

**NH Site Evaluation Committee Docket No. 2015-05: Application Supplement to Address
Revised SEC Rules Effective as of December 16, 2015**

1. Site 301.03 Contents of Application

Site 301.03(c)(3) The location, shown on a map, of property lines, residences, industrial buildings, and other structures and improvements within the site, on abutting property with respect to the site, and within 100 feet of the site if such distance extends beyond the boundary of any abutting property.

The Existing Conditions Mapping contained in Appendix E of the Application (“Existing Conditions Mapping”) depicts the location of residences, commercial properties, and other improvements within or adjacent to the Project. The Existing Conditions Mapping was revised to include property boundaries. Please see Attachment A to this supplement for the Revised Existing Conditions Mapping.

Please also see Applicants’ Motion to Partially Waive Site 301.03(c)(3), requesting a waiver from strict compliance with this Rule. Some abutting properties along the Project’s right-of-way (“ROW”) extend beyond the mapped area as depicted on the Existing Conditions Mapping. The Applicants seek a waiver from identifying property lines, residences, industrial buildings, and other structures and improvements beyond the edge of the Existing Conditions Mapping.

Site 301.03(c)(4) Identification of wetlands and surface waters of the state within the site, on abutting property with respect to the site, and within 100 feet of the site if such distance extends beyond the boundary of any abutting property, except if and to the extent such identification is not possible due to lack of access to the relevant property and lack of other sources of the information to be identified.

Delineated wetlands and surface waters are depicted on the Existing Conditions Mapping. Along with the addition of property lines as discussed above, the revised Existing Conditions Mapping now includes the additional identification of wetlands and surface waters of the state within abutting properties and within 100 feet of the site.

Identification of wetland and surface waters on properties abutting the site was completed using information publically available on United States Fish and Wildlife Service (“USFWS”) National Wetland Inventory maps and United States Geological Survey (“USGS”) Topographical Survey maps. (This identification was limited to the abutting property boundary, or within the limit of the mapped area as depicted on the Existing Conditions Mapping, whichever was closer.)

The supplemental identification of wetlands and surface waters within 100 feet of the site was completed through interpretations of project-specific contours and aerial photographs, in

addition to the specific locations of field delineation. Please see Attachment A to this supplement for the Revised Existing Conditions Mapping.

Please see Applicants' Motion to Partially Waive Site 301.03(c)(4), requesting partial waiver from strict compliance with this Rule as some abutting properties extend beyond the mapped area as depicted on the Existing Conditions Mapping at a scale of 1 inch to 400 feet. The Applicants seek a waiver from identifying wetlands and surface waters beyond the edge of the Existing Conditions Mapping.

Site 301.03(c)(5) Identification of natural, historic, cultural, and other resources at or within the site, on abutting property with respect to the site, and within 100 feet of the site if such distance extends beyond the boundary of any abutting property, except if and to the extent such identification is not possible due to lack of access to the relevant property and lack of other sources of the information to be identified.

a. Natural Resources

Rare, Threatened or Endangered ("RTE") Plants, Animals and Natural Communities

The list of rare plants to be included in the 2016 growing season surveys was expanded to include all plant species known to occur within a quarter mile of the Project area and Torrey's mountain mint (*Pycnanthemum torrei*), which was identified within the Project area during 2015 field surveys. The increase in the number of species was requested during consultation with the New Hampshire Natural Heritage Bureau ("NHNHB") and in review of the results of the 2015 surveys. 2016 surveys will include all of the 10 RTE plants listed on the NHNHB review, plus Torrey's mountain mint, and will occur in four locations along the ROW. The additional target areas for 2016 surveys were based on 2015 survey findings and locations of known NHNHB records. The NHNHB has provided a letter summarizing consultation that has been performed with the Applicants to date and their concurrence on field survey protocols and Best Management Practices, included as Attachment B to this supplement.

Rare animal surveys and vernal pools surveys were conducted for northern long-eared bat, northern black racer, Blanding's turtle, and spotted turtle in 2015 following consultation with the New Hampshire Fish and Game Department ("NHFG"). NHFG determined which species surveys should occur within the Project area based on NHNHB records and previous studies conducted in the Project vicinity. 2016 surveys will occur for the northern black racer and New England cottontail. As an accepted Best Management Practice ("BMP"), pre-construction sweeps will occur within turtle nesting habitat. The NHFG has provided a letter summarizing consultation that has been performed with the Applicants to date and their concurrence on field survey protocols and BMPs, included as Attachment C to this supplement.

Surveys will not extend outside of the Project because no impact to rare, threatened, or endangered species or exemplary communities is expected beyond the footprint of the Project, nor do the Applicants have the required access to conduct such surveys. The NHNHB review includes a map of all known rare, threatened, and endangered species within the vicinity of the

Project. The map was not included in the Application due to the confidential nature of the information. The map is included as Attachment R to this supplement as a confidential attachment.

Please see Applicants' Motion to Partially Waive Site 301.03(c)(5) requesting partial waiver from strict compliance with this Rule to the extent any rare, threatened, and endangered plants, animals and natural communities exist outside of the Project ROW.

Wildlife Habitat Resources

NHFG identified wildlife habitat cover types across New Hampshire, as part of its Wildlife Action Plan. These wildlife habitat land cover types are depicted on the Wildlife Habitat Land Cover Type Mapping contained in Appendix I of the Application. Additional depiction of wildlife habitat cover types on abutting properties and within 100 feet of the ROW was accomplished by using the NHFG cover types maps provided in the Wildlife Action Plan. The wildlife habitat land cover types were field-verified and modified, if required, only within the Project ROW. The wildlife habitat cover types were limited by the extent of the mapped area on the Wildlife Habitat Land Cover Type Mapping at a scale of 1 inch to 400 feet. Property boundaries were also added to the Revised Wildlife Habitat Cover Type Mapping, included as Attachment D to this supplement,

Please see Applicants' Motion to Partially Waive Site 301.03(c)(5) requesting partial waiver from strict compliance with this Rule as some abutting properties extend beyond the mapped area as depicted on the Wildlife Habitat Land Cover Type Mapping. The Applicants seek a waiver from identifying natural resources beyond the edge of the Wildlife Habitat Land Cover Type Mapping.

b. Cultural and Historical Resources

As described in the Application, the New Hampshire Department of Historical Resources ("NHDHR") cultural resource files were reviewed to identify previously recorded above-ground historic properties within the Project area and within one-quarter mile area on each side of the Project's centerline. This inventory file review revealed that there are no properties that have been previously listed or determined eligible for listing within the Project area. See Due Diligence Report, Appendix J of the Application. Moreover, NHDHR has already concluded that "there is no potential to affect above ground resources in the New Hampshire portion of the Project and that no further studies are required." See Letter from NHDHR, Sept. 3, 2015 included as part of Appendix AN to Supplement #2.

The NHDHR cultural resource files were also reviewed to identify previously recorded below-ground archaeological sites within the Project area and within one-half mile on each side of the Project's centerline. As discussed in the Application, Segments 3 and 4 of the Project previously underwent a Phase IA archaeological survey and NHDHR project review for a prior PSNH project. This prior Phase IA review did not recommend further archaeological survey, and the prior project received a determination of no effect from NHDHR (R&C #4356). See

Appendix L of the Application. The Request for Project Review (“RPR”), Appendix K of the Application, also includes additional information related to cultural resources.

As described in Supplement Number 2 (Appendix AN), results of the Phase IB survey performed for Segment 2 did not identify any archaeological resources that would be impacted by the Project. NHDHR has already concluded that “there are no known properties or archaeological significance within the area of the undertaking’s potential impact and no further identification or evaluative studies are recommended.” See Letter from NHDHR, Dec. 9, 2015, included in Supplement Number 2.

Please see Applicants’ Motion to Partially Waive Site 301.03(c)(5) requesting partial waiver from strict compliance with this Rule to the extent any historic properties exist outside of the ¼ mile area of potential effect and to the extent any archaeological resources exist outside of the ½ mile area of potential effect.

c. Community Resources and Development

Community resources within 1,000 feet of the ROW were depicted on Community Resources Mapping contained in Appendix M of the Application. The Community Resources Mapping, provided at a scale of 1 inch to 2,000 feet, was revised to include property boundaries. Please see Attachment E to this supplement for the Revised Community Resources Mapping.

Please see Applicants’ Motion to Partially Waive Site 301.03(c)(5) requesting partial waiver from strict compliance with this Rule as some abutting properties extend beyond 1,000 feet as depicted on the mapped area on the Community Resource Mapping, Appendix M. The Applicants seek a waiver from identifying other resources beyond the edge of the Community Resources Mapping.

Site 301.03(c)(6) 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.

Please see the Supplemental Joint Pre-Filed Testimony of Bryan Hudock and David L. Plante, Attachment F to this supplement, for a complete summary of evidence that the Applicants have the 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.

Site 301.03(c)(7) Evidence that the applicant has a current or conditional right of access to private property within the boundaries of the proposed energy facility site sufficient to accommodate a site visit by the committee, which private property, with respect to energy transmission pipelines under the jurisdiction of the Federal Energy Regulatory Commission, may be limited to the proposed locations of all above-ground structures and a representative sample of the proposed locations of underground structures or facilities.

The Project is located along numerous public roads and in public places where the Committee and any other member of the public has the right to access or view the Project in a sufficient manner so as to accommodate a site visit. Members of the Committee are able to see the ROW, therefore, there is not a specific need to access private property. Please also see the Supplemental Joint Pre-Filed Testimony of Bryan Hudock and David L. Plante, Attachment F to this supplement.

Site 301.03(g)(11) Copy of any proposed plan application or other system study request documentation required to be submitted to ISO New England, Inc. in connection with construction and operation of the proposed facility.

To date, the Applicants have not prepared a proposed plan application or other system study request that would have been submitted to ISO New England in connection with the construction of the proposed facility. Once this documentation is available and submitted to ISO New England, the Applicants will provide a copy to the Committee.

Site 301.03(g)(12) Copy of system impact study report for the proposed electric transmission facility as prepared by or on behalf of ISO New England, Inc. or the interconnecting utility, if available at the time of application.

To date, neither the Applicants nor ISO New England have prepared a system impact study report for the proposed electric transmission facility. When a study is available, the Applicants will provide a copy to the Committee.

2. Site 301.04 Financial, Technical and Managerial Capability

Site 301.04(a)(3) A description of the applicant's financing plan for the proposed facility, including the amounts and sources of funds required for the construction and operation of the proposed facility.

For a description of the Applicants' financial plan for construction of the Project, please see the Pre-Filed Testimonies of Brian McNeill and Michael Ausere.

The funds for the operation and maintenance ("O&M") of the Applicants' electric transmission assets are budgeted on a system-wide level, not on a transmission line level. Thus, the Applicants cannot provide the amount of O&M funds required for the new 3124 Line once in-service. However, that amount will not be significant since the new 3124 Line is located in an existing ROW that is already being maintained on a regular cycle. The Applicants will fund the cost of O&M by internally generated funds, debt, and equity.

Site 301.04(a)(4) **An explanation of how the applicant's financing plan compares with financing plans employed by the applicant or its affiliates, or, if no such plans have been employed by the applicant or its affiliates, then by unaffiliated project developers if and to the extent such information is publicly available, for energy facilities that are similar in size and type to the proposed facility, including any increased risks or costs associated with the applicant's financing plan.**

NEP and PSNH will finance this Project as the Applicants historically have financed similar transmission projects. This process is described in the Application, Section 301.03(h)(5). Please also see the Pre-Filed Testimonies of Brian McNeill and Michael Ausere.

Site 301.04(a)(5) **Current and pro forma statements of assets and liabilities of the applicant.**

Please see Attachments G and H for the pro forma statement of assets and liabilities of NEP and PSNH, respectively.

Site 301.04(b)(1) **A description of the applicant's qualifications and experience in constructing and operating energy facilities, including projects similar to the proposed facility.**

Please refer to Section (h)(5) of the Application for information regarding National Grid's and Eversource's qualifications and experience in constructing and operating energy facilities.

National Grid and Eversource are the two largest electric utilities in New England. As described in Section (h)(5) of the Application, National Grid USA owns and operates approximately 8,600 miles of transmission facilities spanning upstate New York, Massachusetts, New Hampshire, Rhode Island and Vermont; and Eversource owns and operates approximately 4,270 circuit miles of transmission lines, 72,000 pole miles of distribution lines, 578 transmission and distribution stations, and 450,000 distribution transformers, spanning New Hampshire, Massachusetts and Connecticut.

Additionally, below is a list of transmission projects completed by National Grid and Eversource that further provide evidence of the Applicants' qualifications and experience constructing and operating energy facilities.

National Grid / Eversource Joint Venture – NEEWS Interstate Reliability Project (“IRP”)

National Grid and Eversource have recently completed construction of a similar – although more complex – interstate 345 kV overhead transmission line project – the NEEWS Interstate Reliability Project. The approximately \$542 million IRP involved the construction of a 74.7 mile 345 kV overhead transmission line in Massachusetts, Rhode Island, and Connecticut, together with related improvements to existing 345 kV and 115 kV transmission lines and improvements at four substations (one in Massachusetts, one in Rhode Island, and two in

Connecticut). The Massachusetts and Rhode Island elements of IRP were constructed by National Grid subsidiaries New England Power (in Massachusetts) and Narragansett Electric Company (in Rhode Island); the Connecticut portion of the IRP was constructed by Connecticut Light and Power, a subsidiary of Northeast Utilities (now Eversource). Work on the IRP and related projects was coordinated through a NEEWS Project Board consisting of two executives from National Grid and two from Northeast Utilities; this board structure has been replicated for the Greater Boston suite of projects.

Construction of the IRP began on June 2014 in Massachusetts, March 2014 in Rhode Island, and March 2014 in Connecticut. The final link of IRP – the Sherman Road Substation in Rhode Island – was placed into service on December 22, 2015, meeting the December 2015 in-service date established in 2012.

National Grid Rhode Island Reliability Project (“RIRP”)

National Grid’s Rhode Island subsidiary Narragansett Electric Company has also recently completed construction of the NEEWS Rhode Island Reliability Project. This approximately \$250 million project included the construction of a new 21.4 mile 345 kV overhead transmission line within an existing transmission corridor running through North Smithfield, Smithfield, Johnston, Cranston, West Warwick and Warwick, Rhode Island, and the reconstruction of two existing overhead transmission lines to accommodate the new line. Construction of the RIRP began in 2010; the project was placed into service in May, 2013.

National Grid Hampden County Reliability Project (“HCRP”)

NEP has recently completed construction of the Hampden County Reliability Project, an approximately \$50 million project that involved upgrading ten miles of NEP transmission lines in Palmer, Monson and Hampden MA from 69 kV to 115 kV; construction of a new substation in Hampden, with an interconnection to Northeast Utilities’ 115 kV system; the retirement of an existing substation; and related substation improvements. Construction of the HCRP began in June 2013; the project was placed into service in November 2015. This project required coordination with Northeast Utilities subsidiary Western Massachusetts Electric Company, which constructed the interconnection to its 115 kV system.

PSNH - 115 kV Y170 Transmission Line Project

PSNH’s Y170 Line Project included the construction of 7 miles of new 115 kV double circuit line (with the relocation of the existing 34.5 kV distribution line), from the Eastport substation in Rochester, NH to the new Tasker Farm distribution substation in Milton, NH. The approximately \$10.5 million 2014 project included a substantial amount of wetland construction, along with challenging construction access. Single laminate pole with post insulators and steel angle structures were the pole type utilized for this project.

PSNH - Lake Region Energy Project

The Lake Region Energy Project included the construction of approximately 14 miles of double circuit line (consisting of the J125 115 kV transmission line and the 337 34.5 kV distribution line) between the Webster substation in Franklin, NH and the Laconia substation in Laconia, NH. The \$7.3 million total cost of the 2003 project was comprised of \$5.1 million for the transmission line work and \$1.2 million for the distribution line work. The project included approximately 1,100 feet of 34.5 kV submarine cable through Ephram's Bay in Lake Winnisquam, NH.

Site 301.04(b)(2) A description of the experience and qualifications 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 of application.

NEP has engaged Black and Veatch ("B&V") to perform the design and construction oversight of the NEP-portion of MVRP under the supervision of National Grid personnel. Founded in 1915, B&V is a full-service global engineering, consulting, construction and operations company specializing in energy and infrastructure projects. B&V has extensive expertise in a range of energy projects and is nationally recognized for their work in energy delivery projects. Specifically, Engineering News-Record ranks B&V number one in Power and near the top of its list in Power Delivery. Their project portfolio in the utility industry supports this recognition. Notably, B&V was hired by the Salt River Project ("SRP") to design and build a 150 mile 500 kV transmission line between SRP's Palo Verde nuclear plant and their Browning Substation. B&V was also selected to provide engineering, procurement and construction services for the Russell City Energy Center Interconnect Project by Pacific Gas & Electric. The project included 13 miles of 230 kV transmission lines across the San Francisco Bay as well as 7 miles of 115 kV transmission lines across sensitive habitats in the region along with substation upgrades and various technical upgrades to the circuit.

PSNH has engaged TRC Engineering ("TRC") as the design contractor for the PSNH-portion of the Project. TRC is a national engineering, consulting and construction management firm with extensive expertise managing energy and electric infrastructure projects. Among many similar projects, TRC managed the design and construction of a 39-mile 115 kV transmission line and 115 kV terminal with breakers that extended from Moscow to Benton, Maine with responsibilities including regulatory approval, permitting, design, project management, on-site environmental services and construction management support. TRC also worked in partnership with the Vermont Electric Power Company and Green Mountain Power to develop Best Management Practices ("BMP") for integrated vegetation management and operations and maintenance of their electric transmission lines. TRC provided stakeholder outreach, strategic guidance, biological surveying, GIS data analysis and management and planning to develop BMPs protecting threatened and endangered species. TRC also delivered design, procurement, and construction services for a large transmission project for Rochester Gas and Electric Company in Rochester, New York, involving 38 miles of new or rebuilt 115 kV transmission lines, two new 115 kV substation expansions, and equipment upgrades at nine existing substation locations ranging in voltage from 35 kV to 345 kV.

Site 301.04(c)(1) A description of the applicant's management structure for the construction and operation of the proposed facility, including an organizational chart for the applicant.

NEP's and PSNH's management structures for the construction phase of the Project were included as Attachments C and D, respectively, of the Joint Pre-Filed Testimony of Bryan Hudock and David L. Plante.

The Applicants now submit organization charts for National Grid's FERC-Regulated Business Group and its Project Management and Complex Construction Group, which jointly will be responsible for the ongoing operation and maintenance of the NEP portions of the Project, Attachment I, and the Eversource Electric Operations Organization Chart, Attachment J.

Site 301.04(c)(2) A description of the qualifications of the applicant and its executive personnel to manage the construction and operation of the proposed facility.

For a description of the qualifications of NEP and PSNH to manage the construction and operation of the Project, see section 301.03(h)(5) of the Application.

For a description of the qualifications of key NEP and PSNH personnel, please see the Joint Pre-Filed Testimony and resumes of Bryan Hudock and David L. Plante.

For a description of the qualifications of NEP's executive personnel, please see Appendix K of this supplement for the resume of Frederick Raymond. Mr. Raymond, as the Vice President, Project Management and Complex Construction for National Grid and a member of the NEP Board of Directors, is the executive in charge of overseeing and managing the construction and operation of the proposed facility. Also included in Appendix K of this supplement are the biographies of Rudy Wynter, President and COO of FERC-Regulated Businesses for National Grid, and a member of the NEP Board of Directors; John Gavin, Vice President of Electric Asset Management for National Grid, and an officer of NEP; and John Bruckner, Senior Vice President for Operations and Engineering for National Grid, and an officer of NEP. All resumes and biographies can be found in Attachment K of this supplement.

For a description of the qualifications of the PSNH's executive personnel, please see the resume of William J. Quinlan, Attachment L. Mr. Quinlan, as the CEO of PSNH, is the executive in charge of overseeing and managing the construction and operation of the proposed facility.

Site 301.04(c)(3) To the extent the applicant plans to rely on contractors or consultants for the construction and operation of the proposed facility, a description of the experience and qualifications of the contractors and consultants, if known at the time of application.

As of this date, neither contractors nor consultants have been identified to manage the construction of the Project. When appropriate, the Applicants will initiate the process through

which the most qualified contractor will be chosen. Each Applicant has specific and well-tested procurement procedures in place to competitively bid the construction of the Project, focusing on a number of key areas of the potential contractors and consultants, including but not limited to experience and qualifications, safety record, financial stability, cost effectiveness of the Project bid, etc.

The operation of the Project, once in service, remains with the Applicants. If specific consultants and/or contractors are required during the operation, similar procurement procedures will be followed.

3. Site 301.05 Effects on Aesthetics

Site 301.05(b)(7) Photosimulations . . . from 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, and from any visible plume that would emanate from the proposed facility.

Please see Attachment M for photosimulations from representative private property observation points within the area of potential visual impact.

Site 301.05(b)(8)(a) Photosimulations shall be printed at high resolution at 15.3 inches by 10.2 inches, or 390 millimeters by 260 millimeters.

Please see Applicants' Request for a Waiver from Site 301.05(b)(8)(b).

Site 301.05(b)(8)(d) Field conditions in which a viewpoint is photographed shall be recorded including:

- 1. Global Position System (GPS) location points with an accuracy of at least 3 meters for each simulation viewpoint to ensure repeatability;**
- 2. Camera make and model and lens focal length;**
- 3. All camera settings at the time the photograph is taken; and**
- 4. Date, time and weather conditions at the time the photograph is taken.**

Please see Attachment N, for additional data for each photosimulation as required by 301.05(b)(8)(d).

Site 301.05(b)(9) If the proposed facility is required by Federal Aviation Administration regulations to install aircraft warning lighting or if the proposed facility would include other nighttime lighting, a description and characterization of the potential visual impacts of this lighting, including the number of lights visible and their distance from key observation points.

Pursuant to Section 301.05 (b)(9), Federal Aviation Administration consultation is in process and a determination of lighting requirements has not been made for this Project at this time.

Site 301.05(b)(10) A description of . . . the alternative measures [to avoid, minimize, or mitigate potential adverse effects of the proposed facility] considered but rejected by the applicant.

Please see Appendix AB of the Application.

4. Site 301.06 Effects on Historic Sites

Site 301.06(c) Finding or determination by the division of historical resources of the department of cultural resources and, if applicable, the lead federal agency, that no historic properties would be affected, that there would be no adverse effects, or that there would be adverse effects to historic properties, if such a finding or determination has been made prior to the time of application.

NHDHR has concluded that “there is no potential to affect above ground resources in the New Hampshire portion of the project and that no further studies are required.” See Letter from NHDHR, Sept. 3, 2015, included as part of Appendix AN to Supplement #2.

As described in the Application, NHDHR has also concurred that the Project will not have an adverse effect on archaeological resources for Segments 3 and 4, and therefore, any additional identification of archaeological resources outside of the ½ mile area of potential effects is inapplicable to this Project. As for Segment 2, the Applicants submitted the Phase I-B survey results and in December of 2015 received a letter from NHDHR that “there are no known properties or archaeological significance within the area of the undertaking’s potential impact and no further identification or evaluative studies are recommended.” See Letter from NHDHR, Dec. 9, 2015, included as part of Appendix AN to Supplement #2.

Site 301.06(d) Description of the . . . alternative measures [to avoid, minimize, or mitigate potential adverse effects on historic sites and archaeological resources] considered but rejected by the applicant.

NHDHR determined that the Project will not adversely affect historic sites and archaeological resources. Therefore, alternative measures to avoid, minimize, or mitigate potential adverse effects on cultural resources were not considered.

5. **Site 301.07 Effects on Environment**

Site 301.07(c)(5) Description of . . . the alternative measures [to avoid, minimize, or mitigate, potential adverse impacts of construction and operation of the proposed facility on wildlife species, rare plants, rare natural communities, and other exemplary natural communities, and on critical wildlife habitat and significant habitat resources] considered but rejected by the applicant.

The Project has been designed to avoid and minimize impacts to wildlife species, rare plants, and significant habitat resources to the greatest extent practicable. The primary measure taken to avoid impacts was to modify the transmission line design and the alignment of temporary work areas and accessways. As a result of modifications, direct impacts to known rare plants and vernal pools have been avoided, and therefore, no additional alternative measures to avoid, minimize, or mitigate potential adverse effects on these resources were considered.

In the event that new occurrences of rare plants, vernal pools, and/or significant habitat resources are identified during the 2016 surveys, modification of the line design would be an alternative measure that would not be feasible due to the time constraints relative to construction start. The measures for avoidance or minimization would be rare plant transplantation, time of year restrictions, or other types of acceptable mitigation.

In consultation with the New Hampshire Department of Environmental Services (“NHDES”), United States Army Corps of Engineers (“USACE”), and United States Environmental Protection Agency (“EPA”), several parcels within the Town of Londonderry were evaluated for suitability as mitigation for direct and secondary impacts to wetlands and riparian buffers. The parcels evaluated within the Town of Londonderry were considered unsuitable for compensatory mitigation by the regulatory agencies. No parcels were identified in Hudson or Windham as possible mitigation. As a result, In-Lieu Fee payment was selected as mitigation for impacts within Londonderry, Hudson, and Windham. In-kind mitigation in the form of upland buffer preservation has been selected in Pelham.

6. **Site 301.08 Effects on Public Health and Safety**

Site 301.08(b) For electric transmission facilities . . . an assessment of the risks of collapse of the towers, poles, or other supporting structures, and the potential adverse effects of any such collapse.

National Grid and Eversource both proactively mitigate the risks associated with the collapse or failure of overhead transmission line elements during the course of engineering and throughout the facilities’ lifecycle. The occurrence of a transmission line structure failure is a rarity and as such, the potential for adverse impact is minimal.

Understanding the methods employed by engineers to mitigate the risk associated with failure of transmission line elements requires a basic understanding of how an overhead electric transmission line (“transmission line”) behaves mechanically. Transmission line structures are

often grouped into categories with those utility structures supporting wind turbines and cellular antennas. The major difference between the structural system attributed to a transmission line and those structural systems associated with wind turbines or cell towers is that the structural system for a transmission line is composed of two distinct subsystems consisting of the wires (shield wire and conductor) and structures. The wire and structure system act together as a system and as a result, the failure of a transmission line structure can be more complex than that of a tower or monopole supporting other utility infrastructure.

The majority of the structural loading is associated with the wire system. The conductors and shield wires associated with a particular circuit are subject to wind, ice, and changes in temperature. As such, the design considerations utilized by both Companies take into account a variety of different loading conditions as outlined in governing code (National Electrical Safety Code, 2012 Edition) and based on internal company standards that have been developed based on previous extreme weather conditions encountered during operation over the past 100 years. These loading conditions include, but are not limited, the following:

- NESC Heavy Loading (250B)
- NESC Extreme Wind (250C)
- NESC Extreme Ice with Concurrent Wind (250D)
- National Grid Heavy Ice
- Eversource Heavy Ice

Recognizing that there are some events that cannot be predicted or prudently incorporated into the engineering considerations utilized for the design of a transmission line, each company employs practices to minimize risks should the failure of a structural element occur. The American Society of Civil Engineers (“ASCE”) Manual and Report on Engineering Practice No. 74 “Guidelines for Electrical Transmission Line Structural Loadings” has several recommendations for mitigating the risks associated with both exceeding the anticipated loading conditions as well as the loss of a structure. These recommendations include 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 NESC. Both Applicants employ the practices outlined above to provide a cost efficient and reliable design. In addition, all supporting structures have been designed to comply with Grade B construction as outlined in Section 24 of the 2012 NESC, which is the most robust design category contained in the NESC. Overload factors and factors of safety are incorporated based on sound engineering practice as another mitigation measure so that in the event that these loading conditions are exceeded transmission line structures have the ability to maintain their integrity.

The mode of failure associated with a transmission line structure collapse is dependent upon a number of different factors. These considerations include the condition of the structure, types of load imposed by the wire system at the time of failure, fixity of wire attachments and their location on the structure, foundation type, and ground line conditions. Transmission line

structures can also be designated as having failed without catastrophic collapse occurring. Any deformation state above the recoverable limit of an element is considered as having failed and would be proactively addressed.

In instances where transmission line structures have failed catastrophically, the collapse pattern is seldom one in which a single or multiple pole structure fails about the base creating the potential for a radial zone of impact. Rather, these failures tend to result in the failed structure buckling and failing within its original footprint or being pulled in along the line of the wire with the point of deformation located above ground line. Given the footprint of those structures proposed on the Project and their placement, should a structure fail, there is a very high degree of probability that any and all elements will remain within the bounds of the ROW, mitigating the potential adverse impact associated with such a failure.

In addition to the engineering considerations utilized by both companies to mitigate the risk associated with structure collapse, National Grid and Eversource have robust 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. These inspections are conducted in the form of aerial patrols (via helicopter) and walking inspections.

Lastly, should a structure fail, the system is configured with relaying systems that detect faults and de-energize the line. Both Applicants have 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. Materials necessary for the restoration of a collapsed structure are stored in the event of an emergency and can be deployed rapidly once a solution to a tower failure has been developed.

301.08(c)(2) A facility decommissioning plan prepared by an independent, qualified person with demonstrated knowledge and experience in similar energy facility projects and cost estimates.

On page 61 of the Application, the Applicants address the requirement of RSA 162-H:7, V(g) to “[d]escribe in reasonable detail the elements of and financial assurances for a facility decommissioning plan.” The additional information below supplements that section and responds to the SEC new rules. The Applicants have also filed a Motion to Partially Waive Site 301.08(c)(2) from the requirement that the Applicants retain an independent person to prepare a decommissioning plan, as well as from certain rules regarding the content of the decommissioning plan.

In the very rare instance that a transmission line were decommissioned and completely removed, the Applicants would follow a process similar to the initial line construction. In general, the Applicants would include this Project in their respective business plans and sanction the expenditure of funds to complete engineering, permitting and site investigation activities, including, for instance, the identification of access points, required environmental testing or monitoring, and disposition of the materials. The Applicants would secure the required permits

as well as any necessary access rights. After the electrical facilities are retired, the underlying ROW will remain an asset for the utility and will not be relinquished.

This level of detail for a decommissioning plan for a transmission line is reasonable at this stage. A more detailed decommissioning plan for the 3124 Line would need to take into account any changes to that line and other lines in the ROW that may have changed over time as well as all applicable laws and regulations that exist at the time of decommissioning. Given that transmission lines are frequently rebuilt and reconducted, it is unlikely that any plan developed now could be implemented as written 50 or even 100 years from now.

The Applicants will submit to the Committee a complete decommissioning plan prior to initiating the removal of the Project, should decommissioning be required. The decommissioning plan will provide details of each element of the Applicants' plan to decommission the Project, consistent with then-current environmental, safety, and other regulatory requirements. As regulated public utilities and transmission owners, the Applicants have experience in the construction, upgrade, and removal of transmission facilities.

- a. A description of sufficient and secure funding to implement the plan, which shall not account for the anticipated salvage value of facility components or materials.**

Please see the Pre-Filed Testimonies of Brian McNeill and Michael Ausere for a description of the sufficient and secure funding to implement a decommissioning plan.

The Applicants further state that under the Federal Energy Regulatory Commissions' ("FERC") Uniform System of Accounts, decommissioning is considered an asset retirement obligation. Under this system, over the useful life of the asset the Applicants recover money that is used to fund an account dedicated to asset retirements. While money is not dedicated to the retirement of specific assets, like the 3124 Line, this system ensures that funds are always available for any retirements that may occur in a given time period.

- b. The provision of financial assurance in the form of an irrevocable standby letter of credit, performance bond, surety bond, or unconditional payment guaranty executed by a parent company of the facility owner maintaining at all times an investment grade credit rating.**

Under the FERC Uniform System of Accounts, the Applicants will recover money used to fund an account to retire the Project, if necessary.

The Applicants request a waiver from providing such financial assurance in the form of an irrevocable standby letter of credit, performance bond, surety bond, or unconditional payment guaranty executed by a parent company of the facility owner maintaining at all times an investment grade credit rating. See Applicants' Motion to Partially Waive Site 301.08(c)(2).

c. All transformers shall be transported off-site.

The construction of the Project does not include the installation or addition of any new transformers. Because the Applicants will not construct any new transformers as part of this Project, Site 301.08(c)(2)(c) is not applicable.

d. All underground infrastructure at depths less than four feet below grade shall be removed from the site and all underground infrastructure at depths greater than four feet below finished grade shall be abandoned in place.

Please see Applicants' Motion to Partially Waive Site 301.08(c)(2).

Site 301.08(c)(3) A plan for fire safety prepared by or in consultation with a fire safety expert.

The Applicants do not, in the ordinary course of business, develop specific fire safety plans for their individual ROWs. Electric transmission line ROWs are typically unoccupied during operation, so there are no personnel to evacuate. Any fire that might occur on the ROW once the Project is in operation would be initially addressed by the local fire department; the Applicants would respond pursuant to each Applicant's emergency preparedness plans, provided in 301.08(c)(4).

During construction, emergency response (including response to fires) will be documented and addressed daily at each morning's tailboard safety meeting. The Applicants do not plan 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 ROW while workers are present (either during construction or during future maintenance activities), workers would evacuate to the muster point established at the daily tailboard meeting and call the local fire department.

Site 301.08(c)(4) A plan for emergency response to the proposed facility site.

Please see Attachment O, National Grid Electric and Gas System Level Plan, dated May 2015; and Attachment P, Eversource's New Hampshire Electric Operations Emergency Response Plan, dated March 5, 2015.

Site 301.08(c)(5) A description of . . . alternative measures [to avoid, minimize, or mitigate public health and safety impacts that would result from the construction and operation of the proposed facility] considered but rejected by the applicant.

As described in Section 301.03(i)(6) of the Application, the Applicants have taken, and will continue to take, preventative steps to protect the health and safety of workers and the public during the construction and subsequent operation of the Project. The Applicants have designed the Project to adhere to company polices and the National Electrical Safety Code ("NESCS") requirements for transmission lines and have optimized the design of the proposed phase

conductors to minimize levels of magnetic fields at the ROW edge. The avoidance and minimization methods chosen by the Applicants are the best practical methods.

7. Site 301.09 Effects on Orderly Development of Region

Site 301.09(b)(6) The effect of the proposed facility on community services and infrastructure.

The construction and operation of the Project will not place any new or significant demands on local or regional services, facilities, or infrastructure. Once the Project is constructed, the operation of the Project will not place any new or increased demands on school facilities, police or fire stations, roads, transit services, solid waste disposal, drinking water or wastewater treatment facilities or services, recreation facilities, medical facilities or services, or any other community service or infrastructure. Please also see Pre-Filed Testimony of Robert Varney.

Site 301.09(c)(2) The number and types of full-time equivalent jobs expected to be created, preserved, or otherwise affected by the operation of the proposed facility, including direct employment by the applicant and indirect employment induced by facility-related wages and expenditures.

The Applicants expect that there may be some additional incremental work needed for the operation and maintenance of the Project due to the additional infrastructure. However, based on the minimal amount of incremental work, the Applicants expect that there would only be nominal impacts to direct, indirect, and induced jobs.

ADDITIONAL INFORMATION INCLUDED WITH SUPPLEMENT NUMBER 3

As part of Supplement Number 3, the Applicants provide updates to the National Grid Engineering Drawings, Appendix R of the Application. The revised drawings are included as Attachment Q of this supplement. Updates were required due to the need to increase structure heights to provide appropriate clearance to ground (115 kV Y-151 Line Structures 26 and 27 and 345 kV 3124 Line Structures 72, 101, 122, 124) and appropriate clearance to under-built distribution lines (115 kV Y-151 Line Structures 38, 39, 68, 74, 75 and 79 and 345 kV 3124 Line Structure 131). An increase in structure height of 115 kV Y151 Line Structure 78 was required to mitigate uplift due to the structure height change of Structure 79. Pole lengths were adjusted to account for side slope (345 kV 3124 Line Structure 80) and the structure height of one of the three poles on the three pole Structure 85 (Y151 Line) was reduced to account for sloping terrain. Drawings were also modified to allow for increase phasing spacing from 12' to 15' for 115 kV vertically mounted side break switches with vacuum interruptors and to update the Y151 phasing diagram to reflect changes made to structure configuration in Massachusetts.

ENCLOSURES

- Attachment A – Revised Existing Conditions Mapping
- Attachment B – New Hampshire Natural Heritage Bureau Letter, dated 2/5/16
- Attachment C – New Hampshire Fish & Game Letter, dated 2/11/16
- Attachment D – Revised Wildlife Habitat Land Cover Type Mapping
- Attachment E – Revised Community Resource Mapping
- Attachment F – Supplemental Joint Pre-Filed Testimony of Bryan Hudock and David L. Plante
- Attachment G – NEP Pro Forma Statement of Assets and Liabilities
- Attachment H – PSNH Pro Forma Statement of Assets and Liabilities
- Attachment I – National Grid Organization Charts: FERC-Regulated Businesses; Project Management and Complex Construction
- Attachment J – Eversource Electric Operations Organization Chart
- Attachment K – Resume of Frederick Raymond, Biographies of Rudy Wynter, John Gavin, John Bruckner
- Attachment L – Resume of William J. Quinlan
- Attachment M – Representative Private Property Photosimulations
- Attachment N – Additional Information for Photosimulations
- Attachment O – National Grid Electric and Gas System Level Plan, dated May 2015
- Attachment P – Eversource’s New Hampshire Electric Operations Emergency Response Plan, dated March 5, 2015
- Attachment Q – Revised National Grid Engineering Drawings
- Attachment R – CONFIDENTIAL - NH Natural Heritage Bureau Map (NHB14-4809)