

**STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE**

Docket No. 2015-04

Application of Public Service Company of New Hampshire d/b/a Eversource Energy
for a Certificate of Site and Facility

DURHAM HISTORIC ASSOCIATION'S POST-HEARING BRIEF

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Durham Historic Association submits this post-hearing brief pursuant to the October 31, 2018 Order on Schedule for Final Briefs and the November 9, 2018 Order on Newington's Motion for Extension of Deadlines to File Briefs.

INTRODUCTION.

On April 12, 2016, Public Service Company of New Hampshire d/b/a Eversource Energy ("Applicant") applied for a Certificate of Site and Facility ("Application") with the Site Evaluation Committee ("SEC"). The Application seeks the issuance of a Certificate of Site and Facility approving the siting, construction, and operation of a new 12.9-mile 115kV electric transmission line between existing substations in Madbury and Portsmouth ("Project").

On November 16, 2016, the Durham Historic Association ("DHA") filed a Late Motion to Intervene in Docket 2015-04, and a Reply in Support of Petition to Intervene on December 7, 2016. On December 21, 2016, DHA's Motion was granted by the presiding officer of the SEC, but limited Durham Historic Association's participation in the docket to issues associated with the impact of the Project on historic resources in Durham. Therefore, this brief will summarize the evidence presented in pre-filed testimony and during the evidentiary hearings concerning the impact of the Project on the historic resources of Durham.

CHAPTER 162-H ENERGY FACILITY EVALUATION, SITING, CONSTRUCTION AND OPERATION. RSA 162-H:1 Declaration of Purpose. "the legislature finds that it is in the public interest... that all entities planning to construct facilities in the state be required to provide full and complete disclosure to the public of such plans..."

It has been difficult for Durham residents to obtain information about this Project from the Applicant. The Applicant refused to answer questions from residents of Durham during the Public Information Session held on April 22, 2015. At Newington on April 23, 2015, Eversource answered questions from residents but those questions and answers were off the record. Therefore, the questions and answers provided were of no use to the public who could not attend. On June 22, 2015 another Public Information Session was held in Durham. Many questions were asked of the Eversource representatives but no useful information was received. This meeting was recorded and may be viewed at: <https://dcat22.viebit.com/player.php?hash=e334c9cfcc0dc1efcd34ad18fbd8844f>.

After the application was filed on April 12, 2016, most information, except a full explanation that substantiated the need for this project, became available. However, unless a resident happened to find *Appendix 5 - Engineering Design Drawings*, and paid to have the drawings printed on oversize paper, there was no way to ascertain or visualize the impact the proposed transmission lines will have in Durham.

SEC rule Site 201.01 Public Information Sessions Prior to Application was ignored by the Applicant, who is required by rule Site 201.01(b) "The applicant shall mail a copy of this notice...to each owner of abutting property by certified mail." No certified mail notices were sent to Durham abutters.¹

It continues to be difficult to find accurate data about the proposed project due to the maps provided by the Applicant. There are several map sets, each with different data about the project. The third, and most recent Environmental map dated 7-16-2018, is

¹ Tr. Day 15, PM at 173, 197, 251

coded to show one of the three Historic Districts defined by the Applicant's consultant. These maps show the stone walls, but not the stone wall codes.²

The most recent 'Stone Wall' map dated 9-1-2017, is coded to show two of the three Historic Districts defined by the Applicant's consultant. These maps show the stone walls and stone wall codes. These maps show 'sensitive areas' defined by Ms. Bunker. The 'Stone Wall' maps use the Environmental map as the base map, with additional coding. However, the most recent Environmental map is dated almost a year after the 'Stone Wall' map, so the 'Stone Wall' map must be out of date.³

The Environmental map scale is 1 inch = 150 feet, which is very compressed. The utility easement is 100 feet wide so it is drawn on the map as 2/3 of an inch wide. This makes the map difficult to see and decipher due to topo lines superimposed on an aerial image, and the many symbols within the easement, which is shown as only 2/3 of an inch wide. Sarah Allen, who signed the map, stated the map scale was set in consultation with the Applicant's legal team.⁴ When questioned about the scale of the roads on the map, Ms. Allen stated the roads in the easement are not drawn to scale, the roads are shown much narrower than the actual width, except in wetlands where the width of the road is accurate.⁵ Trees and vegetation in the easement are shown with a blue symbol, the color ordinarily representing water.⁶ The engineering drawings are drawn at a scale that is adequate for the subject, therefore the engineering drawings are easy to decipher.⁷

² App. Ex. 148

³ DHA Ex. 3

⁴ Tr. Day 5, PM at 54

⁵ Tr. Day 5, PM at 58

⁶ App. Ex. 148

⁷ App Ex 149

STANDARD OF REVIEW

RSA 162-H:16 establishes the findings that must be made for the Subcommittee to issue a certificate. RSA 162-H:16, IV specifically requires that “[a]fter 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.” This general standard ties back to the statement of purpose and the enumerated areas of potential impacts and benefits set forth in RSA 162-H:1, requiring a consideration of those issues before a decision can be made.

In addition to the general standards for issuance of a certificate, RSA 162-H:16, IV further sets forth four specific findings that the Subcommittee is required to make, “[i]n order to issue a certificate.” Those four specific findings are:

- (1). That 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.
- (2). That 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.
- (3). That 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.
- (4). That issuance of a certificate will serve the public interest.

With respect to all of the requirements that must be met under the statute and the Site rules, the burden is on the Applicant to make the necessary showings for a certificate to issue. See Site 202.19(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.”; and also Site 202.19(a) “The party asserting a proposition shall bear the burden of proving the proposition by a preponderance of the evidence.”.

SPECIFIC FINDINGS

FINANCIAL, TECHNICAL AND MANAGERIAL CAPABILITY.

“[I]n order to issue a certificate, the committee [must] find that ... [t]he 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.” RSA 162-H:16-IV(a).

If the SEC issues a certificate to the Applicant, the SEC should include Conditions to ensure the implementation of appropriate Best Management Practices and sufficient Independent Monitoring with strong enforcement powers and penalties to ensure compliance and to deter noncompliance.

Independent Historic Resource Monitors are critical to ensure the MOU conditions and provisions are implemented. Further, the independent monitor should answer to an entity other than the Applicant to avoid any implicit bias. The choice of the independent monitor responsible for historic resources should be approved by the SEC, the towns and NHDHR.

SPECIFIC FINDINGS

EFFECTS ON AESTHETICS, HISTORIC SITES, AIR AND WATER QUALITY, THE NATURAL ENVIRONMENT AND PUBLIC HEALTH AND SAFETY.

The third specific requirement of RSA 162-H:16, IV that must be met before the Subcommittee can issue a certificate is that the Subcommittee must find that “[t]he site and facility will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety.” RSA 162-H:16, IV(c).

Effects on Aesthetics

RSA 162-H:16, IV(c) requires the Subcommittee to find that “[t]he site and facility will not have an unreasonable adverse effect on aesthetics.” Site 301.05 provides further details, setting forth specific “application requirements.” Among these requirements, Site 301.05 requires Applicants to provide a “[v]isual 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.”

The required visual impact assessment must also contain specific components, including but not limited to “[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 required visual impact assessment must also contain “[a] characterization of the potential visual impacts of the

proposed facility,...on identified scenic resources as high, medium, or low,” based on consideration of various identified factors. Site 301.05(b)(6). The required visual impact assessment must also contain “[p]hotosimulations from (a) representative key observation points, from (b) other scenic resources for which the potential visual impacts are characterized as ‘high’ pursuant to (6) above, and, to the extent feasible, from (c) a sample of private property observation points within the area of potential visual impact, to illustrate the potential change in the landscape that would result from construction of the proposed facility and associated infrastructure, including land clearing and grading and road construction...” Site 301.05(b)(7).

Mr. Raphael characterized the existing conditions of the New Hampshire seacoast as “flat and low”, “very developed” with “urban and suburban settlements connected by a major highway network and airport.”⁸ This contrasts with what he describes as the area’s most prominent feature, the much less developed Great Bay Estuary, where the Applicant proposes to construct a high voltage transmission line.⁹ As the fastest growing, populated area of the state, the Seacoast of NH is remarkable for all the conserved land surrounding its most treasured natural feature. This conservation effort reflects the public’s high regard and concern for the Great Bay Estuary.¹⁰

SEC rule Site 102.45(e) requires the Applicant to list “historic sites that possess scenic quality”. Yet Mr. Raphael stated that he relied on the Applicant’s historic consultants who listed only historic resources that are listed or that are eligible for listing on the National Register or the State Register.¹¹

8 App. Ex. 17 pg.7 of 17

9 ibid

10 TD-UNH Ex. 1 Suppl. A-B pg. 42 of 53

11 Tr. Day 9, PM at pg. 74-75

Despite all the assertions that the Applicant reached out at the local level, the Applicant and the Applicant's consultants never contacted the Durham Historic Association.¹²

Many historic and cultural resources possessing scenic quality that would have qualified under SEC rules were never identified or analyzed by Mr. Raphael. Using the broader SEC rules, as opposed to the Section 106 rules, the Durham Historic Association identified many resources with scenic qualities that reflect the history of Durham and New Hampshire in its pre-filed testimony.¹³

During Attorney Needleman's cross examination of Michael Lawrence, it becomes clear that only National Register-eligible and State Register-eligible historic resources were listed by the Applicant's historic consultants.¹⁴ When SEC member Ms. Muzzey questions the source of the information provided to Mr. Raphael by the Preservation Company, Attorney Needleman admits he is introducing new evidence, but does not know the source of the evidence.¹⁵ In responding to questions from SEC member Mr. Fitzgerald about when historic districts need to be included according to SEC rules, Mr. Lawrence replies that "Well reading the rules, my understanding is that that's, that they have to be included."¹⁶

In his Visual Assessment testimony, Mr. Raphael starts with 181 identified scenic resources, then applies LandWorks viewshed analysis eliminating 151 identified scenic

¹² Tr. Day 11, PM at 133

¹³ DHA Ex. 1 at 4-42

¹⁴ Tr. Day 14, PM at 24-26

¹⁵ Tr. Day 14, PM at 27-28

¹⁶ Tr. Day 14, PM at 42-44

resources, as not having potential visibility.¹⁷ This leaves only 30 scenic resources to qualify for his full assessment using his LandWorks methodology.

During questioning about his visual assessment process, Mr. Raphael described the complex methodology he used to analyze visual sensitivity, visual effects, and the effects on the viewer.¹⁸

Mr. Raphael's Table 7 entitled "Overall Sensitivity Ratings of Resources" shows that if a scenic resource is not given a "moderate high" or "high" rating, it will be dropped from further analysis.¹⁹ If a resource gets a low rating in either category in each of the three analyses of visual sensitivity, visual effects, and viewer effects, it will be eliminated from the list.²⁰ In this process, Mr. Raphael narrows a list of 30 scenic resources down to only 9 scenic resources. This systematic elimination of 21 culturally designated scenic resources appears based on an overly complicated rating and scoring method that counters the purpose of the SEC rules to protect scenic resources important to the history of local communities and the state.

The Applicant has not met its burden of proof in regard to recreational trails, as described in SEC rule Site 102.45(d), which defines recreational trails as scenic resources. The Applicant's consultant did not assess the many trails where the proposed Project crosses three historic districts and several conservation areas between the Durham-Madbury town line and Durham Point Road.²¹ These scenic resources are

¹⁷ App. Ex. 51

¹⁸ Tr. Day 9, PM at 84-92

¹⁹ App. Ex. 51 at 63

²⁰ App. Ex. 51 at 86-88.

²¹ DHA Ex. 9, DHA Ex. 10

heavily used outdoor recreational trails, Class VI roads, old logging and quarrying roads that were once Native American pathways; many with historic sites and scenic landscape features.²² Not only did Mr. Raphael fail to analyze the impact of the Project on recreational trails in these areas, but Mr. Lawrence did as well because his assessment was limited to a review of Mr. Raphaels Visual Assessment.

However, it is clear from Mr. Lawrence's answer to Director Muzzey, that he recognized that the mitigation for historic resources could be determined unreasonable, so that the project should not be built: "And I think that each one of those areas has to be evaluated, you know, where this Project is in proximity to that historic site. If it's a mile away, something very different is the solution to right up close and personal. So I think you have to take every one individually, and mitigation is probably going to be different in every case as well. And in some cases it's unreasonable and the project shouldn't be built."²³

All these scenic resources and historic resources are accessed and enjoyed, free of vehicular traffic, by residents and the public that will be adversely impacted by the degree of change visually in the ROW by 100 ft. wide clear-cutting and the installation of new poles two or three times the height of current poles that will tower above the tree line. The visual impact of a nearby pole was referred to when Mr. Raphael stated "the closer you get the higher it's (the pole) going to look to you in person."²⁴

Mr. Raphael's failure to identify, analyze, avoid, minimize and mitigate the impacts

²² DHA Ex.1 at 4-42.

²³ Tr. Day 14, PM at 65

²⁴ Tr. Day 9, PM at 17-19

of the Project on these recreational trails and areas will cause dramatic visual changes to these treasured pathways through conservation areas because of the closeness of the structures in the corridor stripped of vegetation.

Attorney Aslin questioned Mr. Lawrence about SEC rule Site 102.25 defining “key observation point”. Mr. Mr. Lawrence responded that he considers the Newmarket Road utility crossing and the Durham Point Road utility crossing to qualify as “key observation points” because these roads possess three criteria: visibility, public access, and scenic quality; and furthermore these historic scenic roads do not have to be deemed scenic resources to qualify as key observation points.²⁵

The planting plans proposed in the Stipulations of the Counsel for the Public and the Applicant, as mitigation efforts at road crossings in Durham, will only be token distractions from the drastic changes proposed by the Project. Monopoles two and three times taller than existing poles, viewed towering in a line into the distance, in a clear-cut corridor 100 ft. wide cannot be mitigated or hidden. The degree of change at the crossings of Durham Point Rd. and Route 108/Newmarket Road/The King’s Highway, has not been adequately analyzed or mitigated by the Applicant. These are major historic routes traveled by thousands of commuters and tourists every day.

²⁵ Tr. Day 14, PM at 70-72

SPECIFIC FINDINGS

Effects on Historic Sites

Pursuant to RSA 162-H:16, IV(c), in order to issue a certificate the SEC must find that “[t]he site and facility will not have an unreasonable adverse effect on ... historic sites.” In making that determination, SEC Rule Site 102.23 specifies that “the committee shall consider:”

- (1) All of the historic sites and archaeological resources potentially affected by the proposed facility and any anticipated potential adverse effects on such sites and resources;
- (2) The number and significance of any adversely affected historic sites and archeological resources, taking into consideration the size, scale, and nature of the proposed facility;
- (3) The extent, nature, and duration of the potential adverse effects on historic sites and archeological resources;
- (4) Findings and determinations by the New Hampshire division of historical resources of the department of cultural resources and, if applicable, the lead federal agency, of the proposed facility's effects on historic sites as determined under Section 106 of the National Historic Preservation Act, 54 U.S.C. §306108, or RSA 227-C:9; and
- (5) The effectiveness of the measures proposed by the applicant to avoid, minimize, or mitigate unreasonable adverse effects on historic sites and archaeological resources, and the extent to which such measures represent best practical measures.

The Applicant bears the burden of proof to demonstrate the Project meets the statutory standard. SEC Rule Site 202.19(b) states “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.” SEC Rule Site 202.19(a) states “The party asserting a proposition shall bear the burden of proving the proposition by a preponderance of the evidence.”

Inventory of Historic Sites and Effects Assessment.

The Applicant retained Cherilyn Widell of Widell Preservation Resources, LLC as an expert witness. Contrary to the definition of historic sites adopted by the SEC, Ms. Widell limited the types of resources she considered to only those that were either on the National Register for Historic Places or determined to be eligible for listing on the National Register.²⁶ While National Register listed or eligible resources are a specific category of “historic sites” called out in the rules, there is no plausible interpretation of Site 102.23 that would limit “historic sites” to only this subcategory.

Ms. Widell testified that she completed a Project Area Form, a step in the federal Section 106 process.²⁷ Ms. Widell also testified that she “looked at all the properties that were brought forward by the Durham Historic Association”²⁸

However, Ms. Widell testified that she did no further research on the “Durham Farms Railroad Historic District”²⁹ as described in DHA’s pre-filed testimony. This historic site includes land crossed by the easement between Mill Road and Bennett Road, and includes land on both sides of the railroad track, extending from Mill Road south 2.8 miles to the Newmarket town line.³⁰ The stone walls that demarcate this historic site are shown on the stone walls maps³² As a result, the stone walls at this historic site are not fully protected.

²⁶ Tr. Day 10, PM at 9,10

²⁷ Tr. Day 10, PM at 19

²⁸ Tr. Day 10, PM at 16

²⁹ Tr. Day 10, AM at 73-75

³⁰ DHA Ex. 1 at 30, 33, 34, 35.

³¹ DHA Ex. 3 at 7 – 11

Ms. Widell testified that she did no further research on the “Longmarsh Road Quarries Historic District”, as described in DHA’s pre-filed testimony.³² Ms. Widell just testified that it “is a contributing part of the Durham Point Historic District”³³ However, referring to the Durham Point Historic District map, that Historic District includes only a section of the Quarries ‘sensitive area’³⁴ Further, the Quarries ‘sensitive area’ as drawn does not include the quarry cut to the west where the Quarrymen’s bench is situated which Ms. Widell testified should be included in the Quarries ‘sensitive area’³⁵ The Quarries ‘sensitive area’, within the 100 foot wide easement, does not extend west to the ox pen which is the western limit of the Longmarsh Road Quarries Historic District” as defined in DHA pre-filed testimony.³⁶ Ms Widell also testified that she did not know the significance of cape chisel splitting marks on granite.³⁷ This new technology enabled the controlled splitting of granite and dates from 1767, according to research published by James Garvin, Architectural Historian for the State of New Hampshire³⁸ his research is available on the NH DHR website. The “Longmarsh Road Quarries District” as described in DHA’s pre-filed testimony was not adequately researched by the Applicant and no exploration outside the direct APE took place, with the result that its boundaries are not accurately defined, and its initial date of operation is wrongly assigned to a later period of history.

³² DHA Ex. 1 at 10-16

³³ Tr. Day 10, AM at 80-81

³⁴ DHA Ex. 3 at 17 of 22.

³⁵ Tr. Day 10, AM at 83-84

³⁶ DHA Ex. 1 at 15-16

³⁷ Tr. Day 10, AM at 81

³⁸ DHA Ex. 1 at 12

Counsel for the Public's expert witness Patricia O'Donnell testified that Ms. Widell's methodology demonstrated an unreasonable bias towards the National Register.³⁹ Ms. O'Donnell further criticized Ms. Widell's methodology as inappropriately focusing on architectural features of structures, to the exclusion of both larger areas and landscapes and smaller historic objects and feature.⁴⁰

Both the DHA's "Longmarsh Road Quarries Historic District" and "Durham Farms Railroad Historic District" fall into these categories. Ms. Widell's identification of "historic sites" was extremely narrow and represents an incomplete capture of "all historic sites ... located within the area of potential effects ..." as required by SEC Rule Site 301.06(b).

Ms. Widell also limited the number of historic sites identified and analyzed by using an overly narrow Area of Potential Affect ("APE"). Pursuant to the SEC rule Site 301.05(b), the Applicant was required to identify "all historic sites ... located within the area of potential effects, as defined in 36 C.F.R. §800.16(d)."

Ms. Widell used the width of the easement, 100 feet, as the APE to evaluate direct effects of the Project in Durham. Ms. Widell used a one-half mile area on each side of the centerline of the utility easement as the APE to evaluate visual affects of the Project.⁴¹ This APE defined the study area of for the Applicant's Section 106 Project Area Form ⁴²

However, the SEC's rules refer to the federal definition of the APE, rather than to the APE that is set in the federal Section 106 process. The Applicant's proposal is to

³⁹ CFP Ex. 5 at 4 of 79

⁴⁰ *ibid.*

⁴¹ Tr. Day 10, AM at 75 and App. Ex. 29 at 6 of 562

⁴² App Ex. 029 at 6 of 562.

construct a brand new 115 kV transmission line with poles and conductors above the tree line, and the federal definition reasonably indicates use of a broader APE than one-half mile to either side of the utility easement centerline. Also, SEC rule Site 301.05(b)(4)(d) requires a visual impact assessment for transmission line projects covering an area with a 10-mile radius to assess aesthetic effects on scenic resources, which include “historic sites that possess a scenic quality”⁴³ Where historic sites out to 10 miles are required to be reviewed for potential visual impacts under the SEC rules, it is not logical to limit the review of the Project impacts to historic sites to a 100 foot APE or a one-half mile APE on each side of the utility easement centerline. Because her APEs were so restrictive, Ms. Widell excluded historic sites that could be adversely effected by the Project, and therefore minimized the potential impacts of the Project on historic sites.

The research that Ms. Widell conducted to identify historic resources resulted in an incomplete identification of resources impacted by the Project. Ms. Widell and the Preservation Company used windshield survey, Section 106 forms, copied the Historic Resources Chapter of the Durham Master Plan, dated house construction from tax records, reviewed published town histories and used Google Earth to identify potential historic sites.⁴⁴ Despite the definition of “historic sites” as “any building, structure, object, district, area or site that is significant in the history, architecture, archaeology or culture of this state, its communities, or the nation,” Ms. Widell, the Applicant and the Preservation Company did not contact Durham officials or the Durham Historic Association for historical data and did not review the archives at the DHA Museum.⁴⁵

⁴³ SEC rule Site 102.45(e).

⁴⁴ App. Ex. 29 at 6-7 of 562.

⁴⁵ Tr. Day 10, PM at 153-155 and Tr. Day 11, PM at 133

After DHA filed its original pre-filed testimony in 2017, including identified stone walls,⁴⁶ Ms. Widell testified the DHA-identified stone walls in the direct APE were added to the Section 106 Project Area Form prepared by The Preservation Company.⁴⁷ However, no other above ground historic resources identified by the DHA were subject to further research or evaluation by the Applicant.

The Preservation Company comment about Durham granite quarries on the Project Area Form stated “granite quarrying w[as] carried out in the area, but locations of quarry sites on Durham Point have not been identified.”⁴⁸ The Applicant’s experts did not utilize the extensive historical research provided in DHA pre-filed testimony ⁴⁹ to improve on the lack of data contained in the Project Area form, to further document and protect this quarry site.

Beech Hill Road and its history, dating from the 1600s, was thoroughly discussed in DHA’s pre-filed testimony, including a copy of the 1763 Act “Directing a High Way to be Made from Durham to the New Settlement at a Place called Cohass...”, the first state highway, *The Province Road*.⁵⁰ Despite being provided with extensive historical research by the DHA, Ms. Widell testified “it was not found to be a historic road unto itself” ⁵¹ and the Applicant took no steps to document and preserve this historic site.

⁴⁶ DHA Ex. 1

⁴⁷ Tr. Day 10, PM at 19

⁴⁸ App. Ex. 029 at 276 of 562

⁴⁹ DHA Ex. 1 at 10-16

⁵⁰ DHA Ex. 1 at 39-43

⁵¹ Tr. Day 10, PM at 41

Therefore, by not utilizing the historical research provided by the Durham Historic Association, or expanding on the reports provided by The Preservation Company, or expanding the Area of Potential Effect, Ms. Widell significantly under-identified historic sites that will be impacted by the Project.

To gauge potential visibility of the Project, The Preservation Company historians relied on the standard tools and methods used by the Applicant's visual impact consultant, LandWorks of Middlebury, VT. The first step in this analysis was to determine which of the properties identified were located within the zone of visual influence (ZVI), also known as the Project viewshed.⁵² Also, The Preservation Company used Google Earth Ground-Level View in conjunction with a digital 3-D model of the Project to verify onsite and viewshed mapping findings regarding visibility of the Project. In certain situations, a photo overlay was used to gain a more accurate simulation of views in question.⁵³

The indirect APE for visual effects used by Ms. Widell and The Preservation Company was one-half mile on each side of the easement centerline.⁵⁴ The segment of the proposed Project in Durham is seven miles long, crossed by public roads and the corridor crosses conservation land with public access.⁵⁵ Instead of using computers to allegedly mimic human experience, the Applicant's consultants only had to walk the roads, trails and the conservation land to produce a credible evaluation of visual impact. The entire length of the easement is visible from public-access land and town roads,

⁵² App. Ex. 029 at 8 of 562

⁵³ App. Ex. 029 at 9 of 562

⁵⁴ Tr. Day 10, AM at 75

⁵⁵ DHA Ex. 1 at 2

except a quarter-mile segment between Longmarsh Road and Durham Point Road in the Plum Swamp.

The Applicant's viewshed analysis included multiple layers that eliminated historic sites with visibility of the proposed transmission lines from further review, thereby limiting the information available to the SEC for consideration when assessing the actual impacts of the Project on historic sites.

The Applicant and its consultants have narrowly interpreted the SEC rules regarding historic sites, and utilized a methodology that inappropriately eliminated potential historic sites from further review. By utilizing a methodology that produced an incomplete capture of historic sites affected by the Project, and presenting effects assessments for only a fraction of the identified historic sites, the Applicant has provided the SEC with a highly edited and reduced picture of the potential effects of the Project on historic sites, thereby reducing the SEC's ability to make an informed determination of whether the Project will have an unreasonable adverse effect on historic sites pursuant to Rule Site 301.14(b).

In addition to starting with a reduced number of historic sites for assessment of potential effects, Ms. Widell's evaluation of adverse effects is also flawed.

In the Applicant's Historic Properties Effects Table concerning the Durham Point Historic District evaluation for "(iv.) change of the character of the property's use or of physical features within the property's setting that contribute to its historic features;" Ms. Widell states "In an isolated location, not visible from road or trails, the setting of these features is already defined by the existing cleared utility corridor. The overall integrity of

setting of the large district will not be changed.”⁵⁶ This is not accurate, as the proposed Project is visible from roads and trails, being less than 180 feet from Durham Point Road⁵⁷ visible from Longmarsh Road, which is an access point to Longmarsh Preserve,⁵⁸ crossed by public trails⁵⁹ and within public access conservation land⁶⁰ owned by the Town of Durham and The Nature Conservancy. The Applicant’s planned use of an access road from Durham Point Road, a Scenic Road⁶¹ for the installation of the massive concrete caisson to anchor the 95-foot corner pole F107-85, will increase visibility as well.⁶² The proposed poles F107-81 through F107-88 within the Durham Point Historic District average 96 feet tall, towering above the tree line. These poles are at the apex of long views of transmission poles to the west and to the southeast.⁶³ The sight of the long line of massive transmission poles, looking west from the Durham Point Historic District by pole F107-85, was not evaluated. The view west along the straight utility easement is more than 1.6 miles long and includes 18 poles with an average height of 95 feet.⁶⁴ At present, the poles are not visible over this distance because the distribution poles are only 30 to 40 feet tall. The sight of the long line of poles from within the Durham Point Historic District, to the west and to the southeast, was not evaluated in the Effects Table.

⁵⁶ App. Ex. 164 at 23 of 111

⁵⁷ DHA Ex. 3 at 17

⁵⁸ DHA Ex. 4 at 6-7

⁵⁹ DHA Ex. 9

⁶⁰ DHA Ex. 1 at 2 and DHA Ex. 9

⁶¹ DHA Ex. 6

⁶² DHA Ex. 3 at 17

⁶³ App. Ex. 149 at 10, 11

⁶⁴ App. Ex. 149 at 9, 10, 11

The Quarries 'sensitive area' extends west beyond the Durham Point Historic District and includes pole F107-80 which is 93.5 feet tall.⁶⁵ Ms. Widell stated the Quarries 'sensitive area' should be moved west to include the quarry cut and Quarrymen's bench.⁶⁶ The Quarries 'sensitive area' then includes poles F107-79 and 78, which are each 103 feet tall.⁶⁷

The Effects Table for the Durham Point Historic District, includes an evaluation for "(v.) Introduction of visual...elements that diminish the integrity of...significant historic features;" Ms. Widell states: "The project will introduce visual elements in locations where they will have minimal impact on the district's setting, feeling and associations."⁶⁸ For the same reasons enumerated above, this is not an accurate statement because the Project will be visible from public roads, trails and public access conservation land within the Durham Point Historic District. The massive transmission poles and conductors replace old wood poles that carry three thin distribution wires. Ms. Widell testified that the visibility of the transmission lines within the Historic District has a bearing on whether the transmission lines cause an adverse effect.⁶⁹

Ms. Widell's comment for the Effects Table criterion (iv.) above, that "the setting of these features is already defined by the existing cleared utility corridor" is supported by six images labeled "Durham Point Historic District, Google Earth detail..."⁷⁰

⁶⁵ App. Ex. 149 at 10

⁶⁶ Tr. Day 10, AM at 83-84

⁶⁷ App. Ex. 149 at 10

⁶⁸ App. Ex. 164 at 23 of 111

⁶⁹ Tr. Day 10, AM at 91

⁷⁰ App. Ex. 164 at 27, 28, 29, 31, 32

These Google Earth aerial images have been doctored or ‘photoshopped’ to show 8 or more gray electric lines in the easement corridor where only 3 thin black lines presently exist. Ms. Widell testified she had no knowledge about the addition of the gray lines to the Google Earth images included in the Effects Table.⁷¹ Ms. Widell testified these images were sent to NHDHR to explain the effects of the Project,⁷² in support of the Applicant’s Recommended Finding that the Project will cause No Adverse Effect to historic resources.⁷³ A member of the SEC asked the Applicant to provide an explanation about the addition of the gray lines to the Google Earth images. The Applicant response attributes the gray lines “to a distortion created by an enlargement of the image” as “in this location there is only one three-phase overhead 34.5 kV line, comprising three overhead wires at the top of each pole with a neutral wire below.”⁷⁴

In the Applicant’s Historic Properties Effects Table concerning the Newmarket and Bennett Roads Farms Historic District evaluation for “(iv.) change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic features;” Ms. Widell states: “One small overgrown field, where there is evidence of field drainage according to aerial photography, is crossed by the right of way, but there will be no new transmission structures there.” and “the only historic features that may be

⁷¹ Tr. Day 10, AM at 95

⁷² Tr. Day 10, AM at 94

⁷³ App. Ex. 164 at 25 of 111

⁷⁴ Comm. Ex. 11

changed are stone walls located in the cleared utility corridor. Changes to isolated stone walls will have no effect on the setting, feeling or association of the large historic district.”⁷⁵

Concerning the same Historic District, for the evaluation of “(v.) Introduction of visual...elements that diminish the integrity of...significant historic features;” Ms. Widell states: “Because the electric utility corridor is located in wooded land, the proposed project will only be visible in two places on Bennett Road and in the immediate vicinity of the Newmarket Road crossing” and “The existing H-frames will be removed and the distribution line co-located with the transmission line. The new structures will be 65.5' to 79' tall weathering steel H-frames near the Newmarket Road crossing and weathering steel monopoles ranging from 79' to 98' tall elsewhere. There will be a total of sixteen new structures over a distance of about a mile within the district boundary.”⁷⁶ The Applicant’s Recommended Finding to NHDHR was No Adverse Effect.⁷⁷ This analysis is inconsistent and inaccurate for three reasons: 1. The reason given for no effect under criterion (iv.) is “no new transmission structures”, while under criterion (v.) it is stated there will be 16 new structures ranging from 65.5 feet to 98 feet tall over a mile, which is the entire length of the easement in this historic district. This Historic District includes F107 poles #45, the first south of LaRoche Brook, through #60, by the Mooney burial ground.⁷⁸

2. The visual effect to the historic district was evaluated only from the road, namely Bennett Road, a Scenic Road,⁷⁹ and Newmarket Road, the Mills Cultural Byway.

⁷⁵ App. Ex. 164 at 55 of 111

⁷⁶ App. Ex. 164 at 55, 56 of 111

⁷⁷ App. Ex. 164 at 57 of 111

⁷⁸ DHA Ex. 3 at 10-13

⁷⁹ DHA Ex. 6

However, all the land north of Bennett Road crossed by the easement is public-access conservation land with trails connecting to three other conservation parcels bordering the Historic District to the north.⁸⁰ No visual effect evaluation was done off-road, within the Historic District, as the proposed high voltage transmission lines will be experienced by residents, students, tourists and hunters who use the conservation land.

3. All of the Historic District north of Bennett Road is public-access conservation land but there was no assessment of the long views to the east and to the north of the many transmission poles within the Historic District. The southwest corner of the easement is visible on the Applicant's map as a 20 acre field.⁸¹ The view north from this field in a straight line is three-quarters of a mile and includes 10 poles F107-38 to F107-47⁸² which have an average height of 92.5 feet.⁸³ The straight line of poles running east-west within the Historic District is two-thirds of a mile long, with the transmission lines visible from poles F107-58 through F107-49. The addition of tall industrial structures silhouetted against the sky, dwarfing the humans who use this land must be judged an Adverse Effect to the setting and character of the Newmarket and Bennett Roads Farms Historic District.

Ms. Widell testified about this Historic District, in answer to a question from Attorney Patch, who asked "Could you explain in more detail how much those heights were reduced and how the structure locations have been moved?" Ms. Widell stated

⁸⁰ DHA Ex. 10

⁸¹ DHA Ex. 3 at 10,11

⁸² DHA Ex. 3 at 8-11

⁸³ App. Ex. 149 at 7-8 of 55

“I will give you an example of one which would be by the Mooney cemetery. That structure is now closer to, I believe, 48 feet and is an H-frame. It was moved east from its current location, and so it is pretty much out of sight of the Mooney cemetery, and I think it's an excellent example of the type of work that was done by the Project to reduce the visibility of the Project in the Newmarket-Bennett Road Historic District.”⁸⁴ The pole referred to by Ms. Widell is F107-60, sited northeast of the Mooney burial ground.⁸⁵ According to the Applicant's Engineering Drawings, F107-60 is 79 feet high, a SRAX-UB structure, constructed of two 79 foot steel poles with lightning arresters, stabilized with double X-braces, carrying a horizontal bar for the 115 kV conductors, with a 34.5 kV distribution underbuild.⁸⁶ These two 79 foot poles will be visible from the Mills Scenic Byway, the Historic District, and from Bennett Road, a Scenic Road, and is an Adverse Effect on both Scenic Roads and the Newmarket and Bennett Roads Farms Historic District.⁸⁷

In the Applicant's Historic Properties Effects Table concerning the University of New Hampshire Historic District evaluation for “(iv.) change of the character of the property's use or of physical features within the property's setting that contribute to its historic features;” Ms. Widell states: Stone walls are part of the setting of the East Foss Farm, but the walls within the right of way are already breached by an access road, so there will be no construction impacts.⁸⁸

⁸⁴ Tr. Day 10, AM at 28

⁸⁵ DHA Ex. 3 at 13

⁸⁶ App. Ex. 149 at 9 and 55

⁸⁷ DHA Ex. 6

⁸⁸ App. Ex. 164 at 100 of 111

The characterization of all stone walls crossed by the easement at East Foss Farm as “already breached by an access road” is disingenuous as any breaches in stone walls in the easement were made by PSNH. The stone walls crossed by the easement in Foss Farm are coded WP-5, 6, 7, 8, 8A, 9, 9A, 10 and 11.⁸⁹ The stone walls the Applicant agreed to protect include those which are boundary walls protected by statute, and walls in two designated ‘sensitive areas’. The stone walls without protection include WP-6, WP-8A, WP-9, WP-10, WP-11, all marked “use/widen the existing breach”.⁹⁰ WP-11 should be protected in the same way WP-7 and WP-8 are protected, because WP-11 is also in a delineated ‘sensitive area’ by the Winthrop Smith cellar.⁹¹

At East Foss Farm, the utility easement runs parallel to the PanAm Railroad track which was determined eligible for listing on the National Register in 1993, known as the Plaistow to Rollinsford, Boston & Maine Railroad Western Division, the entire railroad is significant for both its history and engineering. The rail bed and all bridges, stations, and ancillary structures with integrity that pre-date 1943 are considered contributing properties to the district.⁹² In conjunction with this National Register-eligible railroad track, the Durham Historic Association provided research to the Applicant about the ‘Durham Farms Railroad Historic District’.⁹³

⁸⁹ DHA Ex. 3 at 8, 10

⁹⁰ TD-UNH Ex. 27

⁹¹ DHA Ex. 3 at 10

⁹² App. Ex. 164 at 70 of 111

⁹³ DHA Ex. 1 at 25-35

The fact the Applicant did not make use of the research provided by DHA concerning the farms that were crossed by this railroad in 1841, and how the widening of the track in 1910 doomed the farms, is a blatant illustration of how the failure of the Applicant to complete historical research, as required by RSA 162-H, may result in the unnecessary destruction of material culture. The railroad track, the patterns of the adjacent stone walls and the cellars of the once prosperous farms are the elements that define this historic area, which runs along the track from Mill Road south to the Newmarket town line.

Concerning the B&M Western Division entry in the Historic Resources Effects Table, Ms. Widell states “This area is characterized as being an area of existing utility lines with no...contributing features of the railroad (i.e. bridges, culverts, ancillary structures, etc.). No permanent direct or indirect impacts are anticipated.”⁹⁴ Ms. Widell’s statement is not accurate.

Granite mile post 61 is at the place where the utility easement crosses from the west side to the east side of the track, just north of the Mill Road substation, and should be protected during construction, see aerial image 44.⁹⁵ Other contributing features adjacent to the easement include the granite mile post 60, a granite culvert and a granite bridge, see aerial image 30,⁹⁶ and photographs⁹⁷

⁹⁴ App. Ex. 164 at 70 of 111

⁹⁵ DHA Ex. 1 at 35

⁹⁶ DHA Ex. 1 at 25

⁹⁷ DHA Ex. 1 at 28, 29

Concerning the UNH Historic District, for the evaluation of “(v.) Introduction of visual...elements that diminish the integrity of...significant historic features;” Ms. Widell states: “South of campus, the integrity setting at the edge of the East Foss Farm where the project will be seen has been affected by the existing electric utility corridor, newly cleared wildlife habitat and new logging road. The transmission line will not be visible from the historic trails, cemetery or woods roads of the Foss Farm.”⁹⁸ Ms. Widell’s statement is not accurate. The transmission lines will be visible from the trails, Davis-Thompson cemetery and cleared land.⁹⁹ Ms. Widell testified that the visibility of the transmission lines within the Historic District has a bearing on whether the transmission lines cause an adverse effect.¹⁰⁰ There are 9 transmission poles, F107-36 to F107-44 ¹⁰¹ with an average height of 91 feet.¹⁰²

The Applicant’s Recommended Finding is that the Project will cause No Adverse Effect in the UNH Historic District.¹⁰³ Ms. Widell’s recommendation is supported by a Google Earth image of East Foss Farm with ‘photoshopped’ gray lines indicating many wires where there are only three. The burial site is labeled ‘Stevens Cemetery’ which is wrong, the Stevens burial site is not on UNH land.¹⁰⁴ The burial site is the ‘Davis-Thompson burial site’, which was visited by the SEC bus tour in June 2018.¹⁰⁵

⁹⁸ App. Ex. 164 at 100 of 111

⁹⁹ DHA Ex. 10

¹⁰⁰ Tr. Day 10, AM at 91

¹⁰¹ DHA Ex. 3 at 6 and 10

¹⁰² DHA Ex. 5

¹⁰³ App. Ex. 164 at 102 of 111

¹⁰⁴ App. Ex. 164 at 111 of 111

¹⁰⁵ DHA Ex. 4 at 8

Ms. Widell's opinion that NO historic sites would be adversely affected by the Project in Durham significantly undercounts historic resources and underestimates the Project's actual effects. The Applicant has not met its burden of proof concerning adverse effects on historic sites.

Identification and Effects on Archeological Resources.

The Applicants retained Victoria Bunker, Ph.D. to review archeological resources and analyze the Project's impact on those resources. The archaeological shovel surveys are complete and agreement has been reached on most issues. One exception is the investigation of the Samuel Hill family burial site as documented in the History of the Town of Durham, New Hampshire, published in 1913. This source indicates there may be human remains underneath the ground where the Applicant intends to bury a portion of the Project.¹⁰⁶ As other 'lost' burial sites mentioned in this reference have been located, the DHA believes this recorded evidence of a burial site requires a GPR survey before trenching or pipe-jacking in started in that area.

¹⁰⁶ DHA Ex. 1 at 36, 37

Finding of No Unreasonable Adverse Effect on Historic Sites

Based on the considerations required under Site 301.14, the SEC will determine whether the Project will have no unreasonable adverse effect on historic sites. As a preliminary matter, NHDHR does not make a finding on unreasonable adverse effect through the Section 106 process or otherwise. Rather, the Subcommittee bears the burden of making this determination based on the evidence and opinions presented by the parties. Here, Ms. Widell stated that there would be no unreasonable adverse effect and Ms. O'Donnell and the Durham Historic Association stated there would be an unreasonable adverse effect to historic sites in Durham. The ultimate determination rests with the Subcommittee.

PUBLIC INTEREST.

The fourth requirement of RSA 162-H:16, IV that must be met for the SEC to issue a certificate is that the SEC must find that “[i]ssuance of a certificate will serve the public interest.” RSA 162-H:16, IV(e). The “public interest” requirement requires an independent finding from the SEC that the “significant impacts” of the Project are balanced by significant “benefits” of the Project in the areas set forth in RSA 162-H:1 and enumerated in Site 301.16.

As part of its analysis of the public interest, the SEC must consider the input it has received from members of the public, both orally at October 11, 2018 public hearing, in writing and the signatures of hundreds who signed petitions. The overwhelming number of public comments are in opposition to the Project. Both the towns that will be impacted by the Project intervened in opposition to the Project. The population of Newington is 753 people. The permanent residents of Durham number about 5,800 people. Both towns voted to spend taxpayer funds to retain legal counsel and independent experts. Private funds were raised to support opposition to the Project. The SEC witnessed public demonstrations against the Project during the June 2018 bus tour.

The Project will provide no benefits to historic sites or aesthetics. The views of the Project, at road crossings, above the trees, from the water and from public lands will alter the character and setting of the rural areas of Durham that are rich with cultural and historic significance and scenic quality. In addition to unreasonable adverse effects on identified scenic resources, which are assessed pursuant to RSA 162-H:16,IV(a), there are two scenic roads, the Mill Scenic byway and the Oyster River, a scenic river, with

adverse effects from the Project. In addition, the Project will negatively affect views and scenic quality at the chief gateways to the Great Bay Estuary, the high bridges crossing the Piscataqua River on Route 95 and at the entrance to Little Bay at Newington. Other locations that may not technically qualify as “scenic resources” under Site 102.45 will also be adversely affected. The SEC should consider the overall impact of the Project on the scenic quality of the towns of Durham and Newington, as well as the Great Bay Estuary, when considering whether issuing a certificate for the Project is in the public interest.

RSA 162-H:10, III requires that the SEC “shall consider and weigh all evidence presented at public hearings and shall consider and weigh written information and reports submitted to it by members of the public before, during and subsequent to public hearings, but prior to the closing of the record of the proceeding.” The SEC should consider these public comments in determining whether the issuance of a certificate to the Project will serve the public interest.

The SEC received oral comments at the public hearing held at Newington on October 11, 2018. No individual public members spoke in favor of the project. The Subcommittee also received hundreds of written comments before and after that public hearing. The vast majority of the comments were in opposition to the Project for many reasons, particularly the overwhelming concern of citizens for the health and preservation of the Great Bay Estuary.

The SEC’s responsibility under RSA 162-H:16, IV(e) is to balance the significant benefits and impacts of the Project across the areas enumerated in RSA 162-H:1 and Site 301.16. The Project benefits are vague and illusive, the ‘authority’, or ISO material is redacted.

The Subcommittee must balance any potential benefits against the significant impacts of the Project, including disruptions during construction, potential damage to the estuary, longer term impacts to tourism and property values, degradation of the scenic quality due to a new high voltage transmission line with poles towering above the trees across rural, conservation and residential areas of two small towns, interference with private property, and negative impacts to historic sites and the environment. In addition, the Subcommittee must take into account the opinions of the public expressed through municipal governments and public comment, which are overwhelmingly opposed to the Project. Only if the Subcommittee finds that the balance of all the benefits and impacts of the Project serves the public interest can a certificate be issued.