions reflective of what a circuit may be subject to over its life should those loading conditions not be characterized by the base loading conditions defined by the National Electric Safety Code ("NESC"). Supporting structures are also designed to

---

<sup>352</sup> The Deerfield Abutters make reference to a handful of extreme anecdotal examples in their brief at p. 29 but provide no evidentiary link to the Project.

comply with Section 24 of the 2012 NESC, which is the most robust design category. *Additional Information to Address Revised SEC Rules*, App. Ex. 2, pp. 13-14.

In addition to the engineering considerations, Eversource has thorough inspection and maintenance programs that call for the inspection of transmission facilities on a cyclical basis to make sure that any deterioration of assets is proactively addressed before it becomes an issue. Lastly, should the integrity of a structure be compromised, the system is configured with relaying systems that detect faults and de-energize the line. Eversource has internal work forces that can be deployed quickly to address any failures as well as a wide spread network of contract line workers who can be engaged to assist when an event occurs. *Id.*

3) Sound

The Applicants have provided substantial credible evidence, as explained in detail below, that the Project will be constructed and operate in conformance with applicable noise requirements. The Applicants retained Douglas Bell to conduct baseline sound surveys along the Project route, to develop acoustic design goals for the Franklin Converter Terminal, the Deerfield Substation expansion, and the Scobie Pond Substation expansion, and review construction noise impacts. See *Application*, App. Ex. 1, Appendix 39. Mr. Bell concluded that sound produced by the proposed Project, meeting the acoustic design goals, “will not produce a noticeable impact on the acoustic environment and will not have an unreasonable adverse effect at all surrounding properties.” *Tr. Day 4/Afternoon Session*, p. 113.

To accurately assess acoustic impacts for the stationary facilities and the Project route, Mr. Bell conducted baseline sound surveys “to characterize lowest background sound levels that might occur ... along the project route.” *Tr. Day 4/Afternoon Session*, p. 40. In order to “obtain a reasonable spacial representation, north to south, as well as to assess different types of communities,” seventeen measurement locations were selected. *Tr. Day 4/Afternoon Session*, p.

41. Measurements were taken during a cold weather season with leaves off the trees, and a warm weather season with foliage and insect sounds present. *See Application*, App. Ex. 1, Appendix 39; *see also Application*, App. Ex. 1, Appendix 38. The results of Mr. Bell's baseline surveys were used by Dr. Gary Johnson "to provide ... background reference information as to what conditions" presently exist along the line. *Tr. Day 4/Afternoon Session*, p. 48; *see also Application*, App. Ex. 1, Appendix 38.

Mr. Bell also assessed stationary facilities sound levels at the Deerfield and Scobie Pond Substations as well as the Franklin Converter Terminal. He then developed acoustic design goals for each of these stationary locations in order to achieve "minimal impact" or less. The goals for each of these locations were provided to the vendors selected to perform the work and have been made part of their contractual performance requirements. At the conclusion of construction, the contractor will demonstrate through field measurements that the Project complies with the acoustic specifications.

In addition, Mr. Bell assessed construction noise impacts resulting from the Project. *See Application*, App. Ex. 1, Appendix 39, Report 5. Due to the temporary nature of most construction components of the Project, "construction noise is not expected to create an appreciable impact on sensitive receptors." *Pre-Filed Testimony of Douglas Bell*, App. Ex. 27, p. 7. Mr. Bell relied on his extensive experience working on utility construction projects to conclude that the effect of construction noise will not be unreasonably adverse and, where necessary, best practical measures will minimize impacts.

Dr. Gary Johnson calculated both audible noise and radio noise from the various segments of the Project. He calculated audible noise along the DC line route from the Canadian border to the Franklin Converter Terminal of 27 dBA or less in fair-weather conditions and 28

dBA or less in foul-weather conditions. *See Pre-Filed Testimony of Gary Johnson*, App. Ex. 26, p. 12. The audible noise levels at the ROW edge along the AC line from the Franklin Converter Terminal to the Deerfield Substation are 18 dBA or less in fair weather and 43 dBA or less in foul weather. *Id.* In all cases, the audible noise levels fall within the range of background noise measured by Mr. Bell. *Id.* Dr. Johnson calculated radio noise at 50 feet from the nearest conductor along the Project's DC and AC line routes, and the Project has been designed consistent with the Institute of Electrical and Electronic Engineers Radio Noise Design Guide for High-Voltage Transmission Lines. *See Application*, App. Ex. 1, Appendix 38, p. 37.

Based on the studies performed by Mr. Bell and Dr. Johnson, Dr. Johnson concluded that the Project would not create any unreasonable adverse effects on sound as “the calculated values are below levels recommended by government and engineering bodies to avoid unreasonable adverse effects.” *Pre-Filed Testimony of Gary Johnson*, App. Ex. 26, p. 14. This conclusion is consistent with the findings of the Department of Energy (“DOE”) in the Final Environmental Impact Statement (“FEIS”) issued in August 2017 that audible noise consistent with the corona effect would not exceed the EPA’s guidance level. *See Final EIS*, App. Ex. 205, p. S-30.

#### 4) Decommissioning

The Applicants have provided substantial credible evidence that, if decommissioning of the Project were ever to occur, in that unlikely event it will be performed pursuant to the plan developed by GZA GeoEnvironmental, Inc. and filed with the SEC on July 22, 2016, which estimates the probable cost of decommissioning to be approximately \$100 million.

Decommissioning of the Project will include: 1) access planning and permitting similar to the approach utilized during construction; 2) sequenced removal of the overhead conductors, insulators, ground and static wires, guy wires, structures and foundations; 3) removal of underground transmission cable and below ground infrastructure to a depth of 48” below grade;

4) plugging of under waterway, highway, or railway directionally drilled conduits; 5) off-site transport of materials for salvage or disposal; and, 6) restoration. Decommissioning will be performed in accordance with established electric utility practices, best management practices, final engineering plans, NPT specifications, and the conditions specified in certificates and permits obtained for the Project. Conventional overhead and underground electric transmission line construction techniques will be used during decommissioning activities.

Pre-construction engineering, design, and permitting will be required prior to initiation of any decommissioning activities. During pre-construction planning, details of accessing the work areas, sequencing of construction activities, and permitting of regulated work would be performed and an updated decommissioning study would be required to sufficiently address the regulations and standards at that time. In general, decommissioning activities will be in reverse of the construction using conventional overhead electric transmission line construction techniques. Following establishment of access roads, preparation of laydown areas, and installation of work pads and pull pads, removal of the structures will be systematically performed in a phased approach.

#### 5) Fire Safety

The Applicants have provided substantial credible evidence that ensures the safety of the public, employees and emergency responders, while protecting property, providing for the continuity of operations, and limiting environmental impact. Because of the unique equipment and operations of the Franklin Converter facility, the prescriptive requirements of the NH State Fire and Building Codes are not applicable and the Project has chosen to utilize a performance based design approach.

The Applicants' fire protection design criteria were developed in coordination with representatives from the City of Franklin and the New Hampshire Department of Safety. *See*

*Application*, App. Ex. 1, Appendix 50. The Fire Safety Design Basis is intended to ensure, among other things, life safety for the public, building occupants and emergency responders, protect property, provide for the continuity of operations, and limit the environmental impact of a fire. All components of the facility's fire protection and life safety design will be approved by a licensed fire protection engineer registered in the State of New Hampshire. *See Application*, App. Ex. 1, Appendix 50, p. 4.

During construction, emergency response plans (including response to fires) will be reviewed and documented daily at the morning safety meeting. Neither NPT nor Eversource plans to engage in live line construction on this Project; therefore, the work presents no fire safety hazards beyond those typically associated with construction projects. If a fire breaks out on the right-of-way while workers are present (either during construction or during future maintenance activities), they would evacuate to the established muster point and call the local fire department.

6) Emergency Response

The Applicants have provided substantial credible evidence that appropriate measures will be employed for purposes of emergency response. As part of their February 26, 2016 supplemental filing to address the SEC's new rules adopted subsequent to their Application, the Applicants filed the Eversource Energy *New Hampshire Electric Operations Emergency Response Plan*. The plan, effective March 5, 2015, includes, among other things, chapters addressing the strategy for emergency operations, organization and assignment of responsibilities, and policy, coordination and command, as well as communications, and advance planning, training and exercising.

In addition, the Applicants' Traffic Management Plan will include strategies to encourage work zone safety, efficient routes for emergency response vehicles, incident management and

enforcement. *See Pre-Filed Testimony of Lynn Farrington*, App. Ex. 15, pp. 4-5. “Local emergency responders will be included in the creation of the Project’s TMP.” *See Supplemental Pre-Filed Testimony of Lynn Farrington*, App. Ex. 91, p. 5. Such local emergency responders will be notified daily, at a minimum, as to the location of the work zone. *Id.* Designated emergency responders will also be given a phone number to reach the Project’s point of contact if real time updates are required. The Traffic Management Plan will be submitted to DOT for approval. *See Pre-Filed Testimony of Lynn Farrington*, App. Ex. 15, p. 5.

7) Blasting

The Applicants have provided substantial credible evidence that any blasting activities will be conducted safely. During construction of the Project, occasional blasting may be required to place transmission line support structures, install transmission lines underground, or for substation construction. The Applicants anticipate that blasting will occur for site development of the Franklin Converter Terminal, Deerfield Substation, Scobie Pond Substation and the transition stations. The locations and amount of blasting required for the trenching operations will be determined during the construction phase as the underground contractor encounters rock and is able to determine the depth and character of rock along the route. *See Supplemental Pre-Filed Testimony of John Kayser*, App. Ex. 89, p. 1.

All laws, ordinances and regulations, including the DOT *Standard Specifications for Road and Bridge Construction*, will be followed in the use, handling, loading, transportation, and storage of explosives and blasting agents. In addition, all blasting contractors that work on the Project will have all required licenses and certifications and will have received training in the safe use and handling of explosives from the International Society of Explosive Engineers. The contractors will be required to submit copies of all licenses, certifications and training in order to

document the fulfillment of those requirements prior to doing any work. *See Supplemental Pre-Filed Testimony of John Kayser*, App. Ex. 89, pp. 1-2.

Prior to commencement of any blasting, the contractor will develop a General Blasting Plan, a Blasting Safety Plan, an Emergency Response Plan and a Pre-Blast Inspection Survey for review and approval by NPT. In addition, the contractor will develop, and submit for approval to NPT, an Individual Blasting Plan for each area a minimum of 24 hours prior to blasting. *See Supplemental Pre-Filed Testimony of John Kayser*, App. Ex. 89, p. 2. The blasting plan will take into account proximity of known wells to where the blasting is being completed. *Tr. Day 8/Afternoon Session*, p. 53. To the extent there are any wells within the area, the Applicants will perform “the testing that is required through the New Hampshire DES.” *Tr. Day 10/Morning Session*, p. 48. As noted by the Applicants engineers, this will likely include a monitoring plan for wells within 500 feet of any blasting activity. *Tr. Day 8/Afternoon Session*, p. 46.

8) Aviation

The Applicants have provided substantial credible evidence that the Project will not affect aviation. NPT has been working with the FAA for Project design purposes since 2010. *See Application*, App. Ex. 1, p. 81. The Project submitted preliminary information in 2011 to the FAA to verify that the Project’s calculated height limitations were within FAA criteria. Discussions with the FAA validated the understanding of the limitations in the area of the Concord Airport and the Mount Washington Regional Airport in Whitefield. The Project has submitted to the FAA all required structure design information for the Mount Washington Regional Airport and received “Do Not Exceed” letters, which means that the structures do not exceed obstruction standards and do not have an adverse effect on navigable airspace. For the Concord Airport, the Project received “Determination of No Hazard” letters for 31 structures requiring that they be marked and lighted in accord with FAA standards, and “Do Not Exceed”

letters for the remaining structures that were submitted for FAA review. *See Supplemental Pre-Filed Testimony of Derrick Bradstreet*, App. Ex. 87, pp. 2-3; *see. Tr. Day 11/Afternoon Session*, pp. 212-213; *see also Tr. Day 43/Morning Session* p. 102.

Helicopters are used by construction contractors and electric utility operations and maintenance personnel as an essential tool in the construction of transmission lines, particularly in remote or inaccessible areas. *Id.* Helicopters will also be used for wire stringing operations, bringing workers, materials and equipment to the worksite, and for inspecting existing or newly-constructed transmission lines. *Id.* at 81-82 It may not be unusual for three or more helicopters to be working on the Project simultaneously during peak construction periods. *Id.* at 82. The tasks generally performed include pulling in lead line for wire stringing, placing workers on pole tops for wire clipping and re-numbering, long-lining, setting and removing stringing blocks, inspecting new or de-energized lines prior to energizing them, and flying in and setting pre-assembled structures. *Id.*

Because helicopter work involves mostly low flight paths, often in common and intersecting ROWs, flights must be monitored and controlled to keep the work as safe as possible. *Id.* In addition to the standard FAA protocols, all proposed helicopter flight schedules are sent to a central contact in the utility's control center and distributed to a predetermined flight contact group consisting of individuals involved in the operation of the electrical system. The notification includes an aircraft description and contact information. The Eversource control center will be contacted before liftoff and upon landing.

9) Crossing Local Highways

The Applicants have provided substantial credible evidence that the Project will not unreasonably interfere with the safe, free, and convenient use of locally maintained highways for public travel. NPT seeks permission to install the Project, including conduit, cable, wires, poles,

structures and devices across, over, under and along certain locally-maintained highways, including 71 aerial crossings and three underground roadway installation segment. *See Application*, App. Ex. 1, p. 82. The underground sections are identified by town and roadway. *Id.* The SEC has exclusive authority to grant permission to an energy facility to utilize locally-maintained highways. In *Public Service Company of New Hampshire v. Town of Hampton*, 120 N.H. 68 (Jan. 31, 1980), the Court noted that the "declared purposed of RSA ch. 162-F [forerunner to RSA ch. 162-H] is to provide a resolution, in an 'integrated fashion,' of all issues involving the routing of transmission lines." *Id.* at 70. The Court held that the Town of Hampton could not regulate transmission lines associated with the Seabrook Nuclear Station, noting that the SEC protects the public health and safety of towns with respect to transmission lines covered by the siting statute. NPT has filed a request with the DOT to cross state-maintained highways and has included that request with the Application as required by RSA 162-H:7 and Site 301.03 (d). *See Application*, App. Ex. 1, Appendix 9.

RSA 162-H: 16, IV provides that the SEC must find, among other things, that issuance of a certificate of site and facility will not have an unreasonable adverse effect on public health and safety. Utilities of all varieties, including power lines, have long been recognized as appropriate users of public highways, so long as the facilities do not conflict with the general public's superior use. *See McCaffrey v. Concord Electric Co.*, 80 N.H. 45, 46-47 (1921). In *King v. Town of Lyme*, 126 N.H. 279, 284 (1985), the Court affirmed that a utility's use of a highway easement is appropriate since New Hampshire has never considered highway purposes to be limited to the transportation of movable vehicles, persons or property.

The authority to erect electric transmission lines and underground cables in state and local highways is codified at RSA 231:160. The standard for locating poles, lines, and

underground cables is set forth at RSA 231:168, which states that the lines "will not interfere with the safe, free and convenient use for public travel of the highway." To further that process, the DOT has adopted certain standards, which are set forth in its Utility Accommodation Manual ("UAM"), dated February 24, 2010. This filing constitutes notice of these proposed crossings, associated pole placements and locations in accordance with the procedures set forth in the UAM, Appendix G-3.1-2.

The New Hampshire Supreme Court has made it clear that the authority to license placement of power lines, poles and underground conduit within highways is regulatory in character and must be exercised in a non-exclusionary and reasonable manner. In *Town of Rye v. Pub. Serv. Co. of New Hampshire*, 130 N.H. 365, 369 (1988), the Court found that a crossing application may be denied only for a public safety-based reason.

NPT seeks approval from the SEC to install its Project within, along, over, under, and across locally-maintained highways. This request mirrors the approach followed, and the standards applied, in the request made to DOT for state-maintained highways. With respect to the underground highway installation sections in the towns of Clarksville and Stewartstown, NPT proposes that the SEC apply the DOT Standard Specifications for Road and Bridge Construction and the provisions, instructions, and regulations set forth in the DOT's standard excavation Permit. Furthermore, NPT proposes that the SEC condition approval of a certificate, to the extent necessary, on compliance with such standards. Accordingly, Project plans for aerial crossings and underground sections within highways are provided at the 30% design level, which is the commonly accepted level of detail for initial permit applications and consistent with DOT practice. *See Application*, App. Ex. 1, Appendix 9 and 10.

As the DOT permitting process moves forward, further refinements and more information will be incorporated. In addition, appropriate traffic management and control plans, as well as temporary access requests will be developed as more field detail, and construction means and methods become available during the approval process. As explained in Mr. Bradstreet and Mr. Kayser's testimony, the Project will not unreasonably interfere with the safe, free, and convenient use for public travel of locally maintained highways, and it will not have an unreasonable adverse effect on public health and safety. *Pre-Filed Testimony of Derrick Bradstreet*, App. Ex. 12, p. 2.

10) Pipeline Interference Assessment

The Applicants have provided substantial credible evidence that the Project will be safely co-located with the Portland Natural Gas Transmission System ("PNGTS") natural gas pipeline. Mr. Bradstreet, the lead design engineer for the Project, addressed issues with respect to co-location of the Project with PNGTS in both his pre-filed and supplemental pre-filed testimony. *See Pre-Filed Testimony of Derrick Bradstreet*, App. Ex. 12, pp. 7-8; *see also Supplemental Pre-Filed Testimony of Derrick Bradstreet*, App. Ex. 87, p. 3. Subsequently, the Applicants filed with the SEC, on June 30, 2017, a Preliminary Interference Assessment ("PIA") prepared by Corrpro Canada, Inc. ("Corrpro") regarding the possible effects of co-location of the Project, and re-location of an existing PSNH transmission line, with PNGTS along approximately twelve miles of the Project route. *See Preliminary Interference Assessment (Co-Location Study)*, App. 179.

As Mr. Bradstreet testified, the Project will coordinate with PNGTS to assure that structures will be aligned to provide safe distances for construction and maintenance activities and a detailed assessment will be completed during the execution phase when design changes or

mitigation requirements will be finalized with PNGTS.<sup>353</sup> *Pre-Filed Testimony of Derrick Bradstreet*, App. Ex. 12, p. 8; *Supplemental Pre-Filed Testimony of Derrick Bradstreet*, App. Ex. 87, p. 3. Furthermore, Corpro identified in its PIA the interference topics that would be addressed in discussions with PNGTS, consistent with standard practice on high-voltage transmission lines throughout the industry.<sup>354</sup> Corpro concluded that there are some potential areas of interest, based on worst case scenario assumptions, but that there are well-understood mitigation techniques available to reduce and risks to acceptable levels. *Preliminary Interference Assessment (Co-Location Study)*, App. 179, p. 10.

In addition, as noted in the Preliminary Assessment and testified to by Mr. Samuel Johnson, further study is warranted and will be completed when the overhead design has progressed to the next phase. *Tr. Day 43/Afternoon Session*, p. 93. To oversee this further assessment, the Applicants propose that the SEC delegate authority to the PUC to monitor and enforce measures identified in the Project's final interference study and to condition the Certificate on the Applicants coordinating its construction efforts with PNGTS.

11) Traffic Control Measures

As explained in Mr. Bradstreet, Mr. Kayser, and Ms. Farrington's pre-filed and supplemental pre-filed testimony and exhibits, and during multiple days of examination before the Committee, installation of the NPT will be mitigated properly so as not to unreasonably interfere with the safe, free, and convenient use of local and state maintained highways. *See, e.g., Pre-Filed Testimony of Derrick Bradstreet*, App. Ex. 12, p. 2. The Project has retained

---

<sup>353</sup> Mr. Bowes also testified that co-locating high voltage electric transmission lines and gas pipelines in the same corridor is "not a new thing" and that both Eversource and National Grid have "already used utility corridors for decades to co-locate gas transmission and electric transmission." *Tr. Day 10/Afternoon*, pp. 119–20.

<sup>354</sup> Mr. Bowes testified that once the interference study is complete the Applicants would have discussions with the Portland Natural Gas Company. *Tr. Day 10/Afternoon*, p. 14.

Louis Berger to ensure that the necessary plans are developed, finalized, and implemented during construction of the project, including a transportation management plan and traffic control plans.

Traffic control plans will be implemented utilizing traffic control devices such as cones and signing to ensure the safe and efficient movement of the traveling public. The plan will conform to the NHDOT's *Construction Sign Standards*, the State of New Hampshire *Flagger Handbook*, and standards set forth in the Federal Highway Administration ("FHWA") *Manual on Uniform Traffic Control Devices* ("MUTCD"), which is a required condition of the NHDOT's excavation permit. The draft traffic control plans have been submitted to NHDOT for approval. To the extent the design is modified by DOT during the exception process, the traffic management plans will be altered to reflect any changes made by DOT to the design.

Once all traffic control plans are developed and finalized, the Applicants will develop a transportation management plan, that includes additional traffic analysis and recommended mitigation, as well as: Traffic control plans for each construction location within the roadway; Intelligent Transportation Systems necessary to improve level of service; Construction timing limitations; Public outreach requirements; Safety considerations; Roles and responsibilities to ensure the implementation of the transportation management plan throughout construction; and Strategies to encourage work zone safety, efficient routes for emergency response vehicles, incident management and enforcement. *Pre-Filed Testimony of Lynn Farrington*, App. Ex. 15, pp. 4–5. Specific mitigation measures will be implemented along each project segment that will include specific detour routes, signal timing and phasing adjustments, as well as public outreach campaigns.

Prior to construction, the final traffic control plans and transportation management plan will be submitted to DOT for approval and will include refined traffic control plan layouts;

location specific information; names for key roles; address comments from the emergency responders; address comments from the construction phasing team; address comments from the DOT; and elaborate on the general strategies proposed.<sup>355</sup>

The Transportation Management Plan is required for all complex traffic control plans and/or projects that are likely to cause disruption.<sup>356</sup> It is a larger scale document that is designed to consider the safety of workers and the travelling public and to limit potential delays due to the traffic control measures being implemented during construction. All traffic management components of a Certificate issued for the Project will be referred to in the Transportation Management Plan and, therefore, task leader responsibilities, inspection and monitoring requirements will refer to these specific requirements.<sup>357</sup>

During construction, the Applicants will comply with DOT's condition that requires that construction cannot impact more than a single travel lane on state-maintained highways without prior approval from DOT.<sup>358</sup> The Project anticipates using a rolling work zone with a varying length based on traffic volumes. Access to driveway and side street locations will be maintained within the extents of the work zone at any given time.<sup>359</sup> The Applicants will also follow all DOT traffic control requirements, time of year restrictions,<sup>360</sup> and will provide suitable

---

<sup>355</sup> *Pre-Filed Testimony of Lynn Farrington*, App. Ex. 15, p. 7.

<sup>356</sup> *Supplemental Pre-Filed Testimony of Lynn Farrington*, App. Ex. 91, p. 3.

<sup>357</sup> *Pre-Filed Testimony of Lynn Farrington*, App. Ex. 15, p. 5.

<sup>358</sup> *NHDOT Recommended Approval with Permit Conditions*, App. Ex. 107, p. 6 (“In no case shall the excavation be located where it would impact more than a single lane of traffic at any one time without prior Department approval and implementation of appropriate traffic control measures.”).

<sup>359</sup> *Supplemental Pre-Filed Testimony of Lynn Farrington*, App. Ex. 91, p. 4.

<sup>360</sup> *NHDOT Recommended Approval with Permit Conditions*, App. Ex. 107, pp. 7–8.

unrestricted ingress and egress to properties abutting the highway at all times.<sup>361</sup> Based on this approach the proposed detour routes and preferred routes are expected to have a minimal impact.

The Applicants have requested that the SEC delegate approval to the DOT to approve and oversee the implementation of all traffic control plans (including traffic measures for locally maintained roads) and the Transportation Management Plan. In combination with the Applicants' proposed mitigation measures related to traffic and DOT oversight, the Project will not have an unreasonable adverse impact on public safety during construction.<sup>362</sup>

## 12) Opposition Arguments

No expert testimony or credible evidence of any sort was offered to dispute any of the conclusions reached by the Applicants' witnesses with respect to public health and safety. Some intervenors, however, raised the specter of potential effects of the Project on public health and safety. For instance, several intervenors provided third party reports and indicated concerns about EMF and sound.

During the course of the hearings, CFP challenged Dr. Bailey, positing, for example, that no definitive conclusions can be drawn about potential EMF effects based on the current available data. *Tr. Day 4/Morning Session*, p. 38. Dr. Bailey, among other things, cited research and conclusions reached by the World Health Organization ("WHO"), refuting CFP's characterization of the status of EMF research. While CFP suggested that research may not be complete, it also pointed out the WHO conclusion that: "Despite extensive research to date, there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human

---

<sup>361</sup> *NHDOT Recommended Approval with Permit Conditions*, App. Ex. 107, p. 9.

<sup>362</sup> *NHDOT Recommended Approval with Permit Conditions*, App. Ex. 107, pp. 6-7.

health.” (p. 40).<sup>363</sup> And, in response to questioning the following day, *Tr. Day 5/Morning Session*, p. 136, Dr. Bailey stated “Well, I think there's been a lot of research on this. The WHO has commented that there's been more research on EMF than most of the 50,000 or so chemicals that have in everyday use.” It was based on his systematic review of all this evidence that Dr. Bailey concluded that the “weight of the scientific evidence clearly supports that conclusion that the Project would not pose an unreasonable adverse effect to public health and safety.” *Pre-Filed Testimony of William H. Bailey*, App. Ex.25, pp. 16-17.

Several intervenors also expressed concerns associated with the effect of EMF on implanted medical devices, including the Deerfield Abutters who cited the proximity of the Sherburne Woods elderly community and the potential effect of EMF on residents with pace makers and other medical devises. *See Post-Hearing Brief of the Deerfield Abutters*, Docket No. 2015-06, p. 29. Based on his calculations of the EMF levels in that route section, Dr. Johnson and Dr. Bailey responded that the field levels at the community buildings would be below levels at which devices complying with IEC (International Electrotechnical Commission) standards would be affected. *Tr. Day 5/Morning Session*, pp. 10-12. They also consulted the FDA’s MAUDE database of reported interference to implanted medical devices and did not find any reports in this database of interference with cardiac pacemakers and implanted devices by transmission lines. *Tr. Day 5/Morning Session*, pp. 12-13

In addition, counsel for GCC suggested that construction noise would have an unreasonably adverse effect. However, she did not take into account the actual progress of

---

<sup>363</sup> CFP recaps the exchange with Dr. Bailey in its brief, and suggests a condition requiring the Applicants to incorporate no-cost and low-cost design techniques to lower exposure to EMF. *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 135. The Applicants have already incorporated such design techniques. See, for example, discussion of phase optimization. Application, Ex. 1, Appendix 38, p. 53. The Ashland to Deerfield Non-Abutters take the concept to an illogical extreme, however, arguing that there is no more effective low-cost measure than denying the Certificate. *See Ashland to Deerfield Non-Abutting Property Owners Intervenor Group Post-Hearing Brief*, Docket No. 2015-06, p.17.

underground construction activity in this case and the distance potential receptors would be from construction activity, when she suggested that the underground construction would result in prolonged impacts. *Tr. Day 4/Afternoon Session*, p. 123.

Dr. Campbell McLaren from the Bethlehem-Plymouth Abutters group conveyed concerns about the potential use of fly ash during the course of construction. He contended, without knowledge of the type of fluidized thermal backfill that will be used, or whether it will contain fly ash, that fly ash may contain materials including arsenic, mercury, lead, as well as other potentially harmful constituents. *Tr. Day 10/Afternoon Session*, p. 24. As explained below, Dr. McLaren's concern is unwarranted.

Finally, Mr. Cunningham, on behalf of Lagaspence Realty, has argued that co-location of the Project with PNGTS, along with existing PSNH transmission facilities, in the existing PSNH right-of-way "poses safety risks" and "is a threat to the structural integrity of the steel pipeline." *Objection to Applicants' Motion for Rehearing*, Docket No. 2015-06, p. 1 (August 8, 2017). He takes the position that the Preliminary Interference Assessment filed by the Applicants is not sufficient for the Subcommittee to find that there is no unreasonable adverse effect on public health and safety. Mr. Cunningham has speculated often about the potential impact of the Project on PNGTS, but he has failed to provide any credible evidence that the Project cannot or will not be co-located safely with respect to PNGTS. The Dummer-Stark-Northumberland Group repeats these arguments in its brief but fails to add anything new. The preponderance of the evidence on this issue supports the Applicants' position that co-location will be accomplished safely.

### 13) Conclusion

The Project will not have an unreasonable adverse effect on public health and safety. Consistent with the requirements of the SEC rules, the Applicants: 1) assessed electric and

magnetic fields, the risk of collapse of towers, poles and other supporting structures, and operational sound; 2) provided a decommissioning plan prepared by an independent, qualified person with demonstrated knowledge and experience; 3) developed plans for fire safety and emergency response; and, 4) described measures to address blasting, aviation, and the use of local highways. For each aspect of public health and safety, the Applicants have provided substantial credible evidence that there will be no unreasonable adverse effects resulting from the construction and operation of the Project. The work and research performed by the Applicants supports by a preponderance of the evidence that the Project will not have an unreasonable adverse effect on public health. In each instance, the Applicants have demonstrated that they have taken effective measures to avoid, minimize or mitigate potential adverse effects and that the measures they have taken represent best practical measures as required by the relevant permitting authority or industry standard.

In particular, the assertions made by the intervenors and CFP with respect to noise and/or EMF do not support a finding that the Project will have an unreasonable adverse effect on public health and safety. In both cases, there has been no showing of any methodological flaw or error in the research or calculations performed by Mr. Bell, Dr. Johnson, or Dr. Bailey. Moreover, in both cases, the results are consistent with applicable standards, prior SEC decisions, and the conclusions of the DOE in the Final EIS.

To the extent the Project will create noise along the AC and DC portions of the Project, the audible noise levels fall below the levels recommended by governmental and professional agencies to ensure no unreasonable adverse effect on public health. With respect to construction related noise, any effects would be temporary in nature and duration, and would be managed in accord with best practical measures.

As for EMF, the literature review conducted by Dr. Bailey supports the conclusion that the Project will not have an adverse effect on public health and safety by a preponderance of the evidence and is supported by research conducted by numerous Federal and international agencies. The Ashland to Deerfield Non Abutters argue at pp. 13-16 of their brief to the contrary but do not supply substantial credible evidence to support their position. In addition, the Project does not pose any threat to individuals with implanted medical devices because the Project will comply with the ICNIRP standards, which provides protections against interference with implanted medical devices.<sup>364</sup> Finally, the Applicants position is supported by the DOE, which concluded that the proposed Project “would generate electric and magnetic fields, but there would be no impact of the Project due to EMFs outside the transmission route, and minimal (not harmful) potential impacts due to AC electric fields within the transmission route.” *Final EIS*, App. Ex. 205, p. S-26.<sup>365</sup>

The use of fly ash during construction of the Project does not pose any danger to public health and safety. As noted by the Applicants, fly ash is a common constituent of fluidized thermal backfill, which will be used during underground construction of the Project. *Tr. Day 10/Afternoon Session*, p. 20. The use of fly ash is not only a common practice in the construction

---

<sup>364</sup> *Tr. Day 5/Morning Session*, p. 11-12 (Noting that in the case of magnetic fields, the lowest level of guidance for not Exceeding Exposure, in term of potential effect on implanted medical devices “is a thousand milligauss. So, the magnetic field levels on the right-of-way and outside the right-of-way are well below a thousand milligauss. And, so, the magnetic field would not be an issue.” In addition, with respect to the electric field, the levels are within the levels allowed on the right-of-way and even within, where the levels are reduced by the presence of vegetation.)

<sup>365</sup> In their brief, the Joint Munis allege that relocation of a PSNH 115 kV transmission line in the right-of-way adjacent to 41 Hoitt Road in Concord “raises issues relative to compliance with basic restriction[s] for exposure of the general public to EMFs” and they conclude that there will be “unreasonable public health and safety concerns.” *Post Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South, and 3 North*, Docket No. 2015-06, pp.129-130. The design of the Project, including relocation of all PSNH facilities, is consistent with all applicable codes including the NESC and all calculated values for EMF are well below field levels that would exceed ICES or ICNIRP restrictions. Consequently, the Joint Munis fail to prove their proposition by a preponderance of the evidence.

industry, but it has been permitted by DES as a means of recycling a byproduct associated with the combustion of coal. *See* App. Ex. 158; *see also* App. Ex. 159; *see also* App. Ex. 160; *see also* App. Ex. 161; *see also* App. Ex. 177; *see also* App. Ex. 494.

Lastly, the co-location of natural gas pipelines and high-voltage electric transmission lines is a common occurrence worldwide and the potential effects are well known. The principal safety issue concerns appropriate design for locating and grounding of the electrical facilities in close proximity to a pipeline. Any potential impacts on public health and safety are preventable through coordination between the Applicants and PNGTS to assure that appropriate distances are maintained between facilities and that the pipeline is properly grounded. To achieve this end, the Applicants recommend that the Subcommittee adopt a condition that requires coordination between the Applicants and PNGTS and that the PUC be delegated oversight authority to monitor and enforce the necessary coordination. *See* Applicants' Proposed Condition No. 27.

#### **IV. Issuance of a certificate will serve the public interest.**

The Applicants have proved sufficient facts for the Subcommittee to find that the issuance of a certificate for the Project will “serve the public interest,” which is the new finding that the Legislature added to RSA 162-H:16, IV in 2014. As explained below, applicants in the past only had to demonstrate their capabilities, and show that the proposed project would not unduly interfere with the orderly development of the region and not have unreasonable adverse effects. Hence, the new finding requires a showing that there are positive attributes, not just that there are no undue or unreasonable negative consequences. Consistent with the approach used by the SEC in the Antrim and Merrimack Valley proceedings, the Applicants have demonstrated by a preponderance of the evidence that the Project will provide significant benefits, thus serving the public interest.

Through the testimony of Mr. Quinlan, Ms. Frayer, Dr. Shapiro, Mr. Andrew, and others, the Applicants demonstrate the extensive benefits that the Project will bring to New Hampshire and the region. Northern Pass serves the public interest by providing low carbon, competitively priced power from HQ to customers in New Hampshire. As a result, Northern Pass will lower energy costs, increase GDP, create jobs, increase the tax base, reduce emissions, diversify regional power supply, enhance electric system reliability, and advance state and regional energy and environmental policies.

Through the Forward New Hampshire Plan, NPT will also commit \$200 million for community betterment, tourism, clean energy innovation, and economic development; sponsor a \$7.5 million North Country Job Creation Fund; reserve 5,000 acres for natural resource preservation, recreational activities, and additional mixed uses important to the North Country’s future; upgrade the Coös Transmission Loop; and, partner with the National Fish and Wildlife Foundation to restore and sustain healthy forests and rivers in New Hampshire. In total, NPT

will provide over \$3 billion in benefits to New Hampshire in coming years without any monetary contribution from New Hampshire residential and business customers.

The significant benefits that accrue from the Project are discussed in greater detail in Part C, section II on the orderly development of the region. Just as there is no real dispute that the Project does not interfere with the orderly development of the region, there can be no real dispute that the Project provides significant benefits. Even if one were to assume for the sake of argument that the electricity market or other benefits were reduced to reflect concerns voiced by CFP witnesses, the benefits would still be significant.

Below, the Applicants lay out the development and application of the public interest finding. Among other things, the Applicants specifically address the arguments made by CFP, SPNHF and others in their briefs that the Subcommittee should treat the public interest finding as an independent balancing or net benefits test – an approach that if utilized would render the other three findings meaningless. Of paramount import, the Applicants point to the SEC decision in its Rulemaking, Docket No. 2014-04, where it acceded to the determination of the Joint Legislative Committee on Administrative Rules (“JLCAR”) that using a balancing or net benefits test to find whether an energy facility would serve the public interest was contrary to legislative intent.

#### **A. Legislative and Rulemaking History of Public Interest Finding**

In 2014, as a result of Senate Bill 245 (“SB 245”), the Legislature added RSA 162-H:16, IV (e), which requires a finding that a Certificate will serve the public interest. As it made its way through the legislative process, SB 245 included a pointed debate over the nature of the public interest finding that would be required of the SEC. That debate focused primarily on whether to adopt a net benefits test, which was ultimately rejected.

When SB 245 was initially considered by the Senate Energy and Natural Resources Committee, it included as the new, fourth required finding under RSA 162-H:16, IV, the following:

(e) The site and facility will serve the public interest when taking into account:

- (1) The net environmental effects of the facility, considering both beneficial and adverse effects.
- (2) The net economic effects of the facility, including but not limited to costs and benefits to energy consumers, property owners, state and local tax revenues, employment opportunities, and local and regional economies.
- (3) Whether construction and operation of the facility will be consistent with federal, regional, state, and local policies.
- (4) Whether the facility as proposed is consistent with municipal master plans and land use regulations pertaining to (i) natural, historic, scenic, cultural resources and (ii) public health and safety, air quality, economic development, and energy resources.
- (5) Such additional public interest considerations as may be deemed pertinent by the committee.

SB 245 was considered by the full Senate and referred to the Committee on Finance, which removed the net benefits test. It adopted instead language requiring that issuance of a Certificate will “serve the public interest.” It is this formulation of the public interest element that was ultimately enacted as RSA 162-H:16, IV (e).

As part of the rulemaking process required by the 2014 amendments to RSA Chapter 162-H, the SEC was directed to undertake a rulemaking that included criteria for siting energy facilities under RSA 162-H:16, IV. In its October 2, 2015 Final Proposal to the Joint Legislative Committee on Administrative Rulemaking (“JLCAR”), the SEC, among other things, proposed criteria relative to finding whether an energy facility would serve the public interest that spoke in terms of considering the “beneficial and adverse environmental effects” as well as the “beneficial and adverse economic effects” of a facility.

The proposed rule, set forth below, closely resembled the public interest language that was removed during the legislative process, making cosmetic changes, such as, substituting “beneficial and adverse effects” for “net effects.” JLCAR Staff Comments on Potential Bases for an Objection on Legislative Intent, at p. 3, noted that the “language describes public interest by referring to several different criteria. While these criteria do not include the phrase ‘net,’ criteria (a) and (b) apparently do refer to net requirements.”

Site 301.16 Criteria Relative to Finding of Public Interest. In determining whether a proposed energy facility will serve the public interest, the committee shall consider:

- (a) The beneficial and adverse environmental effects of the facility, including effects on air and water quality, wildlife, and natural resources;
- (b) The beneficial and adverse economic effects of the facility, including the costs and benefits to energy consumers, property owners, state and local tax revenues, employment opportunities, and local and regional economies;
- (c) The extent to which construction and operation of the facility will be consistent with federal, regional, state, and local plans and policies, including those specified in RSA 378:37 and RSA 362-F:1;
- (d) The municipal master plans and land use regulations pertaining to (i) natural, scenic, historic, and cultural resources, and (ii) public health and safety, air quality, economic development, and energy resources; and
- (e) The extent to which siting, construction, and operation of the facility will have impacts on and benefits to the welfare of the population, the location and growth of industry, historic sites, aesthetics, the use of natural resources, and public health and safety, consistent with RSA 162-H:1. (Emphasis supplied.)

On October 16, 2015, JLCAR entered a preliminary objection to the SEC’s proposed rule on the grounds that the proposed rule was a net benefits test contrary to legislative intent. The SEC responded to the preliminary objection on November 25, 2015, removing the net balancing language, i.e., references to beneficial and adverse effects, and substituting instead references to factors included in the Declaration of Purpose in RSA 162-H:16-1. JLCAR ultimately approved the revised version of the rule, which is set forth further below.

## **B. Public Interest Standards**

The statutory scheme established by the Legislature for the issuance of a Certificate is fundamentally different from the one it established, for example, to determine when an entity may commence business as a public utility. The four-part test that the Applicants must meet for a Certificate in this proceeding is not a stand-alone public interest test. In other words, the Legislature did not simply say that, in order to issue a Certificate, the SEC shall find that an energy facility is in the public interest.

A number of examples of stand-alone public interest tests can be found in statutes administered by the PUC, including: RSA 374:26, which governs permission to engage in business as a public utility; RSA 374:30 and 33, which govern public utility mergers and acquisitions; and, RSA 369:1, which governs the issuance of securities. Respectively, under RSA 374:26 the PUC may grant authority to commence business when it “would be for the public good,” under RSA 374:30 a utility may transfer or lease its franchise, works or system when the PUC finds “it will be for the public good,” under RSA 374:33, a utility may acquire stock when the PUC finds it “lawful, proper and in the public interest,” and, under RSA 369:1 a utility may issue securities when the PUC finds that it is “consistent with the public good.”

As noted above, pursuant to RSA 374:26, the PUC may grant permission to commence business as a public utility when it is for the public good. In determining when to permit an entity to operate as a public utility in New Hampshire, the PUC must make that single finding. The PUC was provided little additional guidance by the Legislature, although due process is required. The PUC has interpreted the statute over time, and through precedent fleshed out the test for determining the public good, focusing on whether an entity has the financial, technical and managerial capability to operate and maintain its business.

The Legislature, however, took a very different approach with respect to the construction of energy facilities in New Hampshire by providing significant guidance to the SEC in the form of four mandatory findings. As a result, it is clear that the SEC has far less discretion, that is, it is more guided or constrained than the PUC is when the PUC renders a decision under a stand-alone public interest test. But see, *Appeal of Pinetree Power, Inc.* below for an example of a guided public interest test administered by the PUC.

### **C. Statutory Construction**

A number of basic rules of statutory construction are pertinent to determining what it means to “serve the public interest” in the context of issuing a Certificate under RSA 162-H:16, IV. The New Hampshire Supreme Court has said that it looks to the plain and ordinary meaning of words; construes statutes so that they do not contradict each other; interprets statutes not in isolation but in the context of the overall statutory scheme; construes statutes so that they lead to reasonable results; construes the various statutory provisions harmoniously; examines the statute’s overall objective; and, looks to legislative history. See, e.g., *Appeal of New Hampshire Right to Life*, 166 N.H. 308, 311 (2014), *Petition of James M. Mooney*, 160 N.H. 607, 609-610 (2010), *Appeal of Northern New England Telephone Operations, LLC*, 165 N.H. 267, 271 (2013), *In re Pennichuck Water Works, Inc.*, 160 N.H. 18, 27 (2010), and *Appeal of Pinetree Power, Inc.*, 152 N.H. 92, 96 (2005), which is discussed further below.

It is critical as a matter of statutory construction to recognize that the Legislature did not repeal the three existing findings, but added a fourth, and thus all four findings must necessarily be applied in a way that they do not contradict one another. In addition to being contrary to legislative intent, a net benefits test would lead to contradictory results. Consequently, the Subcommittee must harmonize the fourth finding with the other three so that they each maintain

their vitality and are not subsumed by the fourth. If the Legislature had intended to make the fourth finding superior to the others, it could have and would have done so.

Unlike the stand-alone PUC public interest tests, the public interest element of the four-part SEC test is guided or limited by the context of the other three required findings. In order to issue a Certificate in this proceeding, RSA 162-H:16, IV requires the SEC to find that: (1) the applicant has the financial, technical and managerial capabilities to construct and operate the facility; (2) that the facility will not unduly interfere with the orderly development of the region; (3) that the facility will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety; and, (4) that the project serves the public interest. In making a finding that the project will serve the public interest, the SEC must harmonize that finding with the previous three separate, yet equally important considerations.

Under a net benefits or balancing approach, the SEC could arguably weigh the impacts and benefits of an energy facility in a manner of its own devising. Such an approach, however, would render meaningless the findings regarding undue interference and unreasonable adverse effects, and would be contrary to legislative history, which shows that a net benefits test was considered and rejected.

In order to lead to a reasonable result, one in which the parts of the test do not contradict one another, which comports with the plain meaning of the statutory language, and which is consistent with legislative history, to “serve the public interest” should be read to require that an applicant demonstrate that a facility will provide benefits, which is something the SEC had not been required to consider prior to the 2014 amendment. The new finding should not be read to

include consideration of adverse effects or impacts that are the subject of other findings, which is the only sure way to give full force and effect to each of the four parts.

#### **D. Supreme Court Decisions**

The general rule for what constitutes the public good or public interest in the case of a stand-alone public interest test is set forth in *Grafton County Electric Light & Power v. State*, 77 N.H. 539 (1915). In that case, the Court concluded, in the context of a statute relative to the transfer of property by public utilities, that the measure described by the Legislature as the public good “is equivalent to a declaration that the proposed action must be one not forbidden by law, and that it must be a thing reasonably to be permitted under all the circumstances of the case.” *Id.* As noted above, however, the SEC has not been charged with applying a stand-alone public interest test and its discretion is as a consequence not so broad.

A sounder analytical basis for examining the breadth of the SEC’s discretion when considering whether an energy facility will serve the public interest is found in *Pinetree Power, Inc.* There the Court reviewed a PUC decision applying RSA 369-B:3-a, which provided that PSNH may modify a generation asset if the PUC finds that it is “in the public interest of retail customers of PSNH to do so, and provides for the cost recovery of such modification or retirement.” *Appeal of Pinetree Power, Inc.*, 152 N.H. at 97. In that instance, the Legislature did not give the PUC the broad discretion it did in the other statutory provisions noted above, but provided additional guidance.

In *Pinetree Power, Inc.*, the PUC had approved a modification by PSNH to the fossil fuel-fired Schiller Station to permit the burning of wood. The PUC concluded that the “project yields certain overall public policy goods such as economic benefits and environmental improvements.” *Id.* at 96. It also found that such positive contributions, combined with favorable rate effects, served as a basis for determining that the project was in the public interest

of the retail customers of PSNH. Also of note, the Court found that there was no basis for the argument by opponents that the PUC should have applied a net benefits test. The Court stated that there was no basis in the statutory scheme or case law for applying such a test.

The Court considered the nature of the public interest-related test in the *Pinetree Power, Inc.* case in the context of the overall statutory scheme and it also found the legislative history to be instructive. The PUC, moreover, focused on public policy goals, such as economic benefits and environmental improvements, in rendering its decision. The SEC should take the same approach employed by the Court and the PUC, which is to reject the net benefits test and focus on the benefits that the Project will provide.

#### **E. Purpose Section**

As noted above in the context of rulemaking history, the SEC rule relative to public interest criteria uses language from the Purpose section of RSA Chapter 162-H, i.e., RSA 162-H:1, which has followed the same formula for decades. *See* 1991 Laws of NH 295, 1998 Laws of NH 264, 2009 Laws of NH 65, and 2014 Laws of NH 217. The Legislature has long recognized that there will be significant impacts from the siting of energy facilities. It has found that the public interest requires that a balance be maintained between the environment and the need for new facilities, or more recently, among potential significant impacts and benefits. It therefore established a procedure for the review and approval of proposed facilities.

The procedure established by the Legislature included, among other things, the creation of the Site Evaluation Committee, the use of adjudicative hearings, and the requirement that the SEC make certain enumerated findings in order to issue a Certificate. The three core findings have remained in place, namely: an applicant must demonstrate financial, technical and managerial capability; a facility must not have unreasonable adverse effects; and, a facility must not unduly interfere with the orderly development of the region. Certain findings, such as

determining the need for a facility, were eliminated in recognition of the restructuring of the electric industry. More recently, the finding was added requiring that a facility serve the public interest.

It is important to keep the Purpose section in context; it is not a substantive grant of authority to the SEC. While it is part of the statutory scheme and can be useful in divining legislative intent, it does not specifically require anything of the SEC or authorize it to do anything. Furthermore, as the Court has noted, it is important to remember that legislative intent is “determined by examining the construction of the statute as a whole, and not simply by examining isolated words and phrases found therein.” *NH Division of Human Services v. Hahn*, 133 N.H. 776, 778 (1990); see also *Appeal of Pinetree Power, Inc.*, 152 N.H. at 96 (noting that the Court will “interpret statutes not in isolation, but in the context of the overall statutory scheme.”).

Viewing the construction of RSA Chapter 162-H as a whole, the Purpose section is the introduction, in which the Legislature tells the reader in general terms what it intends to accomplish. The succeeding sections of the Chapter are the operative provisions of the law. Key among them is RSA 162-H:16, which contains the findings that the SEC must make in order to issue a Certificate. Through the findings, the Legislature makes its intent concrete and expresses the balance referred to in the Purpose section in terms that can be implemented by the SEC.

The SEC previously addressed the question of whether the Purpose section constitutes a basis for a generalized balancing test in the Groton Wind. There the SEC rejected an argument by certain intervenors that the Purpose section justified a generalized balancing test that would effectively trump the required statutory findings. The SEC pointed out that the intervenors mistakenly conflated the general language of the Purpose section with the specific required

findings. The SEC noted that the balance sought by the Legislature was achieved by the statutory scheme, which mandated specific findings in order to issue a Certificate. *See Decision Granting Certificate of Site and Facility with Conditions*, Docket No. 2010-01, pp. 27-31 (May 6, 2011). In Groton Wind, the SEC also rejected the argument for a generalized balancing test based on the prefatory language to RSA 162-H:16, IV, which speaks to the consideration of other relevant factors. The SEC found that the language did not “give carte blanche authority to create a new test that would weigh negative impacts against benefits.” *Id.* at 30.

#### **F. Recent SEC Decisions**

The SEC has applied the criteria set forth in Site 301.16 relative to a finding of public interest in two proceedings, namely, Antrim Wind Energy LLC, Docket No. 2015-02 and Eversource – Merrimack Valley, Docket No. 2015-05, issuing decisions on March 17, 2017 and October 16, 2016, respectively. Site 301.16 provides:

In determining whether a proposed energy facility will serve the public interest, the committee shall consider:

- (a) The welfare of the population;
- (b) Private property;
- (c) The location and growth of industry;
- (d) The overall economic growth of the state;
- (e) The environment of the state;
- (f) Historic sites;
- (g) Aesthetics;
- (h) Air and water quality;
- (i) The use of natural resources; and
- (j) Public health and safety.

In neither case did the SEC apply a net benefits test when making its public interest finding, nor does Site 301.16 provide for such weighing or balancing. Instead, the SEC considered the list of factors in a way that harmonized the new public interest finding with the other three findings, giving full force and effect to each finding. In both cases, the SEC

enumerated its other statutory findings, noted the project would not have unreasonable adverse effects, identified benefits, and found that the project would serve the public interest.

Specifically, in the Merrimack Valley case, the SEC recognized that the transmission line was a reliability project important to the region and, in the Antrim Wind case, the SEC recognized economic benefits to the region and the state, as well as better air quality.

### **G. Opponent Briefs**

CFP, SPNHF, and the Joint Munis, as well as others, argue that the Subcommittee has broad, practically unlimited authority to find that the Project does not serve the public interest. SPNHF asserts that the plain language of RSA 162-H requires a balancing of benefits and impacts. SPNHF Brief, p.170. Despite what SPNHF declares, RSA 162-H:16, IV (e) does not refer to or require a balancing test. To get to its alleged plain language balancing, SPNHF attempts to weave IV (e) together with the prefatory language in RSA 162-H:16, IV and portions of RSA 162-H:1, but neither provision authorizes the Subcommittee to apply IV (e) as an independent balancing or net benefits test.

As for the prefatory language, all it does is direct the SEC to give due consideration to all relevant information, including potential significant impacts and benefits, which is done through the four findings. Relevant information of potential significant impacts is duly considered through IV (b) and (c), while relevant information of potential significant benefits is duly considered through IV (e), thus maintaining the balance referred to in the purpose section, which is discussed next.

As for the purpose section, it expresses a number of legislative findings underlying the establishment of the procedure for the review and approval of the siting of energy facilities. Of particular interest here, the purpose section says, in part, that “the legislature finds that it is in the public interest to maintain a balance among those potential significant impacts and benefits in

decisions about the siting, construction, and operation of energy facilities in New Hampshire.”<sup>366</sup>

To further that and other objectives, the Legislature established a procedure that, among other things, now includes four separate findings. The purpose section does not say that to determine whether an energy facility will serve the public interest the SEC shall conduct a balancing test. The balancing is achieved through the four findings that the Legislature established.

CFP makes similar arguments, offering up the conclusory statement that the “Subcommittee must balance the benefits and adverse impacts of the Project to determine whether the ‘issuance of a certificate will serve the public interest.’” *Counsel for the Public Post Hearing Brief*, Docket No. 2015-06, p. 136. CFP says it relies on the text of the statute, legislative history, and related statutory provisions and rules, yet it inexplicably ignores the critical fact that JLCAR issued a preliminary objection, on October 16, 2015, to the SEC’s proposal to apply a balancing or net benefits test under Site 301.16 when determining whether an energy facility would serve the public interest. See SEC Rulemaking, Docket No. 2014-04. JLCAR objected on the grounds that the proposed balancing test was contrary to legislative intent and the SEC responded on November 25, 2015, removing the balancing language as a consequence. CFP makes no effort to explain how its interpretation can possibly be reconciled with JLCAR’s action. What CFP is therefore asking of the Subcommittee – to effectively undo the expressed intent of the Legislature - is wholly inappropriate.

The Applicants do not dispute that the Subcommittee must assess impacts and benefits. Their dispute with CFP, SPNHF and others is how the assessment is accomplished. CFP and the others are wrong when they say a balancing approach should be used and should be independent

---

<sup>366</sup> Prior to 2014, the purposes section said that it was “in the public interest to maintain a balance between the environment and the need for new energy facilities in New Hampshire.” The new formulation better reflects restructuring and the repeal of the finding of need but amounts to the same thing in terms of how the required findings are administered.

of the other criteria when determining whether issuance of a certificate will serve the public interest. The plain language says no such thing and the Applicants agree with JLCAR that application of Site 301.16 in a way that applied a balancing test would be contrary to legislative intent. The balancing is accomplished by the Subcommittee faithfully working its way through the four findings one-by-one, considering potential significant impacts under orderly development and unreasonable adverse effects, and considering potential significant benefits under public interest. If the potential impacts are not so significant as to unduly interfere with the orderly development of the region or constitute unreasonable adverse effects, and the benefits are significant, thus serving the public interest, then the Subcommittee should issue a Certificate.

#### **H. Conclusion**

By adding the public interest finding, the Legislature clearly intended that the SEC do “something new” that was not required previously under the three existing findings. That “something new” is determining whether the Project will provide benefits, which the SEC was not required to do before the addition of the public interest finding. To go further and apply a net benefits or independent balancing test would effectively transform the four findings into one. If the Legislature had repealed the other three findings and turned instead to a stand-alone public interest test, then the SEC may have had the discretion to apply some form of balancing test, but the Legislature has not seen fit to delegate such broad authority to the SEC relative to certificates for energy facilities.

The public interest finding in RSA 162-H:16, IV is a part of the whole; it is one element of a four-part test and operates within certain confines. Ultimately, in the event that an applicant has the financial, technical, and managerial capability to construct and operate a facility, and that facility will not unduly interfere with the orderly development of the region or have unreasonable adverse effects on any areas contemplated in RSA 162-H:16, IV (c), the facility will serve the

public interest, and the SEC may issue a certificate, if the facility will provide benefits. The benefits, however, are viewed independently; they are not netted, weighed or balanced against impacts, but considered in relation to the factors listed in Site 301.16.

The legislative history of SB 245, the statutory scheme of RSA Chapter 162-H, and the rules of statutory construction all support the conclusion that the adverse effects of an energy facility are properly determined when the SEC makes its findings under RSA 162-H:16, IV (b) and RSA 162-H:16, IV (c), and the beneficial effects are properly determined when the SEC makes its determination under RSA 162-H:16, IV (e). Finally, the SEC's deliberations and decisions in the Merrimack Valley and Antrim Wind proceedings are consistent with and support this view.

In summary, the Opposition pursues two lines of attack with respect to the public interest. First, they argue that the benefits identified by the Applicants are not as significant as presented. Second, they argue that the benefits are outweighed by the impacts. On the first point, they are factually incorrect as shown in the discussions above under Orderly Development. On the second point, they are legally incorrect in the test they seek to apply; they are just hoping to invent another way to say no to the siting of an energy facility in New Hampshire.

## **PART D--STATE PERMITS AND APPROVALS**

Pursuant to RSA 162-H:16, I, the SEC is required to “incorporate in any certificate such terms and conditions as may be specified to the committee by any of the state agencies having permitting or other regulatory authority, under state or federal law, to regulate any aspect of the construction or operation of the proposed facility.” Consistent with RSA 162-H:7-a, the relevant permitting agencies for the Northern Pass Project are the Department of Environmental Services, the Department of Transportation and the Public Utilities Commission, all of whom have made final decisions approving the Project subject to specified conditions and submitted those decisions to the Subcommittee. The various state agency decisions are summarized below.

### **I. Department of Environmental Services**

#### **A. Wetlands Permit**

The Applicants filed a state Wetland Permit application as part of their Application to the Committee filed on October 19, 2015. *Application*, App. Ex. 1, Appendix 2. At the time the DES Wetlands permit application was filed, the Project’s wetlands scientists estimated that direct permanent impact would be 2.48 acres of wetlands and direct temporary impact to 137.11 acres of wetlands. *Id.* at Bates APP01927.

In May 2016, NHDES submitted a written Progress Report to the NHSEC in which it requested additional information from the Applicants and further avoid and minimize wetland and surface water impacts. App. Ex. 57. In response to the Progress Report, the Applicants continued to work toward minimizing wetland impacts and provided additional data to NHDES in several packages from July 2016 through January 2017. *See generally* App. Ex. 63; App. Ex. 67, App. Ex. 69, App. Ex. 72; App. Ex. 74. The Applicants identified design modifications that will reduce temporary wetland impacts by 76,009 square feet and permanent wetland impacts by 732 square feet. *See* App. Ex. 74, Bates APP42041.

The Applicants developed a mitigation plan to compensate for unavoidable impacts to wetlands and other natural resources associated with the Project. The mitigation plan is detailed in the Applicants' *Final Compensatory Mitigation Report* which was submitted to NHDES in December 2016 (App. Ex. 72) and approved by NHDES in its Final Decision of March 2017 (App. Ex. 75). The mitigation package includes 1,627 acres of conserved land across eight sites that contain numerous wetlands, floodplains, perennial and intermittent streams and riparian areas, vernal pools and connectivity with adjacent conservation lands. *Final Compensatory Mitigation Report*, App. Ex. 72, p. 3. The conserved land also provides corridors and habitat for wildlife. A 6.9 acre parcel of land in the Concord Pine Barrens, adjacent to the existing Kbb National Wildlife Refuge, will be conserved specifically to provide habitat for Kbb and other rare lepidoptera. *Id.* at 4.

As part of the mitigation package, the Applicants will make a payment to the ARM Fund in the amount of \$3,379,280.59. *Id.* at 13. The ARM Fund payment will be used to mitigate impacts primarily in the towns and watersheds in central and southern parts of the project area where few or no conservation parcels are proposed and no other suitable local projects were identified. *Id.* In addition to the ARM Fund payment, the Applicants will provide \$3,000,000 through a partnership with the NFWF to fund science-based conservation projects with the goal of restoring and sustaining healthy forests and rivers in the state. *DES Final Decision with Conditions*, App. Ex. 75, p. 12.

On March 1, 2017, NHDES issued its Final Decision recommending approval of the application for a Certificate of Site and Facility, subject to certain conditions (App. Ex. 75). Included in the Final Decision is full approval of the Applicants' final mitigation package. App. *Id.* at 6. Among the project-specific conditions imposed by NHDES are the following:

- NHDES must review and approve all final stream diversion plans and associated erosion controls.
- Prior to and during construction, the Project shall notify and coordinate with the NHB regarding the need for any additional monitoring requirements or avoidance measures that may be necessary to minimize potential impacts to sensitive species.
- NHB must review and approve any seed mixes and plantings used for restoration activities.
- The Project is required to coordinate with New Hampshire Fish & Game (NHFG) to establish protocols for encounters with any rare, threatened, or endangered species during the project. These protocols must also be reviewed and approved by NHDES.
- Not less than 5 business days prior to starting work, the Project must notify the NHDES Wetlands Program and the local conservation commission in writing of the date on which work under the Wetland Permit is expected to start.
- A certified wetlands scientist or qualified professional, as applicable, shall monitor the project during construction to verify that all work is done in accordance with approved plans and narratives, adequate siltation and erosion controls are properly implemented, and no water quality violations occur.
- A report including photographs of all stages of construction shall be submitted to the NHDES Wetlands Program within 60 days of final site stabilization, in accordance with construction schedule phasing. Similar inspections, reports and restoration work shall be undertaken in at least the first, second and third full growing seasons following the completion of each restoration site.

**B. Section 401 Water Quality Certification**

The Applicants filed an application for a Section 401 Water Quality Certificate from the NHDES as part of their Application to the Committee. *Application*, App. Ex. 1, Appendix 4.

Project engineers conducted analyses of both quantity and quality of non-point source stormwater runoff at each of the nine development sites and performed assessments and calculations in accordance with NHDES's *Stormwater Manual*. *Pre-Filed Testimony of Jacob Tinus*, App. Ex. 21, p. 6-7.

In May 2016, NHDES submitted a written Progress Report to the NHSEC in which it requested additional information and analysis from the Applicants. App. Ex. 57. In response to

NHDES's information requests, the Project provided several packages of additional information to NHDES. *See generally* App. Ex. 63; App. Ex. 67, App. Ex. 69, App. Ex. 72; App. Ex. 74.

On March 1, 2017, NHDES in its Final Decision approved the Applicants' application for a Section 401 Water Quality Certificate with conditions (App. Ex. 75). NHDES conditioned approval on, among others, the requirement that construction and operation of the Project not cause or contribute to a violation of New Hampshire surface water quality standards as provided in NH RSA 485-A:8 and Env-Wq 1700. App. Ex. 75, p. 24. Furthermore, the Applicants are required to allow NHDES to inspect construction and operation activities and its effects on affected surface waters at any time to monitor compliance with the Section 401 Certificate. *Id.*

### **C. Shoreland Permits**

The Applicants filed thirty-three (33) distinct Shoreland Permit Applications as part of their Application to the Committee filed on October 19, 2015. *Application*, App. Ex. 1, Appendix 5. On March 1, 2017, NHDES approved each of the Shoreland Permit Applications with conditions applicable to all shoreland projects as well as conditions specific to each of the thirty-three (33) locations. *DES Final Decision with Conditions*, App. Ex. 75, p. 13-22

### **D. Alteration of Terrain Permit**

The Applicants filed an AoT as part of their Application to the Committee filed on October 19, 2015. *Application*, App. Ex. 1, Appendix 6a-d. As identified in the AoT permit, the Project will cause 44,075,810 square feet of total disturbance and 1,536,231 square feet of additional impervious cover as a result of construction and operation. *Application*, App. Ex. 1, Appx. 6ab, Bates APP05012. The AoT permit application also provided Stormwater Management Studies for the Project's nine development sites – a converter terminal in Franklin, the Deerfield and Scobie Pond substations, and six transition stations. *Application*, App. Ex. 1, Appendix 6d.

In May 2016, NHDES submitted a written Progress Report to the NHSEC in which it requested additional information and analysis from the Applicants. App. Ex. 57. In response to NHDES's information requests, Project engineers reviewed the stormwater design at all nine sites based on new subsurface geotechnical data collected during the summer and fall of 2016. The data was used to refine the designs, the updated versions of which, along with additional information to respond to other requests, were provided to NHDES in July, August and December of 2016 and January 2017. *See generally* App. Ex. 63; App. Ex. 67, App. Ex. 69, App. Ex. 72; App. Ex. 74.

On March 1, 2017, NHDES approved the Applicants' AoT permit with conditions in its Final Decision (App. Ex. 75). Among the conditions imposed by NHDES is a requirement that all activities comply with the BMPs identified in the Application and incorporated into NHDES approvals. *DES Final Decision with Conditions*, App. Ex. 75, p. 30. NHDES also required that the Applicants perform test pit explorations at seven of the nine sites to confirm estimated seasonal high water table elevations previously collected at the sites. *Id.*<sup>367</sup>

#### **E. Permits and Approvals to be acquired Prior to Construction**

The Applicants will apply to obtain various construction related permits from state and federal agencies prior to the commencement of construction. These include the following:

- Construction General Permit from EPA pursuant to the National Pollutant Discharge Elimination System (NPDES);
- NHDES Groundwater Discharge Permit; and
- NHDES approval of laydown areas, storage areas, wire pulling sites, temporary access roads and permanent access roads.

---

<sup>367</sup> The additional test pit Explorations were performed in October 2017.

## **II. Department of Transportation**

Pursuant to RSA 231:160 and 168, respectively, the DOT may grant authority to any person or corporation to install electric lines and appurtenant structures, as well as underground conduits and cables, in any public highway insofar as they will not interfere with the safe, free and convenient use for public travel of the highway. To administer the highway crossing process the DOT has adopted standards that are set forth in its *Utility Accommodation Manual*. In addition, the New Hampshire Supreme Court has determined that the authority to license placement of electric lines in public highways must be exercised in a non-exclusionary manner and denied only for a public safety-based reason. *See Rye v. Public Service Company of New Hampshire*, 130 N.H. 365 (1988). The DOT issued its final decision with conditions pursuant to RSA 162-H:7, VI-c on April 3, 2017, and it continues to exercise its authority in the normal course as part of the iterative review used to develop the final engineering designs necessary for the execution of a Use and Occupancy Agreement.

## **III. Public Utilities Commission**

### **A. Petition to Commence Business**

The PUC issued Order No. 25,593 (October 14, 2016) in Docket No. DE 15-459, granting NPT's petition to commence business as a public utility in New Hampshire. Among other things, the PUC concluded that NPT has the necessary technical, managerial and financial expertise to operate as a public utility. Furthermore, the PUC found that it will be for the public good to grant NPT authority to commence business as a public utility. In this regard, the PUC approved a settlement agreement with PUC Staff that included the creation of a \$20 million fund for energy efficiency programs and clean energy projects under PUC supervision, and provided rate treatment safeguards in the event the Independent System Operator-New England designated the DC portion of the Project eligible for regional cost recovery.

**B. Petitions to Cross Public Waters and Lands Owned by the State**

The PUC issued Order No. 26, 025 (June 16, 2017) in Docket Nos. DE 15-460, 461, 462, and 463, granting NPT and PSNH permission pursuant to RSA 371:17 to construct lines over, under or across public waters of the state and lands owned by the state. The PUC found that the proposed crossings of public waters and lands owned by the state were necessary to meet the reasonable requirements of service to the public and that the crossings could be exercised without substantially affecting the public rights in the affected public waters and lands.

## **PART E--STIPULATIONS, CONDITIONS AND DELEGATIONS**

The Applicants set forth below proposed ordering clauses that 1) encompass stipulations reached with parties to the proceeding, 2) reflect conditions proposed by the Applicants, or other parties with whom the Applicants agree, 3) pertain to delegations of authority that the Applicants recommend as conditions to the Certificate, and 4) accord with typical SEC practice.

### **STANDARD**

NOW THEREFORE, it is hereby ORDERED that the Joint Application of Northern Pass Transmission LLC and Public Service Company of New Hampshire d/b/a Eversource Energy, (“Applicants”) as amended, is approved subject to the conditions set forth herein and this Order shall be deemed to be a Certificate of Site and Facility pursuant to RSA 162-H:4; and it is,

1. Further Ordered that the Site Evaluation Subcommittee’s Decision and any conditions contained therein, are hereby made a part of this Order; and it is,
2. Further Ordered that the Applicants may site, construct, and operate the Project as outlined in the Application, as amended, subject to the terms and conditions of the Decision and this Order and Certificate; and it is,
3. Further Ordered that this Certificate is not transferable to any other person or entity without the prior written approval of the Site Evaluation Committee (Committee); and it is,
4. Further Ordered that the Applicants shall immediately notify the Committee of any change in ownership or ownership structure, or its affiliated entities, and shall seek approval of the Committee of such change; and it is,

### **MEMORANDA OF UNDERSTANDING**

5. Further ordered that, the Agreements between the Town of Lancaster (App. Ex. 146), Town of Canterbury (App. Ex. 206), Plymouth Water and Sewer District (App. Ex. 207), Town of Thornton (App Ex. 208), the City of Franklin (App. Ex. 209) and the Applicants, attached hereto, shall be part of this Order and the Conditions contained therein shall be conditions of this Certificate. To the extent that any disputes arise under these Agreements, the parties shall file a motion for declaratory ruling, a motion for enforcement or such other motion as may be procedurally appropriate with the Subcommittee and the Subcommittee shall make such final interpretations or determinations that may be necessary; and it is,

### **DEPARTMENT OF ENVIRONMENTAL SERVICES**

6. Further Ordered that all permits and/or certificates recommended by the New Hampshire Department of Environmental Services (DES), including the Wetlands Permit, the Alteration of Terrain Permit, and the Shoreland Permit, shall issue and this Certificate is conditioned upon compliance with all conditions of said permits and/or certificates which are appended hereto as Appendix I; and it is,

7. Further Ordered that DES is authorized to monitor the construction and operation of the Project to ensure that the terms and conditions of the Wetlands Permit, the Alteration of Terrain Permit, the Shoreland Permit, and the Certificate are met, however; any actions to enforce the provisions of the Certificate must be brought before Committee; and it is,
8. Further Ordered that DES is authorized to specify the use of any appropriate technique, methodology, practice or procedure approved by the Subcommittee within the Certificate, as may be necessary, to effectuate conditions of the Certificate, the Wetlands Permit, the Alteration of Terrain Permit, and the Shoreland Permit; and it is,
9. Further Ordered that this Certificate is conditioned upon compliance with the Section 404 General Permit (the New Hampshire Programmatic General Permit) and the 401 Water Quality Certification; and it is,
10. Further Ordered that DES is authorized to monitor the construction and operation of the Project to ensure that terms and conditions of the Section 404 Permit and the 401 Water Quality Certification are met, however, any actions to enforce the provisions of the Certificate must be brought before the Committee; and it is,
11. Further Ordered that DES is authorized to specify the use of any appropriate technique, methodology, practice or procedure approved by the Subcommittee within the Certificate, as may be necessary, to effectuate conditions of the Section 404 Permit and the 401 Water Quality Certification; and it is,

#### DEPARTMENT OF TRANSPORTATION

12. Further Ordered that all permits and/or approvals recommended by the New Hampshire Department of Transportation (DOT) shall issue and this Certificate is conditioned upon compliance with all conditions of said permits and/or approvals; and it is,
13. Further Ordered that DOT is authorized to monitor the construction and operation of the Project to ensure that terms and conditions of the Certificate and permits and approvals issued by DOT are met, however; any actions to enforce the provisions of the Certificate must be brought before the Committee; and it is,
14. Further Ordered that DOT is authorized to specify the use of any appropriate technique, methodology, practice or procedure approved by the Subcommittee within the Certificate, as may be necessary, to effectuate conditions of the Certificate and permits and certificates issued by DOT; and it is,
15. Further Ordered that with respect to the underground installation in locally- maintained roads, a properly qualified consultant selected by and subject to the supervision of the SEC Administrator and paid for by the Applicants is authorized to monitor the construction of the Project in locally-maintained highways and enforce the relevant requirements of the DOT *Utility Accommodation Manual* to the Applicants' request to install lines underground in the Towns of Stewartstown and Clarksville; and it is,

16. Further Ordered that with respect to the underground installation in locally-maintained roads, the SEC Administrator is authorized to monitor the Applicants' excavations consistent with RSA 236:9 to perform shovel tests related to Phase I-B archeological surveys within locally-maintained highways in the Towns of Stewartstown and Clarksville; and it is,
17. Further Ordered that with respect to the underground installation in locally-maintained roads in the Towns of Stewartstown and Clarksville, a properly qualified consultant selected by, and subject to the supervision of the SEC Administrator, and paid for by the Applicants, is authorized to review and approve all requests relative to curb cuts, driveways, detours, etc., involving locally-maintained highways in the Towns of Stewartstown and Clarksville in the same manner that it reviews and approves comparable requests for state-maintained highways; and it is,
18. Further Ordered that with respect to the underground installation in locally-maintained roads in the Towns of Stewartstown and Clarksville, a properly qualified consultant selected by, and subject to the supervision of the SEC Administrator, and paid for by the Applicants, is authorized to review and approve traffic control measures and a traffic management plan for the underground installation in locally-maintained roads in the Towns of Stewartstown and Clarksville; and it is,
19. Further Ordered that, to the extent DOT denies Applicants' exception requests, DOT is authorized to monitor and enforce the Applicants' tree preservation commitment (i.e., that the Applicants agree not to cut trees greater than 6" in diameter within a Cultural or Scenic Byway) where the Project may be constructed outside the paved portion of the highway right-of-way. To the extent the Applicants seek to deviate from this condition, the Applicants must seek approval from the SEC Administrator; and it is,
20. Further Ordered that with respect to the overhead installation, the Applicants shall employ traffic controls in accordance with the 2009 edition of the Manual on Uniform Control Devices and DOT policies; and it is
21. Further Ordered that any future surface distortion within the trench area in locally-maintained roads, due to settlement or other causes attributable to the construction shall be corrected by the Applicants as required during construction and for a period of two (2) years following the commencement of commercial operations of the Project; and it is,
22. Further Ordered that the Applicants agree to assume such additional cost as a municipality may incur due to the maintenance, operation, renewal, or extension of the underground installation components of the Project or appurtenances thereto within the locally-maintained roads; and it is,

#### PUBLIC UTILITIES COMMISSION

23. Further Ordered that all licenses approved by the New Hampshire Public Utilities Commission (PUC) shall issue and this Certificate is conditioned upon compliance with all conditions of said licenses; and it is,

24. Further Ordered that PUC is authorized to monitor the construction and operation of the Project to ensure that terms and conditions of the licenses issued by PUC are met, however; any actions to enforce the provisions of the Certificate must be brought before Committee; and it is,
25. Further Ordered that PUC is authorized to specify the use of any appropriate technique, methodology, practice or procedure approved by PUC or in the Certificate, as may be necessary, to effectuate conditions of the Certificate and licenses issued by PUC; and it is,
26. Further Ordered that the Applicants will comply with the requirements of RSA 374:48 *et seq.*, the Underground Facility Damage Prevention System administered by the PUC, when the Applicants excavate within 100 feet of an underground facility used to convey cable television, electricity, gas, sewerage, steam, telecommunications, or water; and it is,
27. Further Ordered that the PUC is authorized to monitor and enforce measures the Applicants shall take to comply with the interference assessment filed on June 30, 2017, otherwise known as the Co-Location Study, and that the Applicants shall coordinate their construction efforts with the Portland Natural Gas Transmission System; and it is,
28. Further Ordered that the Applicants, in consultation with the PUC's Safety Division, shall measure actual post project electric and magnetic field levels along the Project route at locations in the ROW with the maximum projected magnetic and electric field levels and at each edge of the ROW to those identified in Tables A-1, A-2, A-4 and A-5 in the Application, Appendix 38, Annex A. Post construction measurements will be taken when the Project is at a maximum transfer level during the summer peak loading season; and it is,
29. Further Ordered that the Applicants shall file the results of the electro-magnetic fields measurements conducted pursuant to the conditions of the Certificate with the SEC Administrator; and it is,
30. Further Ordered that, if the results of the electro-magnetic fields measurements exceed the guidelines of the International Committee on Electromagnetic Safety or the International Commission on Non-Ionizing Radiation Protection, the Applicants shall file with the Committee a mitigation plan designed to reduce the levels; and it is

#### DIVISION OF HISTORICAL RESOURCES

31. Further Ordered that, in the event that new information or evidence of historic sites, archeological sites, or other archeological resources is found within the area of potential effect of the Project, the Applicants shall immediately report said findings to New Hampshire Division of Historical Resources (DHR); and it is,
32. Further Ordered that to the extent changes in the construction plans of the Project affect any archeological resources, historic sites, or other cultural resources, the Applicants shall notify DHR of any such change and shall notify DHR of any new community concerns related to such change; and it is,

33. Further Ordered that consistent with the terms of the Programmatic Agreement (App. Ex. 204), DHR is authorized to specify the use of any appropriate technique, methodology, practice, or procedure associated with archaeological, historical and other cultural resources affected by the Project, however; any action to enforce the conditions must be brought before the Committee; and it is,

#### MISCELLANEOUS

34. Further Ordered that the Certificate is conditioned upon NPT's parent entity, Eversource Energy, executing a payment guaranty for Project decommissioning in the amount of \$100 million to apply in the event of a default by NPT subsequent to the commencement of construction, under the current Transmission Service Agreement or successor, evidence of which shall be delivered to the SEC Administrator prior to the commencement of construction; and it is,

#### SEC ADMINISTRATOR

35. Further Ordered that the Applicant shall construct the Project within five (5) years of the date of the Certificate and shall file as-built drawings of the Project with the SEC Administrator within 120 days of commercial operation of the Project.

## **PART F--RESPONSES TO CFP AND INTERVENOR CONDITIONS**

### **I. Counsel for the Public**

#### **A. Best Management Practices – Construction.**

Further Ordered that, prior to any construction activity, Applicants shall file with the SEC a copy of all Best Management Practices (“BMPs”) for all construction activity; including, without limitation BMPs for entering and exiting the ROW or any construction site; sweeping paved roads at access points; BMPs relating to Applicants’ Storm Water Pollution Prevention Plan; BMPs for specific locations such as steep slopes near water bodies; BMPs for HDD/micro-tunnel drilling locations; and BMPs for work near archeological and historic sites.

**Response:** This condition is acceptable to the Applicants.

#### **1. Avoidance, Minimization and Mitigation – Natural Environment.**

Further Ordered that, prior to any construction activity, Applicants shall identify and implement the following avoidance, minimization and mitigation measures (“AMMs”) in addition to or supplementing the Avoidance, Minimization and Mitigation Measures and Time of Year Restrictions for Wildlife Resources approved by NHDES in accordance with Condition 7 of the March 1, 2017 recommended wetlands application filed by the Applicants:

**Response:** The Applicants believe that the AMMs negotiated and agreed to by the responsible state and federal agencies protect the species listed below. To the extent Counsel for the Public or any party requests the SEC to impose requirements beyond those recommended by regulatory agencies, those parties should be required to provide compelling evidence as to why the SEC should depart from those agency recommendations. Neither CFP nor any other party has provided sufficient evidence to warrant such a departure as suggested in CFP’s proposed condition 2 (a)–(g).

**2. Monitoring.**

Further Ordered that, once construction begins, Applicants shall file weekly with the SEC a copy of all reports by all construction and environmental monitors. The SEC shall post said reports on its website. Applicants also shall identify a specific contact person from the Project, with their contact information, to whom all questions, concerns or other communications should be sent regarding monitoring reports. The Project's contact person shall respond in writing within three (3) business days to all written communications they received regarding a monitoring report. The SEC, or any state agency to which the SEC delegates authority to, shall have continuing jurisdiction to address any violations of these conditions, all BMPs or all AMMS for the Project. Following remediation of any such violation, Applicants shall file with the SEC a report of remediation, and the SEC shall post said reports on its website.

**Response:** The condition is unnecessary. The DES is the primary environmental enforcement agency and already requires regular reporting to the Department as part of its Final Permit Conditions. To the extent Counsel for the Public or any party requests the SEC to impose requirements beyond those of DES, those parties should be required to provide compelling evidence as to why the SEC should depart from those agency requirements. Neither CFP nor any other party has provided sufficient evidence to warrant such a departure.

**3. Blasting.**

Further Ordered that, prior to any blasting, Applicants shall identify drinking water wells located within 2,000 feet of the proposed blasting activities and develop a groundwater quality sampling program to monitor for nitrates and nitrites, either in the drinking water supply wells or in other wells that are representative of the drinking water supply wells in the area.

Further Ordered that, the groundwater quality sampling program shall include pre-blasting and post-blasting water quality monitoring to be approved by the New Hampshire Department of Environmental Services (“NHDES”) prior to commencing blasting.

Further Ordered that, the groundwater sampling program shall be implemented by Applicants once approved by the NHDES.

Further Ordered that, the NHDES is authorized to monitor the implementation and enforcement of the groundwater quality sampling program to ensure that terms and conditions of the program and the Certificate are met, and any actions to enforce the provisions of the Certificate must be brought before the SEC.

Further Ordered that, the NHDES is authorized to specify the use of any appropriate technique, methodology, practice or procedure, as may be necessary, to effectuate conditions addressing the groundwater sampling program or to carry out the requirements of the groundwater quality sampling program.

**Response:** This condition is not acceptable to the Applicants as written. The Applicants will comply with all applicable State of New Hampshire laws governing blasting as indicated in the Application and supplemental pre-filed testimony of John Kayser. CFP’s proposed condition goes beyond applicable legal requirements by, for example, requiring groundwater sampling. To the extent Counsel for the Public or any party requests the SEC to impose requirements beyond those required by State of New Hampshire law, those parties should be required to provide compelling evidence as to why the SEC should depart from those laws. Neither CFP nor any other party has provided sufficient evidence to warrant such a departure.

**4. Noise.**

Further Ordered that, the Applicants shall retain a third-party noise expert, as directed by the SEC Administrator, to take field measurements in order to evaluate and validate noise complaints.

**Response:** The Applicants interpret this proposed condition as applying to operational noise. The Applicants recognize that this condition appears to be drawn from the Antrim Wind Order dealing with operational noise. The Applicants believe that such noise issues associated with a wind project are distinct from, and completely unrelated, to a transmission project. Therefore, the Applicants cannot agree to this condition.

**5. Timber Mats.**

Further Ordered that, Applicants shall remove any timber mats that have not been used for 10 consecutive days.

**Response:** The use of timber mats is governed by the DES Final Permit Conditions, and addressed in the AMMs with various agencies. The Applicants also believe that the proposed condition could further increase disturbance through the repeated removal and reinstallation of timber mats. It is further anticipated that timber mats will be addressed in the Section 404 Permit. To the extent Counsel for the Public or any party requests the SEC to impose requirements beyond those of regulatory agencies, those parties should be required to provide compelling evidence as to why the SEC should depart from those agency requirements. Neither CFP nor any other party has provided sufficient evidence to warrant such a departure.

**6. Tamarack Tennis Camp.**

Further Ordered that, Applicants shall not perform any construction activity during any time that the Tamarack Tennis Camp is in session.

**Response:** The Applicants would accept a requirement to coordinate construction around specific dates tied to the normal operation of the camp when it is in session and, to the extent practicable, limit construction in the immediate location of the camp when it is in session.

**7. Municipal Construction Permits.**

Further Ordered that, Applicants shall obtain all construction permits from any municipality through which the Project will pass, such as driveway permits, in order to comply with existing municipal construction rules and regulations.

**Response:** For the reasons discussed *supra* Part B § IV, A the Applicants cannot agree to such a condition. *See also Applicants' Motion to Authorize Phase I-B Archeological Survey.*

**8. Restoration of Municipal Roads.**

Further Ordered that, all municipal roads that are damaged by construction of the Project shall be restored in compliance with all existing municipal rules and regulations, subject to the review of the municipal engineer, road agent or other authorized municipal officer and approval the SEC administrator.

**Response:** The Applicants accept a local role as the primary means of assessing the adequacy of restoration, which will be performed consistent with DOT requirements, but suggest an amendment to make clear that if there is any dispute between the Applicants and a town that it should be resolved by the SEC Administrator.

**9. Public Meetings.**

Further Ordered that, prior to construction of the underground portion of the Project, Applicants shall hold a public meeting with the combined Boards of Selectmen for (1) Clarksville/Stewartstown; (2) Bethlehem/Sugar Hill/Franconia/Easton; and (3) Woodstock/Thornton/Campton/Holderness/Plymouth, to discuss the construction schedule in their respective towns and to coordinate the construction in order to avoid or minimize impacting local or regional events that are scheduled to be held in said towns.

**Response:** As described below, the Applicants are certainly willing to meet with host communities. However, the Applicants believe that the logistics associated with this condition, as proposed, make it unworkable. The Applicants have a robust outreach plan that includes regular communication and meetings with town officials and the public before, during, and as a follow up to the completion of, construction in a community. In addition, the Applicants will have regular conference calls by region where local officials can participate and receive Project updates. Among other things, the outreach plan includes further efforts to enter into MOUs that reflect local concerns and that avoid and minimize construction impacts, and to keep local officials informed of construction specifics and schedule. The Applicants would agree to use their best efforts to meet with each town's governing body prior to commencement of construction, but there must be authority to proceed with construction if a town is unable or unwilling to timely schedule a public meeting of its select board.

Further Ordered that, Applicants shall provide each host town and the Administrator of the SEC with copies of Applicants' proposed construction plans, blasting plans, schedule and other public information (Ref. RSA 91-A:5) to be made available to the public.

**Response:** The Applicants agree to providing, in electronic format, project maps, blasting plans (if they exist) and the schedule as it pertains to a specific town.

Further Ordered that, the construction plans, schedule and other information provided to each host town and Administrator of the SEC shall be updated to reflect changes in the Project's schedule or other changes during construction.

**Response:** The Applicants agree to providing, in electronic format, changes, if any, to the project maps and the schedule on a monthly basis as it pertains to a specific town.

Further Ordered that, the meetings between Applicants and the host towns shall be attended by persons knowledgeable with Applicants' construction plans and responsible for managing construction activities.

**Response:** The Applicants agree to a condition to make knowledgeable Project representatives available during meetings between the Applicants and the host towns.

Further Ordered that, the meetings between Applicants and the host towns shall be public meetings under RSA 91-A, moderated by the towns' Board of Selectmen, except as provided by RSA 91-A:3.

**Response:** It is inappropriate for Counsel for the Public to dictate meeting requirements between host towns and the Applicants. The Applicants will work in good faith to establish a reasonable schedule of meetings with each host town to provide relevant information to that town as reasonably practicable to meet the town's needs. To the extent a town and the Applicants are not able to reach agreement on a schedule of meetings, the town can seek resolution from the SEC Administrator.

Further Ordered that, Applicants shall provide to the SEC for posting on the SEC's website information concerning complaints during construction, if any, and their resolution,

except that confidential, personal or financial information (Ref. RSA 91-A:5) regarding the complaint should be redacted.

**Response:** This proposed condition is vague and unworkable as drafted. For example, at a minimum any such complaints would have to be in writing and specific.

Further Ordered that, in the event of significant unanticipated changes or events during construction that may impact the public, the environment, compliance with the terms and conditions of the Certificate, public transportation or public safety, Applicants shall notify the Board of Selectmen of all affected host towns or their respective designee and Administrator of the SEC in writing as soon as possible but no later than seven (7) days after the occurrence.

**Response:** This condition is acceptable subject to the comments above.

Further Ordered that, in the event of emergency conditions which may impact public safety, Applicants shall notify the host town's appropriate officials and the Administrator of the SEC immediately.

**Response:** The Applicants agree to a condition to provide notification of any significant safety event and will otherwise comply with the reporting requirements of DES and other agencies responsible for regulating the construction of the Project.

#### **10. Independent Claims Process.**

Further Ordered that, the SEC shall appoint an attorney or retired judge (the "Claims Administrator") who shall independently administer a claims process for all claims relating to damage to property, loss of business or loss of income caused by construction of the Project (the "Claims Process"). Counsel for the Public and Applicants shall jointly or separately file with the SEC proposed procedures for filing and deciding said claims, including criteria for eligibility, a procedure for filing claims, required proof of the damage or loss, the presentation and

consideration of claims, the basis for recovery and the manner of deciding claims. Applicants shall establish a fund for the payment of claims (“Claims Fund”) which fund shall be solely administered by the Claims Administrator, who shall provide to the SEC a quarterly report of the Claims Fund, including all disbursements. The Claims Administrator shall be paid an hourly rate to be determined by the SEC, and said compensation and all expenses of the Claims Administrator shall be paid from the Claims Fund, subject to approval by the SEC. Upon issuance of a certificate, Applicants shall deposit Five Hundred Thousand (\$500,000) Dollars to establish the Claims Fund, and shall deposit any additional funds necessary to pay all claims awarded by the Claims Administrator and to pay the Claims Administrator’s compensation and expenses. The Claims Administrator shall accept written claims until the five-year anniversary date of the date when the SEC’s order granting a certificate shall become a final order. The Claims Administrator shall process and provide a written decision on all written claims filed with the Claims Administrator prior to said deadline. The Claims Administrator’s decision and any reconsideration thereof shall be final and non-appealable. The Claims Process is not mandatory. Any party may file a claim in any court of competent jurisdiction in lieu of filing a claim in the Claims Process. If a party files a claim in the Claims Process, that party waives the right to file the same claim in court, and the Claims Process becomes the exclusive forum for deciding all claims filed in the Claims Process. All funds remaining in the Claims Fund after the payment of all timely filed claims and the payment of the Claims Administrator’s compensation and expenses shall be returned to Applicants.

**Response:** The Applicants have proposed procedures for dealing with these kind of claims and believe that in the first instance those procedures should be used. If any party is unsatisfied with the outcome of that claim procedure, the Applicants are open to some form of an

appeal mechanism to the SEC Administrator or an independent 3<sup>rd</sup> Party Appointed by the SEC. However, the Applicants are concerned that CFP's proposal is unworkable, cumbersome and inefficient.

**11. Cape Horn Forest.**

Further Ordered that, prior to construction, Applicants shall provide the SEC with proof that Applicants have the legal right to construct the Project in the ROW in Cape Horn State Forest, including resolution of the gap in Applicants' easement rights.

**Response:** This condition is unnecessary for the reasons discussed *supra* note 6.

**12. EMF Monitoring.**

Further Ordered that, Applicants, in consultation with the PUC's Safety Division, shall measure actual electro-magnetic fields associated with operation of the Project both before and after construction of the Project during peak-load, and shall file with the SEC the results of the electro-magnetic fields' measurements.

Further Ordered that, if the results of the electro-magnetic fields measurements exceed the guidelines of the International Committee on Electromagnetic Safety or the International Commission on Non-Ionizing Radiation Protection, Applicants shall file with the SEC a mitigation plan designed to reduce the levels so that they are lower than the PUC's or SEC's standards.

**Response:** Please see the Applicants' Proposed Condition 28.

**13. North Country Jobs Fund.**

Further Ordered that, the North Country Jobs Fund (the "Fund") employ an independent economic development professional to provide advice on the selection of Fund recipients, and to

file annually with the SEC a summary of Fund disbursements and the use and results of grants awarded by the Fund

**Response:** This proposed condition is inappropriate. The North Country Jobs Fund is an independent entity that is unrelated to the Applicants. Certificate conditions cannot bind such a Third Party. It is solely within the purview of the North Country Jobs Fund to make decisions about the disbursement of funds.

**14. The Forward New Hampshire Fund.**

Further Ordered that, the Forward New Hampshire Fund (“FNHFund”) have a board of directors who have no financial affiliation (employment, vendor, etc.) with Applicants; that the FNHFund employ an independent economic development professional to establish written criteria for the application and receipt of loans or grants from the FNHFund; and that the FNHFund file annually with the SEC and with the Director of Charitable Trust in the Office of the Attorney General a report of its activities, including a report of its expenditures, all loans or grants made by the FNHFund and a review of how each loan or grant was used and their results in creating jobs or economic development.

**Response:** This proposed condition is inappropriate. As Mr. Quinlan testified, the FNHFund “will be administered as a standalone 501(c)(3) organization, fully independent of Eversource and NPT.” *Supplemental Pre-Filed Testimony of William Quinlan*, at p. 3. Therefore, the FNHFund is an independent entity that is unrelated to the Applicants. Certificate conditions cannot bind such a Third Party. It is solely within the purview of the FNHFund to make decisions about the disbursement of funds.

**15. Decommissioning.**

Further Ordered that, prior to construction Eversource Energy shall execute a payment guarantee in the face amount of \$100 million, in a form acceptable to Counsel for the Public and the SEC, that will unconditionally guarantee the payment of all costs of decommissioning the Project, consistent with the Decommissioning Plan prepared by GZA GeoEnvironmental, Inc. that was filed on July 22, 2016. On each tenth anniversary of said payment guarantee, NPT shall file the SEC an updated budget for the costs of decommissioning the Project, and Eversource Energy or its successor or assigns shall provide a replacement payment guarantee in the face amount of said updated budget.

**Response:** Please see the Applicants' Proposed Condition 34.

**16. Coos Loop.**

Further Ordered that, NPT shall complete, as part of the construction of the Project, all of the upgrades to the Coos Loop and the transmission lines that connect the Coos Loop to the New England electrical grid that are required to remove the current constraints or flowgate restrictions on the Coos Loop, including without limitation, upgrading 16 miles of the Q-195 transmission line, 0.5 miles of the O-154 transmission line, and whatever ISO-NE determines is necessary to address voltage stability at the substation in Berlin or at another substation on the Coos Loop, as set forth in Counsel for the Public's Exhibits 46 and 47.

**Response:** Please see the Applicants' Response to the City of Berlin proposed Condition 1.

## **II. Municipal Groups 1 South, 2 , 3 South and 3 North**

1. The Municipalities Proposed Condition: “confirmation that the Applicants are required to receive local permits and licenses.”

**Response:** For the reasons discussed *supra* Part B § IV, A the Applicants cannot agree to such a condition. *See also Applicants’ Motion to Authorize Phase I-B Archeological Survey.*

### III. City of Berlin Recommended Conditions

A. Impose a condition of approval that the Applicants are to upgrade and repair 12.1 miles along PSNH Line 0154 of the Coos Loop, 18 miles along PSNH Line D142 of the Coos Loop, .5 miles of the Coos Loop up to the Paris Substation, and such segments of the Coos Loop leading up to the Moore Hydro-Electric Facility in Monroe, and that such upgrades and repairs be completed prior to the Project being completed and operational;

**Response:** The final two lines in this proposed condition are unacceptable—the final commercial operation of NPT cannot be tied to other projects. With this in mind, the Applicants essentially agree, but propose the following condition instead: Further Ordered that: (1) the D142 line will be rebuilt in its entirety from Lost Nation S/S to Whitefield S/S as part of the NPT Project; (2) the O154 line will be rebuilt / upgrade in its entirety from Lost Nation S/S to Paris S/S as part of the NPT Project; (3) the 0.7 mile segment of the Q195 line leading to the Moore Hydro Electric Facility will be reconducted subject to the receipt of all necessary permits and approvals, including, but not limited to approvals from ISO-New England; and (4) the Applicants shall complete such rebuilds and upgrades of the D142 and O154 during construction of the new NPT line.<sup>368</sup>

B. Impose a condition of approval that the Applicants establish guidelines and by-laws for the Forward NH Fund that emphasizes the distribution of monies from the Forward NHFund to businesses and municipalities in Coos County, particularly the City of Berlin and businesses located within the City of Berlin;

**Response:** This condition is inappropriate. The “Forward NH Fund will consider proposals or requests for funding from New Hampshire residents, businesses, municipalities, communities, and non-profit groups” and not from just one municipality. See Supplemental Pre-Filed Testimony of William Quinlan, at 4. Also, as Mr. Quinlan testified, the FNHFund “will be administered as a standalone 501(c)(3) organization, fully independent of Eversource and NPT.” Supplemental Pre-Filed Testimony of William Quinlan, at p. 3. Therefore, the FNHFund is an independent entity that is unrelated to the Applicants. Certificate conditions cannot bind such a Third Party. It is solely within the purview of the FNHFund to make decisions about the disbursement of funds.

---

<sup>368</sup>The City of Berlin’s Final Brief also makes reference to a condition that would provide that “PSNH requests authorization from ISO-NE to study an SVC at Berlin substation and install an SVC at the Berlin substation if the study so recommends.” The Applicants cannot agree to this condition as written, but would be amenable to the following condition: Further ordered that: the Project will request that ISO New England conduct a study to determine voltage stability on the Coos Loop and if ISO-New England requires a voltage regulator or stabilization device or any other upgrades on the Coos Loop in addition to the proposed upgrades of the D142, O154, and Q195 lines, the Forward NH Fund may be a source of funding to install such a device or other upgrades (at a time so determined by ISO-New England) using the application process and criteria established by the FNHFund.

C. Impose a condition of approval that the Applicants establish guidelines and by-laws for the NCJCF that emphasizes the distribution of monies from the NCJCF to businesses and municipalities in Coos County, particularly the City of Berlin;

**Response:** This proposed condition is inappropriate. The North Country Jobs Fund is an independent entity that is unrelated to the Applicants. Certificate conditions cannot bind such a Third Party. It is solely within the purview of the North Country Jobs Fund to make decisions about the disbursement of funds.

D. Issue a finding that expressly states that the Committee's grant of a Certificate of Site and Facility shall not be construed as a finding that the Applicant's proposed taxation methodology is an accurate methodology for the determination of fair market value of the Project for any state and/or local property tax purposes, including but not limited to NH RSA 72:6, RSA 72:8 and RSA 83-F;

**Response:** The Applicants take no position on this matter.

#### IV. Pemigewasset River Local Advisory Committee (“PRLAC”) Recommended Conditions

1. Destabilized riverbanks at PSNH ROW river crossovers have been a maintenance issue for a long time. **Recommendations** to stabilize banks and prevent silting, toxic stormwater runoff:

- i. Require a 100’ buffer from normal river high water mark to the 1<sup>st</sup> structure. This would apply to all new structures and existing structures scheduled to be moved to allow for the additional transmission line.
- ii. No mowing or other equipment allowed in the 100’ shoreland buffer area.
- iii. Shrubs, short trees (20’), other deep-rooted vegetation will be planted in shoreland buffer.
- iv. These regulations will be incorporated into the SWQPA RSA 483 B.

**Response:** The Applicants do not agree to this condition because the premises underlying this condition are incorrect and the proposed condition exceed DES regulatory requirements.

2. A minimum of three ”Project Monitors” with appropriate technical credentials will be hired by NH DES. They will report to NH DES. At least one shall participate in all NPT pre-construction and construction planning meetings and make recommendations on BMP’s plus provide council on stormwater and other environmental issues. NPT will provide financial support to the Department.

**Response:** The Applicants will hire four environmental monitors with appropriate credentials and will provide weekly and monthly monitoring reports to NH DES. In addition, the Project’s general contractor will have their own environmental monitors to inspect construction activities and verify that work is being conducted in accordance with applicable regulations and permit conditions. The Applicants do not agree to providing additional financial support to NH DES to hire additional monitors.

3. At least 90 days before construction begins, the applicant will provide well-documented erosion and sediment control plans as per NH Stormwater Manual: Volume 3 – Revision 1.0. The document will consist of an outline (a menu) of specific BMP details and will identify on the maps where site-specific BMPs will apply. Write the Plan in a way that it is useable by Interveners and town officials.

**Response:** The Applicants will comply with DES permits and conditions, which more than adequately address these issues. In particular, as required by Section 401 WQC Condition 11, the Applicant submitted the Construction BMP Inspection and Monitoring Plan to NHDES on December 29, 2017. This proposed condition far exceeds what is contained in those permits and the Applicants cannot agree. PRLAC has not provided any basis to the SEC as to why the SEC should impose more stringent conditions.

4. The Applicant should be required to take a more serious look at rerouting the ROW exiting Plymouth. This would call for staying underground when exiting Plymouth, tying into River Road south to where the existing ROW crosses River Road. Benefits: - Avoid extremely sensitive Ashland ROW – town well (protected), waste water treatment ponds plus 10-15 critical monitoring wells

- v. No further encroachment into 150' SWQPA RSA: 483 B protected area
- vi. Avoid further encroachment into the 100 year floodplain
- vii. Avoid two Pemigewasset River crossings
- viii. Avoid two I -93 crossings
- ix. Avoid new construction in New Hampton east of I-93
- x. Avoid 50 above ground structures in tourist sensitive I-93 area between Exits 23 - 24.

**Response:** For the reasons discussed *supra* Part B § IV, B the Applicants do not agree to this condition.

5. Restore wetlands to pre-existing conditions in and outside of ROW. Pre-existing conditions require inventories, flagging, and photos of all wetlands prior to construction. Include all stream cross overs of ROW and Access Road wetland crossings.

**Response:** The Applicants propose the following condition: The Applicants shall restore all temporarily disturbed wetlands within the ROW to pre-existing conditions. The Applicants shall not directly impact wetlands outside of the ROW. Identification of pre-existing conditions may include inventories, flagging, and photos of wetlands prior to construction.

6. Any mitigation plans must be within the Pemigewasset Watershed.

**Response:** This is not a valid permit condition. All mitigation plans are administrated by the NH DES pursuant to its statutory authority and any conditions regarding such issues must conform with that authority.

7. Review all NH DES waivers that respond to "Extreme Weather Conditions".

**Response:** The Applicants are unclear as to what this condition is requesting, and therefore cannot agree to this condition.

8. Add "extreme weather conditions"/ "climate changes" into the regulatory language.

**Response:** The Applicants are unclear as to what this condition is requesting, and therefore cannot agree to this condition.

**V. Abutting Property Owners Bethlehem to Plymouth Proposed Conditions (“APOBP”)**

1. The Applicants should not be permitted to site the proposed underground portion of the power line along NH Highways 18, 116, 112, or 3. The applicants should be compelled to identify a different route that completely avoids or greatly minimizes the unreasonable adverse effects described above. As stated previously, fully feasible alternative routes that would avoid most of the above-described unreasonable adverse effects are available (for example, the I-93 corridor). The Applicants must be compelled to modify their proposal to utilize one of these alternative routes for the underground portion of the project. This condition would greatly mitigate interference with the orderly development of the region associated with the underground portion of the project (as required under RSA 162-h:16, IV), and would mitigate the proposed project’s unreasonable adverse effect on aesthetics, water quality, the natural environment, and public health and safety (as required under RSA 162-H:16, IV(c)). This condition would also satisfy the requirement at RSA 162-H:16, IV that the Subcommittee consider available alternatives to the proposed project.

**Response:** For the reasons discussed *supra* Part B § IV, B the Applicants cannot agree to this condition.

2. Under no circumstances should the applicants be permitted to use CFA in trench backfill material. The Applicants should be required to either:
  - a. backfill with the indigenous soil removed from the trench, using topsoil segregation and replacement of the subsoil then topsoil. This is the BMP identified in the EIS for this project, or
  - b. utilize Fluidized thermal backfill (FTB) or other backfill that does not contain CFA, or any leachable toxic material. FTB with the properties required by this project can be manufactured from clean sand, clean crushed stone, cement, and water, without CFA. This is in fact what the Applicants initially proposed to use, and stated unequivocally that they would use, during the pre-hearing public information period for this project. If the Applicants wish to use FTB, they must be required to use FTB devoid of CFA or any leachable toxic materials.

**Response:** For the reasons discussed *supra* Part C § III, E, 13 the Applicants cannot agree to this condition.

3. The applicant must be required to conduct leaching tests on any material they propose to use as trench backfill, other than the indigenous soil originally excavated from the trench. The leaching tests used should be EPA SW846 Method 1313-131648. The results of the leaching tests must show that no toxic substances are leached from the tested backfill material under conditions approximating the proposed application of the backfill material (including conditions involving permanent submersion in groundwater). The Applicants must be prohibited from using as backfill material any material that does not prove through the above leaching tests to be free of toxic substances in its leachate.

**Response:** For the reasons discussed *supra* Part C § III, E, 13 the Applicants cannot agree to this condition.

4. The Applicants must be prohibited from using as backfill any material that proves through the above leaching tests to have toxic substances in its leachate, in the following locations:
  - a. Adjacent to or within Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance;
  - b. Over aquifers used as drinking water or agricultural water;
  - c. In any location where the power line trench extends downward to below the top of the shallow aquifer in high water season (i.e., where the backfill will be submerged in groundwater for any portion of the year);
  - d. Within any wellhead protection area or aquifer protection area;
  - e. Within the bounds of any organic farming operation; and
  - f. Within the bounds of Franconia Farms.

**Response:** See the Applicants' Response to APOBP Proposed Condition #3 above.

5. Where the applicants propose to install the underground power line along State highways (i.e. NH Rtes. 302, 18, 116, 112, or 3), the applicants must be required to install the power lines under the paved portion of the road, and must not be permitted to install the power line under the shoulder of the highway, or in areas that are outside of the paved roadway. This condition would greatly mitigate interference with the orderly development of the region associated with the underground portion of the project (as required under RSA 162-h:16, IV), and would mitigate the proposed project's unreasonable adverse impact on the public interest (as required under SEC Rules Site 301.16), and in particular the project's unreasonable adverse effects on private property (as required under Site 301.16(b)) and aesthetics (as required under as required under Site 301.16(g)).

**Response:** The matters purported to be covered by this Condition are included within DOT's approvals. The Applicants will comply with all DOT conditions and approvals.

6. The Applicants must be required as a condition of any Certificate to adhere strictly to the promises and statements that the Applicants have made on the record or in the transcripts of the public information sessions of this docket regarding the project. Failure of the Applicants to adhere to any promise or statement must be deemed a default of the Certificate. Any party who suffers damage or loss as a result of such a failure on the part of the Applicants (aggrieved party) must be entitled to compensation from the Applicants in an amount that makes them whole for the damage or loss suffered.

**Response:** Without specific reference to particular statements, it is impossible for the Applicants to assess such a proposed condition and therefore cannot agree to this

condition. Notwithstanding that point, the Applicants made numerous representations during the course of the proceeding, such as for example, commitments in various MOU's and the Applicants have proposed specific conditions to memorialize those commitments.

7. As a condition of any certificate, the Applicants must be compelled to establish an arbitration process, using a fully independent arbiter, by which any aggrieved party can lodge claims against the Applicants for any damages suffered as a result of default by the Applicants on Certificate conditions. Aggrieved parties must not be required to hire lawyers and take the Applicants to court in order to redress damages suffered. Rather, aggrieved parties must be provided an inexpensive, efficient, independent, fair arbitration process through which any damages or losses can be redressed.

**Response:** This proposed condition appears to be premised on the Applicants' failure to comply with Certificate conditions. To the extent that is the issue of concern, the Applicants cannot agree because enforcement of certificate conditions rests with the SEC. To the extent this proposed condition is intended to address alleged damages that arise from the construction of the Project, in full compliance with the Certificate, please see the Applicants' Response to CFP's Proposed Condition #11.

8. Similarly, as a condition of any certificate, the Applicants must be required to reimburse business owners for lost business that can be shown to be caused by the proposed project.

**Response:** The Applicants are willing to adhere to commitments made in their pre-filed testimony and during their oral testimony. *See e.g.* Supplemental pre-Filed Testimony of William Quinlan, Attachment M (describing the Claim Submission Form).

9. The Applicants must be required to provide assistance to municipalities and other utility owners if future repairs or improvements are rendered more expensive due to the presence of the proposed power line. The Applicant must be required to reimburse property owners fully for any lost stone wall, well, or other structure, or any lost tree. Applicants must be required to make abutting landowners whole in the event of contamination by the project of ground water, surface water, vegetation, or soils.

**Response:** With respect to the first sentence, see discussion supra note 26 and the Applicants' Proposed Conditions # 21–22. The NH DOT excavation permit already deals with this issue. With respect to the second and third sentences, see the Applicants Response to Condition 7 above.

10. As a condition of any Certificate, the Applicants must be required to identify through legal survey procedures the borders of all highway easements along the proposed underground route.

**Response:** This condition is unnecessary. The Applicants are in the process of finalizing a survey report that complies with Condition #4 of the NH DOT Recommended Approval with Conditions, App. Ex. 107.

11. As a condition of any Certificate, the Applicants must be prohibited from encroaching on private land without the permission of the landowner. Any instance of such encroachment must be defined as a default of the Certificate, and the aggrieved landowner must be entitled to compensation.

**Response:** This condition is unnecessary. NH DOT Recommended Approval with Conditions, App. Ex. 107, Condition #10, provides that: “The NHDOT permits concern only the type and manner of work to be performed within the NHDOT Right of Way (ROW). The Department cannot and does not grant permission to enter upon or use any privately owned land.”

12. As a condition of the certificate, the Applicants must be permanently prohibited from using eminent domain in order to acquire rights to private land abutting the proposed power line route.

**Response:** This condition is unnecessary. The Applicants have all of the necessary land rights to construct, operate, and maintain the Project.

13. The Easton Conservation Commission provided evidence that geotechnical work crews did not adhere to best management practices. For example, boring fluids were allowed to flow into adjacent bodies of water. Due to the high level of concern over the Applicant’s inability to ensure that subcontractor crews adhere to best management practices and that the environment and waterways in the Easton Valley are protected, an independent observer should be required on site during all construction activities. Condition 13 would greatly mitigate negative impacts on private property as required under Site 301.16(b) and on air and water quality as required under Site 301.16(h).

**Response:** See Applicants’ Response to PRLAC Proposed Condition #2.

Respectfully submitted,

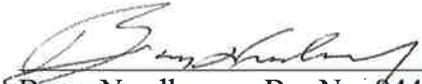
Northern Pass Transmission LLC and Public  
Service Company of New Hampshire d/b/a  
Eversource Energy

By Its Attorneys,

McLANE MIDDLETON,  
PROFESSIONAL ASSOCIATION

Dated: January 19, 2018

By:

  
Barry Needleman, Bar No. 9446  
Thomas Getz, Bar No. 923  
Adam Dumville, Bar No. 20715  
11 South Main Street, Suite 500  
Concord, NH 03301  
(603) 226-0400  
[barry.needleman@mclane.com](mailto:barry.needleman@mclane.com)  
[thomas.getz@mclane.com](mailto:thomas.getz@mclane.com)  
[adam.dumville@mclane.com](mailto:adam.dumville@mclane.com)

Dated: January 19, 2018

DEVINE, MILLIMET & BRANCH,  
PROFESSIONAL ASSOCIATION

By: /s/ George Dana Bisbee

George Dana Bisbee, Bar No. 557  
111 Amherst Street  
Manchester, NH 03101  
[dbisbee@devinemillimet.com](mailto:dbisbee@devinemillimet.com)