

STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE

Docket No. 2015-06

Joint Application of Northern Pass Transmission, LLC
and Public Service Company of New Hampshire
d/b/a Eversource Energy for a Certificate of Site and Facility

DECISION AND ORDER DENYING APPLICATION
FOR CERTIFICATE OF SITE AND FACILITY

March 30, 2018

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I. INTRODUCTION

This Order denies a request by Northern Pass Transmission, LLC and Public Service Company of New Hampshire d/b/a Eversource Energy (collectively Applicant) for a Certificate of Site and Facility (Application) to build the Northern Pass transmission line, a 192-mile high voltage transmission line (HVTL) from Pittsburg, New Hampshire to Deerfield, New Hampshire.

During seventy (70) days of adjudicative hearings, the Subcommittee received testimony from 154 witnesses and received and considered 2,176 exhibits. The evidentiary record closed on December 22, 2017. The Subcommittee began public deliberations on January 30, 2018. On February 1, 2018, the Subcommittee voted to deny the Application.

The Applicant failed to demonstrate by a preponderance of evidence that the Project will not unduly interfere with the orderly development of the region. In reaching this decision, the Subcommittee considered the extent to which the siting, construction, and operation of the Project would affect land use, employment, and the economy of the region. The Subcommittee found that the Applicant failed to demonstrate by a preponderance of evidence that the Project would not overburden existing land uses within and surrounding the right-of-way and would not substantially change the impact of the right-of-way on surrounding properties and land use.

The Subcommittee further determined that the Applicant did not sufficiently demonstrate the effect the Project would have on the economy. While there would be some positive impacts on the economy, the magnitude of those positive impacts was overstated by the Applicant. As for the potential harms of construction and operation of the Project, the Applicant failed to provide credible evidence regarding the negative impacts on tourism and real estate values. The Applicant also failed to provide a plan for construction of the Project that appropriately

considered the Project's effects on municipal roads and businesses in the northern part of the State.

Finally, with respect to the views of municipal and regional planning commissions and municipal governing bodies of the affected municipalities, which the Subcommittee must consider, the Applicant failed to adequately anticipate and account for the almost uniform view of those groups that the Project, as planned and presented, would unduly interfere with the orderly development of the region.

In order to issue a Certificate of Site and Facility, the Subcommittee must find by a preponderance of evidence that the Project will not unduly interfere with the orderly development of the region with due consideration given to the views of municipal and regional planning commissions and municipal governing bodies. *See* RSA 162-H:16, IV(b). If the Subcommittee cannot make this finding based on the record, it cannot issue a Certificate. The Applicant has the burden of persuading the Subcommittee on this and the other findings that are necessary for the issuance of a Certificate.

In considering whether the Applicant met its burden under RSA 162-H:16, IV(b) we considered all the relevant evidence and information regarding the proposed route of the Project and its potential impacts and benefits on the orderly development of the region. Having found the Applicant failed to meet the requirements of RSA 162-H:16, IV(b), the Subcommittee voted unanimously to deny the Application. The Subcommittee decided, by a vote of five to two, not to continue deliberations on the other requirements of RSA 162-H:16, IV.

This Decision and Order memorializes the deliberations of the Subcommittee and sets forth the reasons for denial of the Application.

II. PROCEDURAL HISTORY

On October 19, 2015, an Application was filed with the Site Evaluation Committee (Committee). The Applicant seeks the issuance of a Certificate of Site and Facility approving the siting, construction, and operation of a 192-mile transmission line and associated facilities with a capacity rating of up to 1,090 megawatts (MW) from the Canadian border in Pittsburg in Coos County to Deerfield in Rockingham County (Project). App. 1, at 8, 22, 40.¹ The Applicant supplemented and corrected the Application on February 26, May 10, July 11 and 22, September 29, 2016, August 25 and November 20, 2017. App. 2, 3.

On October 26, 2015, the Committee sent a letter to the state agencies having permitting, licensing, or other regulatory authority over matters covered in the Application. The Committee requested that each state agency review the relevant portions of the Application and determine if the Application contained sufficient information to consider the issuance of any permit, conditions, or licenses under the agencies' jurisdiction.

On October 26, 2015, the Chair of the Committee issued a letter to the New Hampshire Attorney General requesting the appointment of Counsel for the Public pursuant to

¹ For the purposes of this Decision, exhibits filed by the parties in this docket are identified as follows: (i) Applicant – APP; (ii) Counsel for the Public – CFP; (iii) Businesses & Organizations with Economic Interests – BUS; (iv) the City of Franklin and The City of Berlin – FRANKLIN-BERLIN; (v) Grafton County Commissioners– GRAFTON; (vi) Joint Municipal Groups 1(South), 2 and 3 (North and South) – JTMUNI; (vii) George Sansoucy – SAN; (viii) Municipal Group 1 North – MUNI-1-N; (ix) Non-Governmental Organization – NGO; (x) Abutting Property Owners (underground portion), Bethlehem to Plymouth– APOBP; (xi) Abutting Property Owners (overhead portion) Ashland, Northfield, Canterbury, Allenstown, and Concord– ASHLAND-CONCORD-ABTR; (xii) Non-Abutting Property Owners (overhead portion) Ashland to Deerfield – AD-N-ABTR; (xiii) Philip H. Bilodeau and Joan C. Bilodeau – BILODEAU; (xiv) Abutting and Non-Abutting Combined Group of Intervenors Clarksville-Stewartstown – CS; (xv) Abutting Property Owners (overhead portion), Deerfield – DFLD-ABTR; (xvi) Abutting Property Owners (overhead portion), Dummer, Stark, and Northumberland – DNA; (xvii) Sugar Hill Historical Museum, New Hampshire Preservation Alliance and National Trust for Historic Preservation, North Country Scenic Byways Counsel, as a group – HIST; (xviii) Non-Abutting Property Owners (underground portion) Bethlehem to Plymouth – NAPO-BP; (xix) Non-Abutting Property Owners (overhead portion) Stark, Lancaster, Whitefield, Dalton and Bethlehem – NAPO-SB; (xx) Abutting Property Owners (overhead portion) Whitefield, Dalton, and Bethlehem – DWBA; (xxi) The New England Power Generators Association, Inc. – NEPGA; (xxii) Pemigewasset River Local Advisory Committee, as single party – PEMI; (xxiii) Society for the Protection of New Hampshire Forests – SPNF. Adjudicative Hearing and Deliberations transcripts are cited as “Tr., Day _____, [Morning/Afternoon] Session, ___/___/2017, at ____.”

RSA 162-H:9. On October 28, 2015, the Attorney General designated Senior Assistant Attorney General Peter Roth to serve as Counsel for the Public in this docket. Attorney Roth resigned on September 22, 2017. Assistant Attorney General Christopher G. Aslin was appointed to serve as Counsel for the Public on August 25, 2017.

On November 2, 2015, pursuant to RSA 162-H:4-a, the Chair of the Committee appointed a Subcommittee in this docket (Subcommittee).

On December 9, 2015, the Committee sent a notice to the affected municipalities of the Towns of Pittsburg, Clarksville, Stewartstown, Dixville, Millsfield, Dummer, Stark, Northumberland, Lancaster, Whitefield, Dalton, Bethlehem, Sugar Hill, Franconia, Easton, Woodstock, Thornton, Campton, Plymouth, Ashland, Bridgewater, New Hampton, Bristol, Hill, Franklin, Northfield, Canterbury, Pembroke, Allenstown, Deerfield, Chester, Raymond, Londonderry and the City of Concord consistent with RSA 541-A:39, and the procedures to be followed to intervene in the proceeding.

Following the public hearing that was conducted on December 7, 2015, on December 18, 2015, the Subcommittee issued an Order finding that the Application contained sufficient information to carry out the purposes of 162-H and accepted the Application. *See* RSA 162-H:7, VI.

On December 22, 2015, the Presiding Officer of the Subcommittee issued a Procedural Order scheduling public information sessions pursuant to RSA 162-H:10, I-a, a prehearing conference, and setting forth a deadline for filing motions to intervene.

Public information sessions under RSA 162-H:10, I-a were conducted on January 11, 2016, in Franklin, January 13, 2016, in Londonderry, on January 14, 2016, in Laconia, January 20, 2016, in Whitefield and January 21, 2016, in Lincoln.

On February 3, 2016, the Presiding Officer issued an Order and Notice scheduling public hearings pursuant to RSA 162-H:10, I-c. Public hearings were conducted on March 1, 2016, in Meredith, on March 7, 2016, in Colebrook, on March 10, 2016, in Concord, on March 14, 2016, in Holderness, on March 16, 2016, in Deerfield, on March 19, in Whitefield, and on June 23, 2016, in Plymouth.

The Subcommittee conducted seven (7) days of site visits on March 7, 8, 14, 16, 2016; July 27 and 28, 2017; and October 3, 2017.

The Subcommittee received 160 Motions to Intervene. An Order on Motions to Intervene was issued by the Presiding Officer on March 18, 2016. Thereafter, the Subcommittee received numerous requests for review of the Order. *See* RSA 162-H:4, V. On April 12, 2016, the Subcommittee conducted a hearing on the requests for review. On May 20, 2016, the Subcommittee issued an Order on Review of Intervention. As a result of the orders addressing the various intervention requests, the following parties were granted intervenor status and their participation was combined in the following groups:

- 1. Towns, Town Governing Bodies, Municipal Sub-Units, Conservation Commissions, Grafton County Commissioners, Rick Samson, Local Government Entities**
 - a. **Municipal Group 1 North** – Pittsburg, Clarksville, Stewartstown, Colebrook, and Coos County Commissioner Rick Samson, as a group;
 - b. **Municipal Group 1 South** – Northumberland, Whitefield (Board of Selectmen and Planning Board), Dalton (Board of Selectmen and Conservation Commission), Bethlehem (Board of Selectmen, Planning Board and Conservation Commission), and Littleton, as a group;
 - c. **Municipal Group 2** – Sugar Hill, Franconia (Board of Selectmen, Planning Board and Conservation Commission), Easton (Board of Selectmen, Planning Board and Conservation Commission), Woodstock², and Plymouth, as a group;

² Town of Woodstock withdrew its Petition to Intervene on March 17, 2017.

- d. **Municipal Group 3 North** – Holderness (Board of Selectmen and Conservation Commission), Ashland (Board of Selectmen, Conservation Commission and Water & Sewer Department), Bridgewater³, New Hampton and Bristol, as a group;
- e. **Municipal Group 3 South** – Canterbury, Concord, Pembroke (Board of Selectmen and Conservation Commission) and Deerfield (Board of Selectmen, Planning Board and Conservation Commission), as a group;
- f. **City of Franklin and City of Berlin**, as a group.
- g. **Grafton County Commissioners**, as a single party.

2. Individual Parties

- a. Clarksville – Bethlehem
 - i. *Clarksville to Stewartstown Abutting and Non-Abutting (combined groups of intervenors):*
 - Charles and Donna Jordan;
 - Sally A. Zankowski;
 - Jon and Lori Levesque;
 - Roderick and Donna McAllaster;
 - Lynne Placey;
 - Arlene Placey;
 - Brad and Daryl Thompson;
 - David Schrier;
 - Nancy L. Dodge;
 - Robert Martin;
 - Roderick C. Moore, Jr., Joseph John Dunlap, Shawn Patrick Brady and Christopher Thompson; and
 - E. Martin Kaufman, Bradley J. Thompson and John Petrofsky on behalf of 44 residents of Stewartstown and East Colebrook (Dixville Notch-Harvey Swell Location residents).
 - ii. *Dummer, Stark and Northumberland Abutting Property Owners Group of Intervenors (overhead portion of the Project):*
 - R. Eric Jones and Margaret J. Jones;
 - Elaine V. Olson;
 - Eric M. Olson;
 - Joshua Olson;
 - Elaine V. Olson;
 - Rodrigue J. and Tammy L. Beland;
 - Susan E. Percy for Percy Summer Club;

³ Town of Bridgewater withdrew its Petition to Intervene on March 21, 2017.

- Mark Lagasse and Kevin Spencer for Lagaspence Realty, LLC; and
 - Robert Heath.
- iii. *Whitefield, Dalton, and Bethlehem Abutting Property Owners Group of Intervenors (overhead portion of the Project):*
- Elmer C. Lupton and Claire C. Lupton;
 - Mary Boone Wellington;
 - Bruce and Sondra Brekke;
 - James and Judy Ramsdell;
 - Charles and Cynthia Hatfield;
 - Donald and Betty Gooden;
 - Tim and Brigitte White; and
 - David Van Houten.
- b. Stark to Bethlehem Non-Abutting Property Owners Group of Intervenors
- Mark W. Orzeck and Susan Orzeck;
 - John W. Davidge for Prospect Farm-Lancaster, LLC;
 - Linda Upham-Bornstein;
 - Rebecca Weeks Sherrill More, PhD for the Weeks Lancaster Trust;
 - Richard M. McGinnis;
 - Frederic P. Fitts;
 - Gerald and Vivian Roy;
 - Edward A. Piatek;
 - Frank and Kate Lombardi;
 - Marsha J. Lombardi;
 - Wendy Doran;
 - Alexandra M. Dannis and James G. Dannis; and
 - Andrew D. Dodge.
- c. Bethlehem to Plymouth Abutting Property Owners Group of Intervenors (underground portion of the Project):
- Nigel Manley and Judy Ratzel;
 - Russell and Lydia Cumbee;
 - Walter Palmer and Kathryn Ting;
 - G. Peter and Mary S. Grote;
 - Paul and Dana O'Hara;
 - Virginia Jeffreys;
 - Carol Dwyer;
 - Gregory and Lucille Wolf;
 - Ken and Linda Ford;
 - Campbell McLaren, M.D.;
 - Eric and Barbara Meyer;
 - Robert W. Thibault;
 - Dennis Ford;

- Carl Lakes and Barbara Lakes;
 - Bruce D. Ahern; and
 - Frank Pinter.
- d. Bethlehem to Plymouth Non-Abutting Property Owners Group of Intervenors (underground portion of the Project):
- Lee Sullivan and Stephen Buzzell;
 - Timothy and Rebecca Burbank, Edward Cenerizio and Deborah Corey, and Matthew Steele, individually and as owners of 41 Dyke Road, LLC;
 - James Page; and
 - Susan Schibanoff.
- e. Ashland to Deerfield Abutting Property Owners Group of Intervenors:
- i. *Deerfield, as a group:*
- Erick B. Berglund Jr. and Kathleen A. Berglund;
 - Rebecca Hutchinson;
 - Torin Judd and Brian Judd;
 - Jo Anne Bradbury;
 - Jeanne M. Menard as a general partner of the Menard Forest Family Limited Partnership;
 - Jeanne M. Menard for Peter F. Menard and Anne K. Burnett;
 - Kevin and Lisa Cini;
 - Bruce A. Adami and Robert J. Cote; and
 - Eric and Sandra Lahr.
- ii. *Ashland, Northfield, Canterbury, Allentown and Concord, as a group:*
- Carol Currier;
 - Mary A. Lee;
 - Craig and Corinne Pullen;
 - McKenna's Purchase Unit Owners Association;
 - Taras and Marta Kucman;
 - Kelly Normandeau; and
 - Laura M. Bonk.
- iii. Philip H. Bilodeau and Joan C. Bilodeau—limited intervention.
- f. Ashland to Deerfield Non-Abutting Property Owners Group of Intervenors
- Joanna and Robert Tuveson;
 - Nina and Elisha Gray;
 - Rodney Felgate and Laura Felgate;
 - The Webster Family Group;
 - Lawrence Phillips and Maxine Phillips;
 - Lisa Wolford and Pamela Hanglin;
 - F. Maureen Quinn;
 - Madelyn and Thomas Foulkes; and

- Jeanne M. Menard as a managing member of Pawtuckaway View, LLC.

3. Non-Governmental Organizations

- a. Society for the Protection of New Hampshire Forests (Forest Society) as a single party;
- b. Appalachian Mountain Club (AMC), Conservation Law Foundation (CLF), Sierra Club Chapter of New Hampshire⁴, and Ammonoosuc Conservation Trust, as a group; and
- c. Sugar Hill Historical Museum, New Hampshire Preservation Alliance and National Trust for Historic Preservation and North Country Scenic Byways Council, as a group.

4. Businesses and Organizations with Economic Interests – Cate Street Capital, Inc., International Brotherhood of Electrical Workers, Coos County Business and Employers Group, North Country Chamber of Commerce⁵, Dixville Capital, LLC and Balsams Resort Holdings, LLC, as a group.

5. Wagner Forest Management;

6. Pemigewasset River Local Advisory Committee (PRLAC); and

7. New England Power Generators Association (NEPGA) – limited intervention.

The adjudicative hearing began on April 13, 2017. The adjudicative hearing consumed seventy days of testimony. The Subcommittee received testimony from 154 witnesses. The Subcommittee received 2,176 exhibits. The evidentiary record closed on December 22, 2017.

The Subcommittee began public deliberations on January 30, 2018. On February 1, 2018, the Subcommittee concluded deliberations and voted to deny the Application.

III. APPLICATION

Northern Pass Transmission, LLC (NPT) is a single purpose limited liability company that was formed to construct, own, and operate the Project. App. 1, at 50; App. 7, at 2. It is a wholly-owned subsidiary of Eversource Energy Transmission Ventures, Inc. App. 1, at 50; App.

⁴ Sierra Club Chapter of New Hampshire withdrew its Petition to Intervene on July 29, 2016.

⁵ North Country Chamber of Commerce withdrew its Petition on May 19, 2016.

7, at 2. Eversource Energy Transmission Ventures, Inc. is a wholly-owned subsidiary of Eversource. App. 1, at 50; App. 7, at 2. Eversource is a public utility holding company, formerly known as Northeast Utilities. App. 1, at 50.

The Project's transmission corridor would encompass 3,161 acres, including: (i) 465.1 acres of new right-of-way that would be used for the overhead transmission corridor; (ii) 2,520 acres of existing right-of-way that would be leased from Public Service Company of New Hampshire (PSNH) and used for the overhead transmission corridor; and (iii) 175.9 acres for the underground transmission corridor. App. 1, at 8.

The Project would consist of the following major components: (i) a single circuit +/-320 kV high-voltage direct current (HVDC) transmission line that would run from the international border to a converter terminal in Franklin; (ii) a converter terminal that would be constructed at 1079 South Main Street in Franklin, NH; (iii) a single circuit 345 kV alternating current (AC) overhead transmission line that would run from the converter terminal in Franklin to an existing substation located at 27 Cate Road in Deerfield; (iv) six HVDC Overhead to Underground Transition Stations that would be located in Pittsburg, two in Clarksville, Stewartstown, Bethlehem, and Bridgewater; and (v) various access roads, laydown areas, staging areas and marshaling yards. App. 1, at 8, 23-24. The Applicant also seeks to modify the Deerfield and Scobie Pond Substations and to upgrade 10 structures located between them. App. 1, at 24.

The proposed line generally would consist of the following sections:

- Section 1 – From the international border through the Towns of Pittsburg, Clarksville, Stewartstown, Dixville, and Millsfield to Dummer. App. 1, Appx. 1, Sheet 1-38⁶. This section of the line would be constructed within a new right-of-way. App. 1, Appx. 1, Sheet 2; App. 201, Sheet 38-77. Two portions of this line comprising of 8.2 miles in total would be constructed underground: (i) a Route 3 crossing between the Towns of Pittsburg and Clarksville (0.7 miles) and (ii) a portion of the line from Clarksville to

⁶ The Application is made up of multiple volumes containing numerous appendices. References to appendices within the Application will be cited as "Appx." followed by the designated number of the Appendix.

Stewartstown (7.5 miles). App. 1, at 23; App. 1, Appx. 1, Sheet 2. The majority of the underground line from Clarksville to Stewartstown would be installed under existing municipal roads, *i.e.* Old County Road, North Hill Road, and Bear Rock Road. App. 1, Appx. 1, Sheet 5-11; App. 201, Sheet 5-12. As of the conclusion of deliberations, the exact location of the line along these roadways had not been determined. Tr., Day 43, Morning Session, 10/02/2017, at 113; Tr., Day 43, Afternoon Session, 10/02/2017, at 51-52.

- Section 2 – From Dummer through Stark, Northumberland, Lancaster, Whitefield, Dalton, back to Whitefield to Bethlehem. App. 1, Appx. 1, Sheet 38-76; App. 201, Sheet 38-77. This section of the line would follow the existing right-of-way owned by PSNH. App. 1, Appx. 1, Sheet 38-76. The corridor in Whitefield from Structure DC-609 to Structure DC-611 (area of Whitefield Substation) would be widened by approximately 124 feet. App. 1, at 22; App. 1, Appx. 1, Sheet 67. In the Town of Stark, the line would cross Nash Stream Forest, the Yankee Forest Tract, the Percy Summer Club conservation easement, the Damian Tract, Percy State Forest, the Kaufmann Tract and the White Mountain National Forest. App. 1, Appx. 1, Sheet 42-49. In the Town of Northumberland, the line would cross Cape Horn State Forest. App. 1, Appx. 1, Sheet 51-54. In the Town of Lancaster, the line would cross Lancaster Town Forest, the Campen E & E conservation easement, the Bartow & Baker, J & Baker, L. conservation easements and the GRP Savage conservation easement. App. 1, Appx. 1, Sheet 56-58. In the Town of Whitefield, the line would cross the Pondicherry Unit of Silvio O. Conte National Fish and Wildlife Refuge. App. 201, Sheet 64-65.
- Section 3 – From Bethlehem through Sugar Hill, Franconia, Easton, Woodstock, Thornton, Campton, and Plymouth to Bridgewater. App. 1, Appx. 1, Sheet 76-124; App. 201, Sheet 77-124. This portion of the line would be constructed underground and would be 52.2 miles long. App. 1, at 23. Specifically, this section would be constructed under and along State Routes 302, 18, 116, 112 and 3. App. 1, Appx. 1, Sheet 76-124; App. 201, Sheet 77-124. As of the conclusion of deliberations, the exact location of the line along these roadways had not been determined. Tr., Day 43, Morning Session, 10/02/2017, at 113; Tr., Day 43, Afternoon Session, 10/02/2017, at 51-52. In the Towns of Easton and Woodstock, the line would cross the White Mountain National Forest. App. 201, Sheet 88-98.
- Section 4 – From Bridgewater, through Ashland, New Hampton, Bridgewater, Bristol, New Hampton, Hill, Franklin, Northfield, Canterbury, Concord, Pembroke, and Allentown to Deerfield. App. 1, Appx. 1, Sheet 124-180. This section of the line would follow the existing right-of-way owned by PSNH. App. 1, at 22. The corridor in Pembroke from Structure 3132-178 to Structure 3132-195 (8,014 feet) would be widened by approximately 45 feet. App. 1, at 22; App. 1, Appx. 1, Sheet 165-166. In addition, the corridor at Cate Road in Deerfield (343 feet) would be expanded by approximately 85 feet. App. 1, at 22. Finally, another segment of the corridor in Deerfield (343 feet) would be expanded by approximately 285-515 feet. App. 1, at 22. In the Town of Bridgewater, the line would cross the New Hampton – Bridgewater Scenic Easement. App. 201, Sheet 129. In the Town of New Hampton, the line would cross the Franklin Falls Reservoir and

the Conking conservation easement. App. 1, Appx. 1, Sheet 134-136; App. 201, Sheet 134-137. In the Town of Bristol, the line would cross the Pemigewasset River. App. 1, Appx. 1, Sheet 131, 133, 137; App. 201, Sheet 133, 137. In the Town of Hill, the line would cross the William H. Thomas Forest and the Franklin Falls Reservoir. App. 1, Appx. 1, Sheet 137-138. In the Town of Franklin, the line would cross the Franklin Falls Reservoir and Webster Lake WMA. App. 1, Appx. 1, Sheet 140-144; App. 201, Sheet 140-145. In the City of Concord, the line would cross the Spear conservation easement, the Richards Community Forest conservation easement, the SPNHF (Blood) AR, the Turtle Pond FO, the Turtle Pond Village conservation easement and the Soucook River. App. 1, Appx. 1, Sheet 157; App. 201, Sheet 157-158, 160, 164. In the Town of Allenstown, the line would cross Bear Brook State Park and the Wetlands Reserve Programs conservation easement. App. 1, Appx. 1, Sheet 169-171, 173; App. 201, Sheet 170-171, 173. In the Town of Deerfield, the line would cross the Alvah Chase Town Forest, the Levesque Lot, the Wetlands Reserve Programs conservation easement, the Menard conservation easement and the Geddes Trust Melinda L. conservation easement. App. 1, Appx. 1, Sheet 175, 179-180.

The Applicant asserted that it would be using primarily lattice structures, with some tubular steel monopole structures. App. 1, at 42. The lattice configuration would have an approximate base dimension of 30 feet by 30 feet and taper to a six foot by five foot column half way up the structure, anchored to four concrete foundations at the corners of the base approximately three to five feet in diameter. App. 1, at 42. The structures' heights for the HVDC portion of the Project would be between 60 feet and 135 feet. App. 1, at 42. The AC structures would range in height from 48 feet to 160 feet. App. 1, at 43.

The line would cross the following existing substations: (i) the Lost Nation Substation in Northumberland; (ii) the Whitefield Substation; (iii) the North Woodstock Substation; (iv) the Beebe River Substation in Campton; (v) the Ashland Substation; (vi) the Pemigewasset Substation in New Hampton; (vii) the Webster Substation in Franklin; (viii) the Oak Hill Substation in Concord; and (ix) the Deerfield Substation. App. 1, Appx. 1, at 2.

Overhead/underground transition stations would be installed at each end of each underground segment of the line to allow for the transition of the overhead conductor to the underground equipment. App. 1, at 31. Each of these six transition stations would resemble a

small switching station and would occupy an area approximately 75 feet by 130 feet. App. 1, at 31. The equipment at each station would include a line terminal structure, surge arresters, instrument transformers, disconnect switches, cable terminators, communications equipment, and a control building. App. 1, at 31, 41. The transition stations would be enclosed with fencing. App. 1, at 41.

The converter terminal that would be located in Franklin would include buildings with conversion equipment and controls, an open-air substation with filter banks, and other equipment similar to a conventional substation. App. 1, at 35. The converter terminal would be enclosed with fencing. App. 1, Appx. 6d. The converter terminal would use a Voltage Source Converter (VSC) DC converter technology. App. 1, at 41. The VSC would include a HVDC area that would include disconnect switches, circuit breakers, capacitors, reactors, and instrument transformers. App. 1, at 41. The conversion from HVDC to AC would take place in a valve hall – a building that would be approximately 250 feet by 250 feet. App. 1, at 41. A control room and office space would be located adjacent to the valve hall. App. 1, at 41. The AC portion of the converter terminal would include the converter transformers, reactors, filters, capacitors, instrument transformers, disconnect switches, and circuit breakers. App. 1, at 41. The converter terminal would occupy approximately ten (10) acres. App. 1, at 8.

The Deerfield substation would be modified so that it can accommodate the installation of a new 345 kV line. App. 1, at 36. Specifically, it would require a relocation of the existing 345 kV line and installation of equipment necessary for such relocation (terminal structures, 345 kV switches, breakers, bus work, instrument transformers and associated protection and control devices). App. 1, at 36, 42. In addition, the existing 345 kV AC line from Buxton, Maine, to Londonderry, New Hampshire (the 391 line), would be split into two segments and terminated at

the Deerfield Substation. App. 1, at 36. The Applicant seeks to construct a Static VAR Compensator and 345 kV capacitor banks adjacent to the existing substation yard. App. 1, at 42. Equipment additions would also include breakers, transformers, switches, bus, instrument transformers and arresters. App. 1, at 42. Currently, the substation and associated facilities occupy 8 acres. Tr., Day 6, Morning Session, 05/01/2017, at 38. Clearing of an additional 8 acres would be required for installation of upgrades required for operation of the Project. Tr., Day 6, Morning Session, 05/01/2017, at 38; CFP 590, 591.

At the Scobie Pond Substation, the Applicant seeks to install additional 345 kV banks in an area adjacent to the existing substation yard. App. 1, at 36. The Applicant also seeks to install 345 kV breakers in the existing substation bus. App. 1, at 42.

In addition, the Applicant seeks to upgrade 10 structures in order to maintain ground clearances for the 345 kV AC transmission line from the Deerfield Substation to the Scobie Pond Substation. App. 1, at 37.

The Applicant intends to relocate; (i) 51 miles of existing 115 kV lines and 12 miles of 34.5 kV lines for the HVDC portion of the line; and (ii) 16 miles of existing 115 kV lines and 5 miles of 34.5 kV lines for the 345 kV AC portion of the line. App. 1, at 43. These lines would remain within boundaries of the currently existing right-of-way. App. 201. A large number of structures associated with these lines, however, would be substituted with structures greater in height than currently existing structures. App. 201; SPNF 173; JTMUNI 193; JTMUNI 128, at 7; JTMUNI 129, at 9; Tr., Day 7, Afternoon Session, 05/02/2017, at 17-122; Tr., Day 11, Morning Session, 06/01/2017, at 59-63.

Construction of the Project would require establishment of laydown yards and marshaling yards. App. 1, at 24. The Applicant asserts that laydown yards would consist of open space areas

approximately five to fifty acres. App. 1, at 24; Tr., Day 6, Morning Session, 05/01/2017, at 116-117. The laydown yards would be located off the right-of-way along the length of the Project in areas that were identified by the Applicant on the Wetland Maps (Appendix 47) App. 1, at 47-48. The Applicant also asserts that additional laydown yards would be identified during construction of the Project. App. 1, at 47-48. More specifically, the laydown yards would be established in previously disturbed areas and would not require tree clearing or extensive grading or disturbance to wetlands or waterbodies. App. 1, at 27. By the time of the final adjudicative hearing, the Applicant identified only three specific laydown areas, one in Clarksville and two in Millsfield. Tr., Day 6, Morning Session, 05/01/2017, at 118. The Applicant estimated that it would need from 10 to 20 laydowns areas for construction of the Project. Tr., Day 6, Morning Session, 05/01/2017, at 119. The Applicant requested that the Subcommittee delegate the authority to regulate establishment of the laydown yards to the Department of Environmental Services (DES). App. 1, at 28.

The Applicant also asserted that the erection crews would utilize temporary crane pads which would be approximately 5,000 to 10,000 square feet, as staging structure components that would be located within the right-of-way for final on-site assembly of transmission structures. App. 1, at 37; Tr., Day 6, Morning Session, 05/01/2017, at 121-123. In addition, construction of the Project would require establishment of wire pulling sites. App. 1, at 27. The Applicant requested that the Subcommittee delegate to DES authority to review and approve, as necessary, the locations of wire pulling sites. App. 1, at 27.

IV. POSITIONS OF THE PARTIES

A. Applicant

The Applicant pre-filed the testimony⁷ of the following individuals:

- Michael J. Auseré, Vice President of Energy Planning & Economics at Eversource Energy (original and supplemental) – App. 7, 8;
- Kenneth Bowes, Vice President of Engineering at Eversource (original and two supplemental) – App. 4, 9, 10, 90;⁸
- Samuel Johnson, Senior Project Manager of Burns & McDonnell Engineering, Inc. (Burns & McDonnell)(original and supplemental) – App. 11, 86;
- Nathan Scott, Senior Transmission Engineer of Burns & McDonnell (original and supplemental) – App. 13, 88;
- John Kayser, Project Manager in the Transmission and Distribution Division of Burns & McDonnell (original and supplemental) – App. 14, 89;
- Derrick A. Bradstreet, P.E., Project Manager of Burns & McDonnell (original and supplemental) – App. 12, 87;
- Lynn Farrington, Engineer at Louis Berger (original and supplemental) – App. 15, 91;
- William J. Quinlan, President and Chief Operating Officer at Eversource Energy (original and supplemental) – App. 4, 5, 6;⁹
- Robert Andrew, Director of System Solutions (original, substitute and supplemental) – App. 4, 32;¹⁰
- Lee E. Carbonneau, Senior Principal Scientist in the Wetlands/Terrestrial Group at Normandeau Associates, Inc. (Normandeau)(original and supplemental) – App. 22, 98;
- Terrence DeWan, Principal and Founder of Terrence J. DeWan & Associates (DeWan) and Jessica Kimball, Planner and Landscape designer at DeWan (original and supplemental) – App. 16, 92;
- Julia Frayer, Partner and Managing Director of London Economics International LLC (LEI) (original, second updated and supplemental) – App. 28, 82, 101;
- Lisa K. Shapiro, Chief Economist at Gallagher, Callahan & Gartrell, P.C. (original and supplemental) – App. 29, 103;
- James A. Chalmers, Principal of Chalmers & Associates, LLC (original and supplemental) – App. 30, 104;
- Robert W. Varney, President of Normandeau (addressing air resources - original; addressing impact on orderly development of the region – original; addressing land use and orderly development - supplemental and addressing air quality - supplemental) – App. 19, 20, 96, 141;

⁷ Many witnesses who pre-filed their testimony attached or incorporated by reference their reports. Those reports are considered a part of the testimony.

⁸ Originally submitted as a pre-filed testimony of Jerry Fortier.

⁹ Originally submitted as a pre-filed testimony of James A. Muntz.

¹⁰ Originally submitted as a pre-filed testimony of Bradley Bentley.

- Mitch Nichols, Founder and President of Nichols Tourism Group (original and supplemental) – App. 31, 105;
- Gary B. Johnson, Senior Managing Engineer at Exponent, Inc. – App. 26;
- William H. Bailey, Principal Scientist at Exponent, Inc. – App. 25;
- Douglas H. Bell, Senior Principal Consultant and President at Cavanaugh Tocci Associates, Inc. – App. 27;
- Jacob J. Tinus, Project Manager in the Environmental Studies and Permitting Global Practice at Burns & McDonnell (original and supplemental) – App. 21, 97;
- Sarah A. Barnum, Senior Wildlife Ecologist at Normandeau (original and supplemental) – App. 23, 99;
- Dennis Magee, Senior Principal Scientist/Senior Consultant at Normandeau (original and supplemental) – App. 24, 100;
- Victoria Bunker, Ph.D., Owner and Principle Investigator at Victoria Bunker, Inc. (original and supplemental) – App. 17, 94; and
- Cheryl E. Widell, Owner of Widell Preservation Services, LLC (original and supplemental) – App. 18, 95.

The Applicant asserts that the information contained in its Application, pre-filed testimony, and exhibits, clearly demonstrates that the Applicant has the financial, managerial, and technical capacity to construct, manage, and operate the Project in accordance with the conditions of the Certificate. App. 1, at 51-54. In addition, the Applicant asserts that the Project will not unduly interfere with the orderly development of the region and will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, natural environment, or public health and safety. App. 1, at 56-92. Furthermore, the Applicant asserts that construction and operation of the Project is in the public interest. App. 1, at 92-98. The Applicant requests that the Subcommittee grant the Application and issue a Certificate.

B. Counsel for the Public

Counsel for the Public pre-filed the testimony of the following individuals:

- Adam Zysk, Senior Site/Civil Engineer at Dewberry (original (aboveground), original (underground) and supplemental) – CFP 131, 132, 133;
- Brenden Alexander, Senior Structural Engineer at Dewberry – CFP 134;
- David L. Taylor, Jr., Associate Vice President at Dewberry (original (aboveground) and original (underground) – CFP 129, 130;
- Earle C. (Rusty) Bascom, III, President and Principal Engineer of Electrical Consulting Engineers, P.C. – CFP 135;

- Michael Buscher, Professional Landscape Architect and Owner of T. J. Boyle Associates, LLC (T.J. Boyle), James Palmer, Senior Landscape Architect at T. J. Boyle and Jeremy Owens, Vermont Licensed Landscape Architect and Project Manager at T. J. Boyle (original and supplemental) – CFP 138, 139;
- Dr. Nicolas O. Rockler, Chief Executive Officer at Kavet, Rockier & Associates, LLC (Kavet Rockler)(original and supplemental) – CFP 147, 148;
- Samuel Newell, Principal at The Brattle Group and Jurgen Weiss, Principal at The Brattle Group (original, revised, and supplemental) – CFP 142, 143, 144;
- Thomas E. Kavet, President of Kavet Rockler (original and supplemental) – CFP 146, 148;
- Patricia O'Donnell, Principal at Heritage Landscapes, LLC (original and supplemental) – CFP 140, 141; and
- Michael Lew-Smith, Senior Botanist, Ecologist, and Partner with Arrowwood Environmental, LLC, Jeff Parsons, Senior Wildlife Biologist, Wetland Ecologist, and Partner with Arrowwood Environmental, LLC, (Arrowwood) Michal Amaral, an Adjunct Professor in the Environmental Science Department at the American Public University and Scott Reynolds, Managing Partner for North East Ecological Services (original and supplemental) – CFP 136, 137.

Counsel for the Public also filed a Post-Hearing Brief in which Counsel for the Public agreed that the Applicant has sufficient financial, technical, and managerial capability to construct and operate the Project in compliance with the Certificate, subject to certain conditions regarding the use of Best Management Practices. *See* Counsel for the Public's Post-Hearing Brief, at 9-10, 163.

Counsel for the Public argued that the Applicant incorrectly analyzed potential construction impacts of the Project. *See* Counsel for the Public's Post-Hearing Brief, at 14-18. Counsel for the Public's witnesses and others argued that construction activity will cause traffic delays, which will adversely impact residences, town services, and tourist visitors. They also will adversely impact local and regional events and local infrastructure. *See* Counsel for the Public's Post-Hearing Brief, at 11. Counsel for the Public criticized the testimony and opinions of the Applicant's witness Robert Varney, noting several omissions in his analysis. *See* Counsel for the Public's Post-Hearing Brief, at 14-18.

With respect to the economic effect of the Project on energy markets, Counsel for the Public asserted that potential savings in the energy market are expected, but are relatively small. *See* Counsel for the Public's Post-Hearing Brief, at 19. Counsel for the Public also argued that the capacity market benefits of the Project are uncertain. *See* Counsel for the Public's Post-Hearing Brief, at 19. When assessing the economy of the region and more specifically employment in the region, Counsel for the Public asserted that the Subcommittee should include an assessment of the Project's impact from construction and operation on both direct and indirect jobs. *See* Counsel for the Public's Post-Hearing Brief, at 26. Counsel for the Public argued that LEI's analysis overestimated local economic benefits, job growth, and GSP increases from the Project. *See* Counsel for the Public's Post-Hearing Brief, at 27, 29.

With respect to the effect of the Project on property taxes, Counsel for the Public generally agreed with the Applicant's position that tax payments are a benefit. *See* Counsel for the Public's Post-Hearing Brief, at 33. Counsel for the Public noted, however, that the payments would decrease at the end of the 40-year useful life of the Project and that the estimates are uncertain. *See* Counsel for the Public's Post-Hearing Brief, at 33-34. Counsel for the Public also argued that the Applicant's experts failed to account for and consider the negative impact of the Project on property tax revenues that could be experienced by the municipalities due to the Project's negative impact on values of real estate. *See* Counsel for the Public's Post-Hearing Brief, at 34-35.

On real estate values, Counsel for the Public argued that Dr. Chalmers' opinions were not adequately supported and were unpersuasive. *See* Counsel for the Public's Post-Hearing Brief, at 36-44. With respect to the effect of the Project on tourism, Counsel for the Public argued that

the methodology and reliability of the studies performed by the Applicant's expert, Mitch Nichols, were flawed. *See* Counsel for the Public's Post-Hearing Brief, at 45-53.

With respect to the effect of construction activities required by the Project, Counsel for the Public argued that the Application and associated filings do not contain all of the information necessary to fully evaluate the impacts during construction of the overhead portions of the Project. *See* Counsel for the Public's Post-Hearing Brief, at 53. Counsel for the Public further argued that construction of the overhead portion of the Project would cause both temporary and permanent impacts. *See* Counsel for the Public's Post-Hearing Brief, at 55-56. Counsel for the Public argued that construction of the underground portion of the Project will cause road closures and traffic delays and that there is insufficient information to fully determine whether the construction of the underground portion of the Project will unduly interfere with the orderly development of the region due to the potential permanent and/or temporary impacts from underground construction. *See* Counsel for the Public's Post-Hearing Brief, at 56-63.

Counsel for the Public argued that what the Applicant's proposal for decommissioning does not fall within any of the four permissible forms of financial assurance and the Applicant should be required to provide one of the four forms before it can be granted a certificate of site and facility. *See* Counsel for the Public's Post-Hearing Brief, at 65-66. Counsel for the Public argued that a secure and sufficient source of funding for decommissioning is needed at the outset of the Project. *See* Counsel for the Public's Post-Hearing Brief, at 66.

Counsel for the Public argued that the Project will interfere with the orderly development of the region. *See* Counsel for the Public's Post-Hearing Brief, at 68. Counsel for the Public also asserted that the Applicant's assessment of the Project's effect on aesthetics was incomplete. *See* Counsel for the Public's Post-Hearing Brief, at 76. Counsel for the Public asserted that the

Applicant's assessment of the impact on historic sites and archaeological resources was deficient. *See* Counsel for the Public's Post-Hearing Brief, at 94-114.

Counsel for the Public asserted that the Applicant's proposed avoidance and minimization measures pertaining to air quality, water quality and the natural environment do not represent best practical measures. *See* Counsel for the Public's Post-Hearing Brief, at 119.

In considering whether issuance of a certificate will serve the public interest, Counsel for the Public acknowledged the economic benefits of the Project as well as the likely adverse economic impacts of the Project. *See* Counsel for the Public's Post-Hearing Brief, at 138-140. Counsel for the Public noted that no benefits to private property are anticipated from the Project. *See* Counsel for the Public's Post-Hearing Brief, at 140. Counsel for the Public also acknowledged potential damaging environmental impacts of the Project. *See* Counsel for the Public's Post-Hearing Brief, at 142.

Counsel for the Public asserted that the Project will provide no benefits to historic sites or aesthetics and there are no particular health and safety benefits arising from the Project. *See* Counsel for the Public's Post-Hearing Brief, at 142-143.

Counsel for the Public suggested that if the Subcommittee were to grant a Certificate to the Applicant, that the Subcommittee should consider attaching several conditions outlined within its brief. *See* Counsel for the Public's Post-Hearing Brief, at 163-170.

C. Intervenors

- 1. Businesses and Organizations with Economic Interests - Cate Street Capital, Inc., International Brotherhood of Electrical Workers, Coos County Business and Employers Group, Dixville Capital, LLC and Balsams Resort Holdings, LLC**

The Businesses and Organizations with Economic Interests, Cate Street Capital, Inc., the International Brotherhood of Electrical Workers, the Coos County Business and Employers

Group, Dixville Capital, LLC and Balsams Resort Holdings, LLC, pre-filed the testimony of the following witnesses:

- Allen Bouthillier, on behalf of the Coos County Business Employers Group – BUS 3;
- Leslie Otten, Lead Developer on behalf of Dixville Capital, LLC and Balsams Resort Holdings, LLC (original and supplemental) – BUS 1, 2;
- Joe Casey, Representative for the International Brotherhood of Electrical Workers (original) – BUS 10; and
- Tiler Eaton, Member of International Brotherhood of Electrical Workers (original) – BUS 11.

The Business Intervenor Group filed a Post-Hearing Memorandum. The Business Intervenor Group argued that the evidence presented in this docket supports a finding that the Applicant has met its burden and that the Subcommittee should therefore issue a Certificate of Site and Facility. Business Intervenor Group’s Post-Hearing Memorandum, at 1. Specifically, the Business Intervenor Group argued that the Project meets the requirements of RSA 162-H:16, IV, in that the Project will not unduly interfere with the orderly development of the region and issuance of a Certificate will serve the public interest. Business Intervenor Group’s Post-Hearing Memorandum, at 1-7.

2. City of Franklin and City of Berlin

The City of Franklin and City of Berlin pre-filed the testimony of the following witnesses:

- Paul Grenier, Mayor of the City of Berlin (original) – FRANKLIN-BERLIN 1; and
- Elizabeth Dragon, City Manager of the City of Franklin (original) – FRANKLIN-BERLIN 2.

The City of Berlin filed a Trial Memorandum and Requests for Findings of Fact and Rulings of Law. The City of Berlin argued that the Project will serve the public interest because it will result in the improvement of the Coos Loop, which will, in turn, allow for increased transmission of power generated by clean hydro-electric, wind, and biomass stations located on

the Coos Loop. City of Berlin's Trial Memorandum, at 3-6. The City of Berlin argued that the Subcommittee should condition any approval of a Certificate upon the Applicant upgrading portions of the Coos Loop, seeking ISO-NE approval to study the installation of a Static Var Compensator (SVC) at the Berlin substation, and installing that SVC at the Berlin substation. City of Berlin's Trial Memorandum, at 6. The City of Berlin argued that the Subcommittee should find that creation of the Forward NH Fund and North Country Job Creation Fund are in the public interest and will positively impact industry and the economy, conditioned upon the advising boards of the funds adopting guidelines emphasizing the benefit and need for the disbursement of monies to projects located within Coos County and the City, specifically. City of Berlin's Trial Memorandum, at 7-8. Finally, the City of Berlin argued that the Project will positively impact host municipalities by adding high-value taxable property within the host municipalities, and consequently, reducing the overall tax rates of non-host communities, such as the City. City of Berlin's Trial Memorandum, at 8-9.

3. Municipal Group 1 North

The Towns of Pittsburg, Clarksville and Stewartstown, Colebrook (Municipal Group 1 North) pre-filed the testimony of the following witnesses:

- Stephen G. Ellis, Chairman of the Pittsburg Board of Selectmen, Brendan McKeage, Member of the Pittsburg Board of Selectmen and Richard Lapoint, Member of the Pittsburg Board of Selectmen (original) – MUNI-1-N 1;
- Judith E. Roche, Chairman of the Clarksville Board of Selectmen, William C. Purrington, Member of the Clarksville Board of Selectmen and Ray DeMaio, Member of the Clarksville Board of Selectmen (original) – MUNI-1-N 1; and
- Allan A. Coates, Chairman of the Stewartstown Board of Selectmen, Jim Gilbert, Member of the Stewartstown Board of Selectmen and Hazen E. Burns, Member of the Stewartstown Board of Selectmen (original) – MUNI-1-N 1.

Municipal Group 1 North also filed a Post-Hearing Memorandum and argued that the Application is fatally flawed for failing to seek or obtain permits for the use of town roads.

Municipal Group 1 North's Post-Hearing Memorandum, at 3-8. Municipal Group 1 North also argued that the Application should be denied because the Project will unduly interfere with the orderly development of the region. Municipal Group 1 North's Post-Hearing Memorandum, at 9-10. Municipal Group 1 North asserted that the Project would have an unreasonable adverse effect on aesthetics, historic sites, natural resources, public health and safety and property values. Municipal Group 1 North's Post-Hearing Memorandum, at 11-16. Municipal Group 1 North also asserted that the Project will not serve the public interest. Municipal Group 1 North's Post-Hearing Memorandum, at 16-17.

4. Municipal Group 1 South

Northumberland, Whitefield (Board of Selectmen and Planning Board), Dalton (Board of Selectmen and Conservation Commission), Bethlehem (Board of Selectmen, Planning Board and Conservation Commission) and Littleton pre-filed the testimony of the following witnesses:

- Cassandra Laleme, Member of the Bethlehem Board of Selectmen (original and supplemental) – JTMUNI 89, 90;
- Cheryl K. Jensen, Co-Chair of the Bethlehem Conservation Commission (original and supplemental) – JTMUNI 96, 97;
- Edwin Mellett, Chairman of the Northumberland Conservation Commission (original and supplemental) – JTMUNI 91, 92;
- Wendy Hersom, Chair of the Whitefield Board of Selectmen and Frank Lombardi, Chair of the Whitefield Planning Board (original) – JTMUNI 95; and
- Lise Moran, President of the Whitefield Historical Society (original and supplemental) – JTMUNI 94, 192.

5. Municipal Group 2

Sugar Hill, Franconia (Board of Selectmen, Planning Board and Conservation Commission), Easton (Board of Selectmen, Planning Board and Conservation Commission) and Plymouth pre-filed the testimony of the following witnesses:

- Ned Cutler, Selectmen for the Board of Selectmen of the Town of Easton (original and supplemental) – JTMUNI 102;¹¹
- Eric Meth, Member of the Franconia Board of Selectmen (original and supplemental) – JTMUNI 103, 104;
- Jim Collier, Chair of the Town of Easton Planning Board (original) – JTMUNI 101;
- Kris Pastoriza, Chair of the Easton Conservation Commission (original and supplemental) – JTMUNI 111, 112;
- Margaret Connors, Member of the Sugar Hill Board of Selectmen (original and supplemental) – JTMUNI 99, 100; and
- Brian Murphy¹², Community Planner for the Town of Plymouth (original and supplemental) – JTMUNI 105, 106.

6. Municipal Group 3 North

The Holderness (Board of Selectmen and Conservation Commission), Ashland (Board of Selectmen, Conservation Commission and Water & Sewer Department), New Hampton and Bristol pre-filed the testimony of the following witnesses:

- Barbara Lucas, Town Administrator of New Hampton (original) – JTMUNI 122;
- Daniel Moore, Chairman and Member of the New Hampton Conservation Commission (original) – JTMUNI 123;
- Kenneth Kettenring, Chair and Member of the New Hampton Planning Board (original and supplemental) – JTMUNI 119, 120;
- Neil Irvin, Chairman of the New Hampton Board of Selectmen (original and supplemental) – JTMUNI 114, 124; and
- Nicholas Coates, Town Administrator of the Town of Bristol (original and supplemental) – JTMUNI 115, 116.

7. Municipal Group 3 South

Canterbury, Concord, Pembroke (Board of Selectmen and Conservation Commission) and Deerfield (Board of Selectmen, Planning Board and Conservation Commission) pre-filed the testimony of the following witnesses:

- Ammy Heiser, Chairman of the Town of Pembroke Conservation Commission (original and supplemental) – JTMUNI 149, 150;
- Andrew Robertson, Member of the Town of Deerfield Board of Selectmen (original) – JTMUNI 152;

¹¹ Originally submitted as a pre-filed testimony of Deborah Stever.

¹² Originally submitted as a pre-filed testimony of Sharon Penney.

- Beth Fenstermacher, Assistant City Planner of the City of Concord (original and supplemental) – JTMUNI 137, 138;
- Edward Roberge, City Engineer for the City of Concord (original and supplemental) – JTMUNI 131, 132;
- Heather Shank, Acting City Planner for the City of Concord (original and supplemental) – JTMUNI 133, 134;¹³
- David M. Jodoin, Town Administrator for the Town of Pembroke (original and supplemental) – JTMUNI 143, 145;¹⁴
- Kate Hartnett, Vice Chair of the Planning Board and Member of the Conservation Commission for the Town of Deerfield (original, corrected and supplemental) – JTMUNI 153, 154, 155;
- Gail Matson and Candace Bouchard on behalf of the Concord City Council – JTMUNI 128, 129;
- Jan McClure, Member of the Conservation Commission of the City of Concord and Kristine Tardiff, Chair of the Conservation Commission of the City of Concord (original and supplemental) – JTMUNI 135, 136;
- Peter Scott, General Counsel of Sabbow and Co., Inc. (original) – JTMUNI 130;
- Rick Van De Poll, Owner of Ecosystem Management Consultants (original and supplemental) – JTMUNI 141, 142; and
- Stephanie Verdile, Town Planner for the Planning and Building Department of the Town of Pembroke (original and supplemental) – JTMUNI 146, 147.

8. Joint Position of Municipal Groups

The City of Concord, the Towns of Bridgewater, Deerfield, Littleton, New Hampton, Pembroke, Bristol, Franconia, Northumberland, Plymouth, Sugar Hill, Whitefield and the Ashland Water & Sewer Department filed testimony of George Sansoucy (SAN 1-44), owner of George E. Sansoucy, P.E., LLC.

Municipal Groups 1 South, 2, 3 South and 3 North (Municipalities) jointly filed a Post-Hearing Memorandum. In the Post Hearing Memorandum, the Municipalities noted that the comments from the public overwhelmingly opposed the Project. Municipalities' Post-Hearing Memorandum, at 3-5. The Municipalities argued that the Applicant has failed to demonstrate that it has the technical and managerial capability to construct the Project. Municipalities' Post-Hearing Memorandum, at 7-23. With respect to orderly development of the region, the

¹³ Adopted Carlos P. Baia pre-filed testimony.

¹⁴ Originally submitted as a pre-filed testimony of Justine Courtemanche.

Municipalities argued that: (1) the Application failed to describe land use in all the affected communities; (2) the Applicant failed to properly analyze interference with existing land uses; (3) the Applicant improperly assumed that the use of existing right-of-way equates to no undue interference; (4) the Application failed to provide information about master plans and zoning ordinances; (5) the Project is inconsistent with the host communities' master plans and zoning ordinances; (6) the Applicant improperly dismissed the significance of the master plans and zoning ordinances; (7) the Applicant failed to provide information about the views of governing bodies, planning commissions and municipal governing bodies; (8) the Application is overwhelmingly opposed by municipal governing bodies, planning commissions and county governments; (9) the Applicant failed in its outreach efforts; (10) the Project will have unreasonably adverse construction impacts; and (11) any benefits derived from property tax payments and additional employment do not warrant approval of the Project. Municipalities' Post-Hearing Memorandum, at 24-91. The Municipalities argued that the Project will have unreasonable adverse effects on historic sites, water quality, and the natural environment. Municipalities' Post-Hearing Memorandum, at 113-130. Finally, the Municipalities argued that the Project is not in the public interest. Municipalities Post-Hearing Memorandum, at 131.

9. Grafton County Commissioners

The Grafton County Commissioners pre-filed the testimony of Grafton County Commissioner, Linda Lauer, (original and supplemental). GRAFTON 1.

The Grafton County Commissioners also filed a Closing Argument noting that: (1) construction plans with the necessary detail to evaluate the impact of the Project in Grafton County have not been presented to the Committee as part of the Application and that it must, therefore, be denied; (2) the legal authority to construct, operate, and maintain in the location

requested has not been established; (3) the immense scope of the Project in Grafton County necessitates reliable construction plans before approval; (4) the Grafton County Commissioners recommended a Delay the proceedings until the Applicant could rectify the lack of meaningful construction plans and the lack of adequate surveys (5) the Applicant's proposal to delegate the Committee's authority to a variety of New Hampshire agencies is merely an effort to get around its failure to provide complete disclosure and survey information; (6) asking the towns and residences in Grafton County to rely on the Applicant's assurances would ignore the Applicant's past treatment of towns and cities; (7) the potential impacts on the environment cause great concerns; (8) burial in the areas proposed will disturb aquifers and wetlands; and (9) construction will require road closures. Grafton County Commissioners' Closing Argument, at 2-25.

10. Society for the Protection of New Hampshire Forests

The Society for the Protection of New Hampshire Forests (Forest Society) pre-filed the testimony of the following witnesses:

- Jane Difley, President/Forester and Chief Executive Office of Society for the Protection of New Hampshire Forests (original) – SPNF 142;
- Will Abbott, Vice President for Policy and Reservation Stewardship for Society for the Protection of New Hampshire Forests (original and supplemental) – SPNF 1, 2, 144;
- Raymond Lobdell, President and Sole Owner of Lobdell Associates, Inc. (original and supplemental) – SPNH 63, 67;
- Harry Dodson, Principal of Dodson & Flinker, Inc. (amended and supplemental) – SPNF 62, 66;
- Dean Wilber, Owner of Mapletree Farm, LLC (original) – SPNF 139;
- Donald Bilodeau, Diane Bilodeau, Dawn Bilodeau Scribner and Dana Bilodeau (original) – SPNF 143;
- Kelly O'Brien Normandeau, Owner of Concord Equestrian Center (original) – SPNF 140;¹⁵
- Lore Moran Dodge and Lisa Moran, Co-owners of the Moran Family/Longue Vue Farm at 659 Jefferson Road (original) – SPNF 141; and
- John Conkling (original) – SPNF 138.

¹⁵ Pre-filed testimony by Kelly O'Brien Normandeau was withdrawn.

The Forest Society filed a Post-Hearing Memorandum. The Forest Society argued that the Project would have an unreasonable adverse effect on aesthetics and historic and archaeological sites. Forest Society's Post-Hearing Memorandum, at 14-59. The Forest Society argued that the Project would unduly interfere with the orderly development of the region, and would have unreasonable adverse effects on water quality and the natural environment. Forest Society's Post-Hearing Memorandum, at 60-133. The Forest Society asserted that issuance of the Certificate would not serve the public interest. Forest Society's Post-Hearing Memorandum, at 169-184. Finally, the Forest Society argued that the Applicant's proposed delegations and conditions would unlawfully delegate the SEC's statutory functions and role. Forest Society's Post-Hearing Memorandum, at 184-197.

11. Appalachian Mountain Club, Conservation Law Foundation, and Ammonoosuc Conservation Trust

The Appalachian Mountain Club, Conservation Law Foundation and Ammonoosuc Conservation Trust (NGO Intervenors) pre-filed the testimony of the following witnesses:

- Chris Thayer, Director of North Country Programs and Outreach for the Appalachian Mountain Club – (original) NGO 102;
- Dr. David Publicover, Senior Staff Scientist and Assistant Director of Research with the Appalachian Mountain Club – (original) NGO 101; and
- Dr. Kenneth Kimball, Director of Research for the Appalachian Mountain Club and Larry Garland, Staff Cartographer for Appalachian Mountain Club (original and supplemental) – NGO 103, 104.

The NGO Intervenors also filed a Post-Hearing Memorandum. The NGO Intervenors argued that: (1) The Applicant has failed to demonstrate the Project will not have an unreasonable adverse effect on aesthetics, and to the contrary, a preponderance of the evidence in the record proves that the Project will have a profound and long-lasting adverse effect on aesthetics; (2) the Applicant has failed to demonstrate that the Project will not have an unreasonable adverse effect on the natural environment and the evidence in the record proves

that the Project will have severe and long-lasting adverse effects on certain exemplary rare natural communities and will result in significant forest fragmentation; (3) the Applicant has not established that the Project would not unduly interfere with the orderly development of the region; and (4) the Applicant has not established that the Project is in the public interest. NGO Intervenor's Post-Hearing Memorandum, at 4-82.

12. New England Power Generators Association, Inc.

New England Power Generators Association, Inc. pre-filed the testimony of William S. Fowler, President of Sigma Consultants, Inc., (original). NEPGA 1. NEPGA also filed a Post-Hearing Memorandum. NEPGA argued that: (1) the Applicant has not demonstrated the capacity market benefits by a preponderance of the evidence; (2) Hydro-Québec Production capacity has not qualified to participate in the forward capacity auction and will be challenged to do so; (3) on an economic basis Hydro-Québec Production capacity is unlikely to gain entry and or clear the Forward Capacity Market Auction; and (3) LEI generally exaggerates the potential capacity market benefits due to several inaccurate assumptions and unlikely future clearing prices. NEPGA's Post-Hearing Memorandum, at 7-32.

13. Clarksville and Stewartstown Abutting and Non-Abutting Property Owners Group of Intervenor

The Clarksville and Stewartstown Abutting and Non Abutting Property Owners Group of Intervenor pre-filed the testimony of the following witnesses:

- John Petrofsky, (two original and supplemental) – CS 1, 65, 66;
- Bradley J. Thompson, on behalf of the Combined Group of Intervenor Clarksville-Stewartstown (original and three supplemental) – CS 1, 14, 15, 16;
- Bradley J. Thompson individually (two original and two supplemental) – CS 1, 14, 15, 16;
- Daryl Thompson d/b/a Bear's Den, (original) – CS 1;
- E. Martin Kaufman, MD – (original) CS 1;
- Lori and Jon Levesque – (original) CS 1;
- Roderick McAllaster – (original) CS 1;

- Sally Zankowski – (original) CS 1;
- Peter Perkins – (original) CS 1;
- Stephan T. Nix, on behalf of Brad and Daryl Thompson, Licensed Land Surveyor and Attorney at Law (original and two supplemental) – CS 67, 68, 69;
- Roderick Moore – (original) CS 13;
- David Schrier – (original) CS 12; and
- Video Testimony – CS 3.

The Abutters and Non-Abutters of Pittsburg, Clarksville and Stewartstown (CS-Group I North) filed a Post-Hearing Memorandum. CS-Group I North argued that the Project will have unreasonable adverse effects on health, safety and public welfare. CS-Group I North's Post-Hearing Memorandum, at 5-10. CS-Group I North argued that heat given off from underground transmission cables would create an adverse effect on Clarksville and Stewartstown's gravel roads. CS-Group I North's Post-Hearing Memorandum, at 10-16. CS-Group I North argued that the location and construction of Transition Station #4 would have an unreasonable adverse effect on aesthetics and the orderly development of the region. CS-Group I North's Post-Hearing Memorandum, at 16-22. CS-Group I North asserted that the Applicant failed to meet the burden of proof that there will be no unreasonable adverse impacts to aesthetics and natural resources, including wetlands. CS-Group I North's Post-Hearing Memorandum, at 23-30. Finally, CS-Group I North argued that the Application requirements were not satisfied and essential town road permits have not been obtained. CS-Group I North's Post-Hearing Memorandum, at 31-36.

14. Dummer, Stark and Northumberland Abutting Property Owners Group of Intervenor

The Dummer, Stark and Northumberland Abutting Property Owners Group of Intervenor pre-filed the testimony of the following witnesses:

- Karen Johnson-Spencer, on behalf of Lagaspence Realty, LLC (original) – DNA 7;
- Eric and Margaret Jones (original and supplemental) – DNA 39, 41;
- Joshua Olson (original and supplemental) – DNA 12, 13;¹⁶

¹⁶ Originally filed by Eric Olson.

- Rodrigue Beland (original and supplemental) – DNA 10, 11; and
- Susan Percy (original and supplemental) – DNA 57A, 58.

The Dummer-Stark-Northumberland Group filed a Final Brief. The Dummer-Stark-Northumberland Group argued that the Application should be dismissed because the Application and evidence offered in support thereof are deficient and will not support a finding of public interest. Dummer-Stark-Northumberland Group’s Final Brief, at 1. The Dummer-Stark-Northumberland Group argued that: (1) the Applicant lacks financial capability in the absence of Hydro-Québec as a party to the Docket; (2) the Applicant failed to analyze the Project impacts upon Public Service Company of New Hampshire ratepayers; (3) the Applicant failed to analyze the safety aspects of the co-location of high voltage transmission infrastructure with high pressure gas pipelines; (4) there is a need to preserve the rights of intervenors; (5) the Applicant failed to analyze the impacts of the Project on aesthetics and historic sites; and (6) the Applicant failed to analyze the impact of the Project on wetlands. Dummer-Stark-Northumberland Group’s Final Brief, at 4-17.

15. Whitefield, Dalton and Bethlehem Abutting Property Owners Group of Intervenors

The Whitefield, Dalton and Bethlehem Abutting Property Owners Group of Intervenors pre-filed the testimony of the following witnesses:

- Bruce and Sondra Brekke (original and supplemental) – DWBA 7, 14;
- David Van Houten (original) – DWBA 8;
- James and Judy Ramsdell (original) – DWBA 11;
- Peter Powell, on behalf of the Whitefield, Dalton, and Bethlehem Abutting Property Owners (original) – DWBA 10;
- Tim and Brigitte White (original) – DWBA 12; and
- Elmer and Claire Lupton (original and supplemental) – DWBA 9, 13.

The Whitefield to Bethlehem Abutters also filed a Post-Hearing Memorandum. The Whitefield to Bethlehem Abutters expressed concerns regarding the Project’s impact on the

lifestyle and well-being of the abutters, people, property and communities, and argued that the Project would negatively impact aesthetics, natural resources and property values of the region. Whitefield to Bethlehem Abutters' Post-Hearing Memorandum, at 1-5.

16. Stark, Lancaster, Whitefield, Dalton and Bethlehem Non-Abutting Property Owners Group of Intervenors

The Stark, Lancaster, Whitefield, Dalton and Bethlehem Non-Abutting Property Owners Group of Intervenors pre-filed the testimony of Rebecca Weeks Sherrill Moore, Ph.D, (original and amended). NAPO-SB 1, 2.

The Weeks Lancaster Trust (WLT), intervenors in the Non-Abutters Stark to Bethlehem Group (NAPO-SB) also filed a Post-Hearing Memorandum. WLT argued that the Applicant failed to meet its burden of proof that Weeks State Park in Lancaster, NH will not be subject to unreasonable adverse effects by the proposed Project and the Applicant does not hold good title to a right-of-way easement through Cape Horn State Forest in Northumberland, NH. WLT Post-Hearing Memorandum, at 2-5.

17. Bethlehem to Plymouth Abutting Property Owners Group of Intervenors (Underground Portion of the Project)

The Bethlehem to Plymouth Abutting Property Owners Group of Intervenors pre-filed the testimony of the following witnesses:

- Bruce Ahern (two original) – APOBP 1, 3;
- Campbell McLaren (original and supplemental) – APOBP 7, 8;
- Carl Lakes (two original) – APOBP 1, 5;
- Eric and Barbara Meyer, Robert Thibault, Russell and Lydia Cumbee, Walter Palmer and Kathryn Ting, Carl and Barbara Lakes, Bruce Ahern, Peter and Mary Grote (Abutting Property Owners) (original) – APOBP 1;
- Peter Grote (original and supplemental) – APOBP 1, 10;
- Walter Palmer and Kathryn Ting (two original and supplemental) – APOBP 1, 6, 11; and
- Video Testimony – APOBP 2, 11.

The Abutting Property Owners Bethlehem to Plymouth (APOBP) also filed a Post-Hearing Memorandum. The APOBP argued that the Applicant's use of coal fly ash in fluidized thermal backfill (FTB) is dangerous for the environment and human health and would interfere with the orderly development of the region. APOBP's Post-Hearing Memorandum, at 8-17. The APOBP argued that: (1) the proposed high-voltage transmission line is too close to homes and wells; (2) the proposed transmission line creates undue interference with orderly development; (3) the Applicant lacks property rights and seeks unprecedented use of State roads as energy corridors; (4) the proposed benefits of the Forward NH Fund do not offset negative impacts on orderly development and regional economic growth. APOBP's Post-Hearing Memorandum; at 18-23. In the event that a Certificate was issued, the APOBP requested several conditions. APOBP's Post-Hearing Memorandum, at 24-29.

18. Bethlehem to Plymouth Non-Abutting Property Owners Group of Intervenors (Underground Portion of the Project)

Bethlehem to Plymouth Non-Abutting Property Owners Group of Intervenors (underground portion of the Project) did not pre-file any testimony in this docket.

The Non-Abutting Property Owners Bethlehem to Plymouth filed a Final Memorandum. They argued that the Applicant has not met its burden to prove that the proposed underground Project will not have an unreasonable adverse effect on aesthetics and will not have an unreasonable adverse effect on real estate values in the affected communities. Non-Abutting Property Owners Bethlehem to Plymouth's Final Memorandum, at 4-17.

19. Ashland, Northfield, Canterbury, Allenstown and Concord Abutting Property Owners Group of Intervenors

The Ashland, Northfield, Canterbury, Allenstown and Concord Abutting Property Owners Group of Intervenors pre-filed the testimony of the following witnesses:

- Mary Lee (original) – ASHLAND-CONCORD-ABTR 1; and
- Michelle Kleindienst on behalf of McKenna’s Purchase Unit Owners Association (original) – ASHLAND-CONCORD-ABTR 5.

The McKenna’s Purchase Unit Owners Association filed a Post-Hearing Memorandum. McKenna’s Purchase argued that the Applicant failed to meet requirements regarding aesthetics, managerial ability and the economic effect it would have on McKenna’s Purchase real estate. McKenna’s Purchase Unit Owner’s Association Post-Hearing Memorandum, at 3-10.

20. Deerfield Abutting Property Owners Group of Intervenors

The Deerfield Abutting Property Owners Group of Intervenors pre-filed the testimony of the following witnesses:

- D. Scott Newman, Principal of 106 Associates, on behalf of the Deerfield Abutting Property Owners (original and supplemental) – DFLD-ABTR 46, 47;
- Joint Testimony of Deerfield Abutters (original and two supplemental) – DFLD-ABTR 1, 44, 52;
- Erick and Kathleen Berglund (original and two supplemental) – DFLD-ABTR 36, 37, 39;
- Jeanne Menard, on behalf of Anne Burnett and Peter Menard (corrected and supplemental) – DFLD-ABTR 5, 10;
- Jeanne Menard, on behalf of Menard Forest Family Partnership (original) – DFLD-ABTR 8;
- Jo Anne Bradbury (original) – DFLD-ABTR 2; and
- Robert Cote and Bruce Adami (original and supplemental) – DFLD-ABTR 32, 33, 34, 35.

The Deerfield Abutters also filed a Post-Hearing Brief. The Deerfield Abutters argued that the Application should be denied because the Applicant failed to meet its burden of proof that the Project will not have unreasonable adverse effects, will not unduly interfere with the orderly development of the region, and will serve the public interest. Deerfield Abutters’ Post-Hearing Memorandum, at 1-70.

21. Philip H. Bilodeau and Joan C. Bilodeau

Philip Bilodeau and Joan Bilodeau pre-filed joint testimony. BILODEAU 2.

22. Ashland to Deerfield Non-Abutting Property Owners Group of Intervenors

The Ashland to Deerfield Non-Abutting Property Owners Group of Intervenors filed the following pre-filed testimony:

- F. Maureen Quinn (original and supplemental) – AD-N-ABTR 1, 4;
- Madelyn and Thomas Foulkes (original and additional) – AD-N-ABTR 16, 17;
- The Webster Family Group (original) – AD-N-ABTR 28;
- Elisha Gray (original) – AD-N-ABTR 41; and
- Jeanne Menard, on behalf of Pawtuckaway View, LLC (original) – AD-N-ABTR 27.

The Ashland to Deerfield Non-Abutting Property Owners Intervenor Group (AD-N-ABTR Group) also submitted a Post-Hearing Brief. The AD-N-ABTR Group argued that the Applicant has not met its burden to present the facts necessary to conclude that the Project would not have an unreasonable adverse impact on New Hampshire resources and that the Project as a whole would be in the public interest. AD-N-ABTR Group's Post-Hearing Brief, at 3. The AD-N-ABTR Group further argued that the Applicant's experts used methodologies to identify impacts on scenic and historical resources that were inadequate to provide the Subcommittee with all of the information that may be relevant to its determinations. AD-N-ABTR Group's Post-Hearing Brief, at 4. The AD-N-ABTR Group argued that there were inadequacies in the methodologies applied to identify resources noting that, with respect to those resources that were identified, the Applicant's experts used methodologies in evaluating effects that obscure rather than clarify the overall impact of the Project. AD-N-ABTR Group's Post-Hearing Brief, at 11. The AD-N-ABTR Group additionally identified public health and safety risks associated with the Project. AD-N-ABTR Group's Post-Hearing Brief, at 13-18. The AD-N-ABTR Group also criticized the Applicant's expert's reliance on the use of existing corridors to assess the impacts on orderly development. AD-N-ABTR Group's Post-Hearing Brief, at 18.

23. Sugar Hill Historical Museum, New Hampshire Preservation Alliance and National Trust for Historic Preservation and North Country Scenic Byways Council

The Sugar Hill Historical Museum, the New Hampshire Preservation Alliance and National Trust for Historic Preservation and the North Country Scenic Byways Council pre-filed testimony of Carl Martland (original and supplemental). HIST 12, 13.

The Historic Preservation Intervenor Group also filed a Post-Hearing Memorandum arguing that: (1) the Certificate of Site and Facility should be denied because the Project would unreasonably adversely affect historic resources; and (2) the Certificate should be denied because the Project would unreasonably adversely affect aesthetic resources. Historic Preservation Intervenor Group's Post-Hearing Memorandum, at 3-17.

24. Pemigewasset River Local Advisory Committee

The Pemigewasset River Local Advisory Committee pre-filed the testimony of the following witnesses:

- Barry Draper (original and supplemental) – PEMI 3, 7;
- Gretchen Draper (original and supplemental) – PEMI 4, 8; and
- Max Stamp (original and supplemental) – PEMI 2, 6.

The Pemigewasset River Local Advisory Committee also filed a Post-Hearing Memorandum arguing that: (1) the Applicant failed to satisfy the criteria in Site 301.16, relative to a finding of public interest with respect to the Project's impact on water quality; (2) the Project will have an unreasonable adverse effect on the natural environment; (3) the Applicant failed to satisfy criteria for Site 301.14(a) - unreasonable adverse effects on aesthetics; and (4) the Applicant failed to meet the spirit and intent for Site 301.16 criteria relative to a finding of public interest. PRLA's Post-Hearing Memorandum, at 4-18.

25. Wagner Forest Management

Wagner Forest Management did not file any pre-filed testimony.

V. DELIBERATIONS

A. The Subcommittee Deliberation Process

The Subcommittee deliberated on January 30, 31 and February 1, 2018. The Subcommittee followed RSA 162-H:16 to define the contours of its deliberations. First, the Subcommittee reviewed the status of state permits. Thereafter, the Subcommittee deliberated following the outline set forth at RSA 162-H:16. The deliberative process used by the Subcommittee was to engage in a general discussion of each subject area. For the most part, the general discussion was led by one or more members of the Subcommittee, followed by a discussion by the entire Subcommittee. At the conclusion of the discussion, the Presiding Officer sought to obtain a sense of the Subcommittee's position with respect to that subject area. This section of the Decision and Order summarizes the deliberative process.

B. State Agency Permits and Reports

To commence its deliberations, the Subcommittee first reviewed the status of state permits and agency reports.

1. Wetlands Permit Application – Department of Environmental Services

The Applicant filed a Wetland Permit Application as part of its Application with the Committee on October 19, 2015. *See* App. 1, Appx. 2. On May 16, 2016, and after the Department of Environmental Services' (DES) review of the proposed Project, additional information was requested in the form of a written Progress Report. The Applicant provided partial responses to the DES Progress Report on July 12, 2016, July 15, 2016, July 18, 2015, July 28, 2016, August 11, 2016, December 14, 2016, and January 25, 2017. App. 62, 63, 64, 67, 69,

72, 74. Based on a change in use on existing forest access roads and at the request of DES, the Applicant submitted updated plans on December 14, 2016, to replace and upgrade 29 deficient culverts on proposed construction access routes to meet the standard of the DES Stream Crossing N.H. Code Admin. Rules, Env-Wt 900. App. 72. On January 25, 2017, the Applicant submitted revised plans that further reduced wetland impacts as requested by DES in the May 16, 2016 Progress Report. App. 74. Based on the latest revised plans submitted on January 25, 2017, the Applicant identified 6,098,016 square feet of wetland impact of which 112,576 square feet would be permanent wetland impacts, and 5,985,440 square feet would be considered temporary wetland impacts that would be restored upon completion. App. 74.

On March 1, 2017, DES issued its final decision. App. 75. DES recommended granting the Certificate, subject to certain conditions and mitigation measures. App. 75.

DES determined that the Project is considered a Major Project pursuant to New Hampshire Administrative Rule Env-Wt 303.02(c), as the total wetland impacts (permanent and temporary) would be greater than 20,000 square feet. App. 75, at 8. DES found that the Applicant provided evidence that the proposed Project would be the alternative with the least adverse impact to areas and environments under the Department's jurisdiction per Env-Wt 302.03. App. 75, at 8. DES identified the following compensatory mitigation measures: (i) preservation of approximately 1,621 acres of land divided among eight sites comprised of 16 parcels located in the towns of Pittsburg, Clarksville, Dixville, Columbia, Stewartstown and Pembroke; (ii) protection, through a conservation easement, or high elevation habitat of 220 acres of forest land above 2,500 feet and 77 acres above 2,700 feet; (iii) protection of a 6.9 acre parcel within the Concord Pine Barrens area for increasing Karner blue butterfly habitat; (iv) compensation for impacts in the Salmon Falls-Piscataqua, Pemigewasset, Upper Androscoggin and

Middle Connecticut River service areas in the form of payment into the Aquatic Resource Mitigation (ARM) Fund in the amount of \$3,379,280.59; and (v) a partnership with the National Fish and Wildlife Foundation (NFWF) and Northern Pass and Eversource for providing \$3,000,000 of funding over a three-year period for science-based conservation projects with the goal of restoring and sustaining healthy forests and rivers in the State. App. 75, at 12.

DES recommended a number of additional mitigation measures and conditions as part of a Wetland Permit. *See* App. 75, at 2-8.

2. Shoreland Protection Permit – Department of Environmental Services

The Applicant filed an Application for a Shoreland Permit with the DES Water Division. App. 1, Appx. 5. On March 1, 2017, the DES Water Division issued a Shoreland Impact Permit authorizing the shoreland impacts, subject to a number of conditions affecting the area of impact. App. 75, at 13-22.

Counsel for the Public’s witness, Mr. Zysk, argued that the conditions related to erosion and siltation controls were “rather non-specific.” CFP 133, at 5. Mr. Zysk opined that it is crucial for implementation of DES’ conditions to require the Applicant to retain independent environmental monitors who would be approved by the Committee. CFP 133, at 6-7. Mr. Zysk argued that this monitor should have the authority to ensure implementation of DES’ conditions and address violations of conditions, when necessary. CFP 133, at 6-7.

3. Alteration of Terrain Permit – Department of Environmental Services

An Alteration of Terrain Permit Application was filed with DES Alteration of Terrain Bureau, as Appendix 6 of the Application. App. 1, Appx. 6. On March 1, 2017, DES issued a final decision on the Applicant’s Alteration of Terrain Application. App. 75, at 30-31. DES identified a number of project-specific conditions. App. 75, at 30-31.

4. Section 401 Water Quality Certificate – Department of Environmental Services

Section 401 Water Quality Certification Application was filed as Appendix 4 of the Application. App. 1, Appx. 4. On March 1, 2017, DES issued a final decision on the Applicant's Water Quality Certification Application. DES specified a number of Project-specific conditions. App. 75, at 23-27.

5. Petition for Aerial Road Crossings – Department of Transportation

The Applicant filed a request for road crossings as Appendices 9 and 10 of the Application. App. 1, Appx. 9, 10. The Subcommittee received the Department of Transportation's (DOT) recommendations on April 3, 2017. App. 107. DOT advised the Subcommittee that the final horizontal and vertical location of the installation within the highway right-of-way remained to be resolved. App. 107. It also noted that the construction plans were still in development and that they would continue to be reviewed and revised as the Project proceeds through the design process. App. 107. DOT further reported that it would issue a permit for the proposed aerial crossings of state roads subject to a number of conditions. App. 107, at 2-10. Those conditions included, among others, that the Applicant provide a certified survey report delineating means and methods of determining the right-of-way shown on the plans and a requirement to locate underground facilities outside of pavement areas as close to the right-of-way edge as possible. App. 107, at 3-4.

The DOT recommendations also contain a number of conditions relative to construction of the Project. App. 107, at 2-10. Specifically, the Applicant would be required to repair damage resulting from work or detoured traffic to the roadway to the Department's satisfaction. App. 107, ¶46. DOT also required the Applicant, upon Project completion, to submit a set of "as-built" drawings to the Department. App. 107, ¶50.

The Applicant sought exceptions in order to deviate from the requirements of the DOT Utility Accommodation Manual. The Applicant also requested that the Subcommittee delegate to DOT the authority to monitor and regulate construction of the Project over and above municipal roads. DOT considered the exception requests and considered the Applicant's delegation request. By letter dated December 22, 2017, DOT advised the Subcommittee that DOT believed that it should not be approving construction or making decisions which could impact the long term operation and maintenance of local roads and detours over local roads. *See* DOT Correspondence (Dec. 22, 2017). DOT indicated that it would consider each of the exceptions requests once the Applicant provided a certified survey of the right-of-way and State highways.

Counsel for the Public's witness, Mr. Zysk, addressed the DOT's conditions. CFP 133, at 7-8. He opined that, to ensure sufficient time to review the documents that would be provided by the Applicant to DOT prior to construction of the Project, that the Subcommittee should specify the number of days prior to construction that the documents should be provided to DOT in order to allow for a thorough review. CFP 133, at 7-8.

6. Petitions – Public Utilities Commission

The Applicant filed the following Petitions with the Public Utilities Commission (PUC): (i) a Petition to Commence Business as a Public Utility (Northern Pass Transmission, LLC); (ii) a Petition to Cross Public Waters – twenty-five locations in Pittsburg, Clarksville, Stark, Lancaster, Dalton, Bethlehem, Franconia, Easton, Plymouth, Woodstock, Ashland, Bridgewater, New Hampton, Sugar Hill, Franklin, Northfield, Concord, Pembroke, Allenstown and Deerfield (Appx. 12); (iii) a Petition to Cross Land Owned by the State – fourteen locations in Stark, Northumberland, Lancaster, Dalton, Bethlehem, New Hampton, Sugar Hill, Franklin,

Canterbury, Pembroke and Allenstown (Appx. 13). The Application also included copies of Petitions to Cross Public Waters and State Lands by Eversource which were necessary due to the relocation of certain Eversource facilities in order to accommodate the Project (Appx. 14, 15).

On June 16, 2017, the PUC issued an order granting licenses to cross public waters and state lands subject to a number of conditions. App. 173, at 13-14.

On October 14, 2016, the PUC issued an Order addressing the Applicant's Petition to Commence Business as a Public Utility and approving a Settlement Agreement between Commission Staff and the Applicant. App. 78. The PUC authorized the Applicant to operate as a public utility subject to the following conditions contained in the Settlement Agreement: (i) the Applicant obtain all necessary permits, licenses and approvals required for construction of the Project; (ii) the Applicant contribute \$20 million over a ten-year period to be allocated by the Commission to energy efficiency programs and other clean energy initiatives; and, (iii) the Applicant hold New Hampshire electric ratepayers harmless from costs associated with the possible regional allocation of costs for a portion of the Project. App. 78.

7. Historical Resources – Department of Cultural Resources Division of Historical Resources

The Applicant submitted a Request for Project Review filed with the New Hampshire Division of Historical Resources (DHR). App. 1, Appx. 49. DHR reported to the Subcommittee on November 12, 2015, March 7, 2017, August 25, 2017, and December 11, 2017.

On December 21, 2017, the Subcommittee received a Final Report from DHR. DHR advised the Subcommittee that the Section 106 review process was not complete and the consultation process had not been implemented to determine and resolve the Project's adverse effects on historic and archaeological resources. DHR also reported that, as of the date of the Final Report, various consulting parties have not had the opportunity to offer their comments on

these steps in the process. Considering the ongoing status of the Section 106 review, DHR advised that any and all determinations made by DHR were preliminary and could be revised. *See* DHR Correspondence (Dec. 21, 2017).

As to archeological resources, DHR advised the Subcommittee that an archeological investigation on a four-mile segment in the towns of Stewartstown and Clarksville had not been initiated due to a lack of permission to do so by the Boards of Selectmen in those communities. Apart from this section of the Project, 85 archaeological sites were documented, including 12 sites that are either eligible or potentially eligible for listing on the National Register of Historic Places. DHR made a determination of “No Historic Properties Affected” relative to 10 of the 12 archeological sites because the Applicant agreed to shift the right-of-way away from the archeological sites and redesigned the Project to avoid impacts on those sites. DHR determined, however, that the Project would have adverse impact on the remaining two sites: (i) the Cold Brook Site (27-MR-399) in Canterbury; and (ii) the Turtle Town Pond Site (27-MR-352) in Concord. *See* DHR Correspondence (Dec. 21, 2017).

In its review of aboveground historic resources, DHR advised that the identification of resources was completed. In total, 114 aboveground resources were considered as historic for the purposes of the Section 106 review. DHR also reported that the Applicant prepared a Determination of Effect Table for aboveground resources. Although DHR considered the Applicant’s recommendations concerning the Project’s effect on identified resources, it did not consistently agree with the recommendations or the reasoning in support of the recommendations. DHR advised the Subcommittee of the following areas of disagreement with the Applicant’s recommendations of “No Adverse Effect:” (i) the impact of the Project on a number of historic districts including the Weeks Estate; (ii) the impact of the Project on a

number of historic agricultural properties with field and woodlot characteristics; and (iii) the impact of the Project on six historic railroads eligible for listing on the National Register of Historic Places due to the lack of documentation and information supporting the Applicant's conclusion that the Project's visibility would not alter their historic significance. *See* DHR Correspondence (Dec. 21, 2017).

DHR advised the Subcommittee that aboveground resources along the underground section of the Project may have historic character defining features. DHR acknowledged that the Applicant has committed to avoid these features and to restore the areas to existing conditions once the Project is complete. DHR, however, found that the Project would have an adverse effect on these resources considering that the Project's final plans are not available, they have not been reviewed by DHR and the US Department of Energy and the Applicant's commitments are not yet codified through the Programmatic Agreement Historic Properties Treatment Plan. *See* DHR Correspondence (Dec. 21, 2017).

Ultimately, based on information available to DHR at the time of review, DHR determined that the Project would have an adverse effect on the following aboveground historic resources:

- Bethlehem - Rocks Estate;
- Bristol - Peaked Hill Road Rural Historic District;
- Canterbury - Windswept Farm;
- Concord - Maple View Farm and Oak Hill Agricultural District;
- Deerfield - 47 Candia Road, Lindsay-Menard Cabin, Deerfield Historic District and Nottingham Road Historic District;
- Dummer - Dummer Pond Sporting Club;
- Franklin - Webster Avenue Historic District;
- Lancaster - The Weeks Estate and Mount Prospect/ Martin Meadow Pond Cultural Landscape¹⁷;

¹⁷ "Cultural landscape" is defined by the National Park Service as a "broad geographical area that is a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation and the types of structures that are built." *See* DHR Correspondence, at 2 (Aug. 25, 2017). "The character of a cultural landscape is defined both by physical materials,

- Plymouth - Benjamin Teele Barn, Frederick Philbrick Weeks House, Hazen N. Cross Farm, Plymouth Downtown Commercial Historic District, Plymouth Theater and Lower Intervale Grange #321;
- Woodstock - Maple Haven Campground, Montaup Cabins, North Woodstock Village Historic District, Woodstock Cemetery and Woodstock Town Hall; and
- Multiple Towns - Northern Railroad; Boston, Concord, & Montreal Railroad (BC&M); Maine Central Railroad (Mountain Division); Pemigewasset Valley Branch Railroad; Grand Trunk Railroad (Atlantic and St. Lawrence); White Mountain Railroad (Division of BC&M); Franklin Falls Dam-Hill Village Cultural Landscape; Gale River Cultural Landscape; Ham Branch River Cultural Landscape; Harvey Swell Cultural Landscape; North Road-Lost National Road Cultural Landscape; Upper Ammonoosuc River Cultural Landscape; Back Street-Bachelor Road Cultural Landscape; and Route 3 Tourism Development Cultural Landscape.

See DHR Correspondence, Table 1 (Dec. 21, 2017).

DHR advised the Subcommittee that avoidance, minimization and mitigation of the Project's adverse effects would be accomplished through implementation of a Programmatic Agreement. Under the Programmatic Agreement, the Applicant must prepare and comply with: (i) a Historic Properties Treatment Plan; (ii) a Native American Graves Protection and Repatriation Plan of Action, if needed; (iii) a Monitoring Plan; (iv) an Unanticipated Discovery Plan; (v) a Training Plan for Northern Pass Transmission Personnel; (vi) a Curation Plan; and (vii) a Repatriation Plan, in the event Native American remains are found in the White Mountain National Forest. *See* DHR Correspondence (Dec. 21, 2017). DHR requested the Subcommittee, if it issues the Certificate, to condition the Certificate upon the successful preparation and implementation of these Plans, as they are referenced in the Programmatic Agreement. *See* DHR Correspondence (Dec. 21, 2017).

DHR also provided the Subcommittee with a non-exhaustive list of recommended mitigation measures. DHR recommended that, if the Subcommittee grants a Certificate, it

such as roads, buildings, walls, and vegetation, and by reflecting cultural values and traditions.” *See* DHR Correspondence, at 2 (Aug. 25, 2017).

should include conditions requiring compliance with identified mitigation objectives. *See* DHR Correspondence (Dec. 21, 2017).

8. State Fire Marshal

The Applicant filed a Memorandum entitled “Northern Pass Project – Fire Safety Design Basis” as Appendix 50 to the Application. App. 1, Appx. 50. According to the Memorandum, the Applicant’s representatives met with officials from the City of Franklin Fire Department and the New Hampshire Department of Safety. App. 1, Appx. 50, at 1. They agreed that the Applicant, the State Fire Marshal’s Office, and Local Fire Departments would coordinate with the Subcommittee the specific fire system requirements of the Project’s facilities during the application process. App. 1, Appx. 50, at 1. The Memorandum also recommended several conditions. App. 1, Appx. 50, at 1-2.

C. Applicant’s Financial, Technical, and Managerial Capability

During the course of deliberations, the Subcommittee considered the financial, technical and managerial capability of the Applicant as required by RSA 162-H:16, IV (a). In undertaking its deliberations, the Subcommittee decided to address the technical and managerial capabilities separately from the financial capability of the Applicant.

1. Technical and Managerial Capability

Under RSA 162-H:16, IV(a), when making its decision, the Subcommittee is required to determine whether the Applicant has adequate technical and managerial capability to ensure construction and operation of the Project in continuing compliance with the terms and conditions of the Certificate. *See* RSA 162-H:16, IV(a).

Under N.H. Code Admin. Rules, Site 301.13, when determining whether an Applicant has the technical capability to construct and operate the Project, the Subcommittee is required to consider the following:

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

N.H. Code Admin. Rules, Site 301.13, (b)(1)-(2) (2016).

When determining whether an Applicant has the managerial capability to construct and operate the Project in continuing compliance with the terms and conditions of the Certificate, the Subcommittee is required to consider the following:

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

Id. at Site 301.13 (c)(1)-(2).

a. Positions of the Parties

(1) Applicant

The Applicant argued that it has sufficient managerial and technical capability to ensure construction and operation of the Project in accordance with the Certificate. App. 1, at 53; *see* Applicant's Post-Hearing Memorandum, at 40-48. The Applicant relied on Eversource's managerial and technical experience to establish its ability to construct and operate the Project. App. 4, at 9-10. According to the Applicant, PSNH, Eversource and its predecessor companies

have owned, operated and maintained transmission facilities in New Hampshire for over one-hundred years. App. 1, at 53. In addition, according to the Applicant, 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. App. 1, at 53; App. 4, at 9. The Applicant further asserted that Eversource is a leading expert in building, owning and operating transmission facilities and is an Edison Award recipient for transmission ownership and service. App. 1, at 53; App. 4, at 9. The Applicant concluded that Eversource has the resources to use in-house and contract labor, as needed, for the installation, operation, maintenance, repair, and removal of the Project. App. 1, at 53.

As to construction of the Project, the Applicant's witness, Kenneth Bowes testified that the Applicant, as owner, would be responsible for all major management decisions. App. 4, at 10. Direct construction of the Project would be managed by several specialty contractors. App. 4, at 7.

Burns and McDonnell would act as Owner's Representative and Owner's Engineer and would report directly to Northern Pass Transmission's Project Director. App. 90, at 1. It would be responsible for design, permitting, construction management, scheduling, cost, construction coordination, materials management, safety oversight, environmental compliance oversight, communications and Project closeout. App. 4, at 8. It would provide the coordination and reporting to the Applicant to ensure that the Project would be constructed and operated in accordance with the Certificate. App. 4, at 10. The primary design of the Project was developed by Burns and McDonnell. App. 9, at 3.

The Applicant also advised that it retained Quanta Services and its subsidiaries to manage some aspects of the Project. App. 2, at 5. The Applicant identified the following subsidiaries of

Quanta that would be responsible for the management of construction and operation of the Project: (i) PAR Electric; (ii) Underground Construction Company; (iii) M.J. Electric; (iv) Longfellow Drilling, Inc.; and (v) Crux Subsurface, Inc. App. 2, at 5-6.

The Applicant asserted that PAR Electric would engineer the final design of the Project and would serve as the Owner's Agent and general contractor of the Project. App. 2, at 6; App. 90, at 2; Tr., Day 6, Morning Session, 05/01/2017, at 50-52. According to the Applicant, PAR Electric's ability to engineer the final design of the Project is evidenced by the fact that it owns more than 5,000 pieces of specialized transmission line construction equipment and has worked extensively in New England for Eversource, constructing transmission and substation facilities ranging from 34.5kV to 345kV. App. 2, at 6. Derrick Bradstreet of Burns & McDonnell, as the Lead Engineer, would review the final detailed design that would be prepared by PAR Electric. App. 87, at 1.

The Underground Construction Company would manage trenching for the underground section of the Project. App. 2, at 6. According to the Applicant, Underground Construction Company is qualified to conduct such activities because it has 80 years of experience in underground projects in the gas, power, and telecommunication industries, including the Chino Hills 500 kV underground transmission project. App. 2, at 6. SGC Engineering was retained for the civil engineering of the open trench. Tr., Day 6, Morning Session, 05/01/2017, at 49.

M.J. Electric was retained to manage the engineering, procurement, and construction of the Project converter terminal in Franklin. App. 2, at 6. The Applicant claimed that M.J. Electric has over 50 years of experience in the electrical construction industry, with project expertise in managing transmission, distribution and substation construction projects, including servicing a 345/115 kV substation in Killingly, CT. App. 2, at 6.

Longfellow Drilling, Inc. was retained to manage the installation of the foundations for the Project. App. 2, at 6. The Applicant asserted that Longfellow Drilling, Inc. is qualified to conduct these activities because it has been involved in the installation of drilled pier foundations for a variety of projects and received the Iowa Quality Initiative Structures Award in recognition of their work on the U.S. 52 Bridge over IC&E & Mill Creek in Des Moines, Iowa in 2010. App. 2, at 6.

Crux Subsurface, Inc. was retained to design and install foundations in the more logistically challenging portions of the Project. App. 2, at 6. The Applicant claimed that, as a foundation engineering and procurement and construction contractor with expertise in designing and constructing specialty foundations for transmission structures, Crux Subsurface, Inc. is well-qualified to perform assigned duties. App. 2, at 6.

The Applicant also retained ABB to manage the engineering and construction of the underground HVDC cable and, in conjunction with M.J. Electric, the Franklin converter terminal. App. 2, at 6; Tr., Day 10, Afternoon Session, 05/31/2017, at 85. ABB would be responsible for manufacturing, pulling and splicing the HVDC line. App. 2, at 7. The Applicant asserted that ABB is a global engineering company with over 140 years of experience with a total installed capacity of more than 120,000 megawatts. App. 2, at 7. The Applicant also claimed that ABB has over 100 years of experience in substation design and construction and is globally recognized for its work in power automation technologies. App. 2, at 7. As of the date of the hearing, ABB retained Brierley Associates for trenchless engineering. Tr., Day 6, Morning Session, 05/01/2017, at 49.

The Applicant acknowledged that Quanta Services and some of its subsidiaries, including PAR Electric, were cited for OSHA violations. CS 36; Tr., Day 8, Afternoon Session,

05/03/2017, at 42-43. Mr. Bowes testified, however, that Eversource reviews various injury rates and insurance claims for work place injuries of their contractors on a yearly basis. Tr., Day 8, Afternoon Session, 05/03/2017, at 43. Mr. Bowes also testified that Eversource requires all of its contractors to stay below an internal metric developed by Eversource. Tr., Day 8, Afternoon Session, 05/03/2017, at 43.

John Kayser asserted, as Project Manager of Construction, that he would be responsible, on behalf of the Applicant, for direct oversight and management of the field inspectors, safety specialists, outreach coordinators and for the oversight and coordination with the contractors' construction management teams. App. 14, at 2, 7; Tr., Day 12, Morning Session, 06/02/2017, at 145-146. Field inspectors, environmental inspectors and safety specialists would have authority to stop construction in case of an egregious event or non-compliance. Tr., Day 6, Morning Session, 05/01/2017, at 72-75; Tr., Day 12, Afternoon Session, 06/02/2017, at 35-36. The Applicant also would employ a community relations specialist who would be responsible for outreach and notice to the communities and residents as well as resolving any potential community conflicts and complaints. Tr., Day 6, Morning Session, 05/01/2017, at 79-82; App. 4, Att. B. In addition to the Applicant's field inspectors, environmental inspectors and safety specialists, contractors that would be retained by the Applicant would also use their own field inspectors, environmental inspectors and safety specialists. App. 4, Att. B.

Construction of the Project would be conducted in accordance with a Project Execution Plan that would be developed specifically for the Project. App. 14, at 3. A comprehensive schedule for specific design and construction tasks would also be developed. App. 89, at 3. A Project Labor Agreement would define the terms and conditions of union and nonunion personnel who would be hired to work on contracted jobs. App. 4, at 10.

Mr. Bowes acknowledged testimony and exhibits demonstrating that some Eversource contractors did not comply with best management practices while conducting activities unrelated to the Project near a substation in Deerfield. Tr., Day 11, Afternoon Session, 06/01/2017, at 117-121. He agreed that best management practices were not followed and damage was caused to wetlands in Deerfield on two other occasions. Tr., Day 12, Morning Session, 06/02/2017, at 20, 42-46. Mr. Bowes testified, however, that such practices are not supported by the company and any contractor that violated best management practices during construction, or violated them in the past, would be removed from work on Eversource systems. Tr., Day 11, Afternoon Session, 06/01/2017, at 117-121; Tr., Day 12, Morning Session, 06/02/2017, at 46-47.

Mr. Kayser addressed concerns about the removal, storage and disposal of soil spoils generated during the underground construction. App. 89, at 4. He asserted that these activities would be managed by the underground construction contractor who would develop a plan for the disposal of excess materials. App. 89, at 4. The Plan would be approved by the Applicant. App. 89, at 4. According to Mr. Kayser, the contractor would also comply with all state and federal regulations and would follow the Material Handling Guideline that was developed by the Applicant and was incorporated into the contract between the Applicant and the General Contractor. App. 89, at 4.

Mr. Kayser testified that, to address concerns about potential inadvertent returns or “frac-outs” during trenchless installation, the Applicant would require its trenchless installations contractors to develop an Inadvertent Return Mitigation Plan that would be approved by the Applicant. App. 89, at 5. The Plan would address the process and procedures the contractors would utilize in the event of an inadvertent return during the trenchless installation. App. 89, at 5.

Mr. Bowes testified that ISO-NE would assume operational control over the Project pursuant to the terms of a FERC-approved Transmission Operating Agreement (TOA) between NPT and ISO-NE. App. 4, at 12. Mr. Bowes claimed that, under the TOA, ISO-NE would assume operational authority over the Project and all transmission over the Project would be scheduled in accordance with the applicable New England market rules. App. 4, at 12. Mr. Bowes also asserted that Section 6.2 of the Transmission Service Agreement (TSA) entered into by the Applicant and Hydro-Québec's subsidiary, Hydro Renewable Energy Inc., requires NPT to maintain the Project in accordance with good utilities practice and in compliance with all applicable regulatory requirements, including applicable North American Electric Reliability Corporation and Northeast Power Coordinating Counsel Reliability standards. App. 4, at 12.

Maintenance and inspection activities would be location-dependent. App. 4, at 12. The part of the Project located within an existing right-of-way would be serviced as crews traverse the right-of-way with the Applicant paying for its allocated share of the costs associated with such maintenance and inspection activities. App. 4, at 12. Service and maintenance of the Project within the newly created right-of-way would be paid for by the Applicant and would be performed in accordance with the Eversource Energy maintenance policies and procedures recorded in the Eversource Energy Transmission Maintenance Program Manual. App. 4, at 12.

Mr. Scott testified that there would be minimal to no maintenance of the underground facilities under normal operating conditions. App. 88, at 4. According to Mr. Scott, maintenance of the underground sections of the Project would be required only in the event of a failure on the cable system. App. 88, at 4. He asserted, however, that such failures are rare and typically take place at splice pits or terminal locations. App. 88, at 4. Mr. Scott also testified that the Applicant would install digital temperature sensing which would enable the Applicant to analyze

the temperature to a specific designed accuracy with a designated link allowing the Applicant to detect malfunctions of the underground cable. Tr., Day 11, Afternoon Session, 06/01/2017, at 221-222. A failure in the cable system, when detected, would require identifying the location of the failure, opening the splice pits at either end of the failure location, removal of the failed cable/splice, installation of a new cable/splice and civil restoration of any disturbed area. App. 88, at 4-5.

Mr. Bowes asserted that the Applicant would comply with the requirements of the Protection System Maintenance Program that provides the basis for verification of regulatory compliance for protective systems. App. 4, at 13-14. Ultimately, Mr. Bowes claimed that NPT would rely on Eversource's transmission maintenance and work management departments to support the operation and maintenance of the Project's facilities. App. 4, at 15.

To ensure the Applicant's technical and managerial capability, the Applicant agreed to have conditions placed on the Certificate as follows:: (i) the Certificate would not be transferable to any other person or entity without the prior written approval of the Committee; and (ii) the Applicants would be required to immediately notify the Committee of any proposed change in ownership or ownership structure, or its affiliated entities, and seek approval of the Committee of such change. *See* Applicant's Post-Hearing Memorandum, at 399.

(2) Counsel for the Public

Counsel for the Public noted the testimony and evidence about the Applicant's representatives failure to comply with best management practices. *See* Counsel for the Public's Post-Hearing Brief, at 9. Counsel for the Public asked the Subcommittee to condition the Certificate, if issued, upon the following:

[P]rior to any construction activity, Applicants shall file with the SEC a copy of all Best Management Practices ("BMPs") for all

construction activity; including, without limitation BMPs for entering and exiting the ROW or any construction site; sweeping paved roads at access points; BMPs relating to Applicants' Storm Water Pollution Prevention Plan; BMPs for specific locations such as steep slopes near water bodies; BMPs for HDD/microtunnel drilling locations; and BMPs for work near archeological and historic sites.

Counsel for the Public's Post-Hearing Brief, at 163.¹⁸

Subject to this condition, Counsel for the Public agreed that the Applicant has sufficient technical and managerial capability to construct and operate the Project in compliance with the Certificate. *See* Counsel for the Public's Post-Hearing Brief, at 9-10, 163.

(3) Grafton County Commissioners

The Grafton County Commissioners argued that the Applicant failed to provide a plan for the underground portion of the Project that would allow the Committee to determine the Applicant's ability to construct the Project. Tr., Day 9, Afternoon Session, 05/04/2017, at 88-101.

(4) Municipalities

The Municipalities argued that the Applicant does not have the technical and managerial capability to construct the Project. *See* Municipalities' Post-Hearing Memorandum, at 7-23. They asserted that the Applicant's lack of capability was demonstrated by the fact that the Applicant failed to conduct appropriate and acceptable outreach efforts. *See* Municipalities' Post-Hearing Memorandum, at 7-17. They opined that the Applicant's outreach efforts were grossly inadequate, superficial and the "bare minimum." *See* Municipalities' Post-Hearing Memorandum, at 8. They further argued that the Applicant's inability to construct and operate the Project was evidenced by the fact that the Applicant failed to conduct a proper survey of the

¹⁸ The Applicant indicated that this condition was agreeable. Applicant's Post-Hearing Memorandum, at 404.

underground section of the Project and developed and relied upon inaccurate information. *See* Municipalities' Post-Hearing Memorandum, at 18-21.

Kris Pastoriza, on behalf of Easton Conservation Commission, disputed the Applicant's ability to construct the Project in compliance with the Certificate and all applicable rules. JTMUNI 111, at 1. Ms. Pastoriza asserted that the Applicant and its contractors' and subcontractors' incompetence is evidenced by the following: (i) the Applicant mischaracterized the result of public outreach and submitted unsupported and contradictory statements; (ii) Quanta/Par has been cited for 19 OSHA violations since 2010; (iii) Eversource was fined by the PUC for negligence leading to a fatality; (iv) Eversource was fined by the Massachusetts Department of Environmental Protection for failing to report an oil spill from a transformer; (v) Eversource subcontractors failed to properly conduct the geo-technical boring required for the construction of this Project; and (vi) Eversource subcontractors failed to implement best management practices while conducting geotechnical borings. JTMUNI 111, at 1-3. Ms. Pastoriza also argued that it is unclear whether the Applicant would be able to construct the Project in compliance with the conditions imposed by the DOT where no detailed plans explaining how the conditions would be complied with were submitted to the Subcommittee. JTMUNI 112, at 1-4.

Kate Hartnett, on behalf of the Town of Deerfield, expressed concerns about the Applicant's ability to construct the Project in compliance with the Certificate. JTMUNI 154, Ex. 1. Ms. Hartnett asserted that the Applicant has demonstrated an inability to follow best management practices by failing to conduct required monitoring during: (i) geotechnical borings performed pursuant to the DOT's request; and (ii) clearing at the substation in Deerfield. JTMUNI 154, Ex. 1, at 1. Ms. Hartnett further argued that the Applicant demonstrated a lack of

knowledge about specifics of the Project when its experts indicated that it would not cross Class VI roads in Deerfield. JTMUNI 154, Ex. 1, at 3-4.

(5) Individual Intervenors

Bradley Thompson, on behalf of Clarksville to Stewartstown Abutting¹⁹ and Non-Abutting²⁰ Property Owners Group of Intervenors, asserted that the Applicant failed to demonstrate that it had experience with constructing transmission lines under dirt roads and with constructing transition stations. CS 1. Mr. Thompson argued that, prior to construction of the Project and before the Subcommittee issues its decision, the Applicant should be required to demonstrate its ability to construct the underground portion of the Project by constructing a similar underground line, under similar conditions, and in a similar location. CS 14, at 7.

b. Subcommittee Deliberations

The Subcommittee did not take a formal vote on the Applicant's managerial and technical capability to construct and operate the Project in compliance with the Certificate. The magnitude and extent of construction required for the Project is prodigious. We agree, however, that the Applicant demonstrated that its contractors and subcontractors have sufficient experience and resources required for construction of aboveground and underground transmission projects. The Applicant's experts, Mr. Bowes, Mr. Johnson, Mr. Bradstreet, Mr. Kayser, Mr. Scott, and Ms. Frazier, further demonstrated that they possess knowledge, experience and qualifications required for construction of the Project. Considering the experience, knowledge and qualifications of the Applicant's contractors and subcontractors, we find that the Applicant

¹⁹ Charles and Donna Jordan (Clarksville), Sally Zankowski (Stewartstown), Jon and Lori Levesque (Stewartstown), Roderick and Donna McAllaster (Stewartstown), Lynne Placey (Stewartstown), Arlene Placey (Stewartstown), Brad and Daryl Thompson (Stewartstown), David Schrier (Exeter) and Nancy Dodge (Stewartstown). CS 1.

²⁰ Robert Martin (Clarksville), Roderick Moore, Jr., Joseph John Dunlap, Shawn Patrick Brady, Christopher Thompson, and E. Martin Kaufman, Bradley J. Thompson and John Petrofsky on behalf of 44 residents of Stewartstown and East Colebrook. CS 1.

demonstrated that it has technical capacity to construct and operate the Project in compliance with the Certificate.

The Subcommittee discussed the Applicant's managerial capability. We heard unrefuted evidence of a failure to follow best management practices by some Eversource contractors. Managing construction of a Project of this magnitude is extremely challenging. It would require, for example, managing multiple construction activities in multiple locations, extensive traffic control measures, the establishment and appropriate use of marshaling and laydown areas that are not currently identified, and multiple teams of environmental monitors and compliance monitors. Many construction details have not been completed, including a Traffic Management Plan, the specific location of the underground portion of the Project and associated facilities and locations of laydown areas and marshaling yards. Managing the Project is further complicated by the fact that some parts of the Project would be constructed under locally-maintained roads outside the jurisdiction, oversight, and enforcement of DOT. The Subcommittee did not come to a clear consensus in determining whether the Applicant has sufficient managerial capabilities to manage the planning and construction of this Project given its size and effects on surrounding communities. In the event that we were to grant a Certificate further discussion regarding appropriate conditions would be necessary.

1. Financial Capability

Under N.H. Code Admin. Rules, Site 301.13, when determining whether an Applicant has the financial capability to construct and operate the Project in continuing compliance with the Certificate, the Subcommittee is required to consider the following:

- (1) the applicant's experience in securing funding to construct and operate energy facilities similar to the proposed facility;

- (2) the experience and expertise of the applicant and its advisors, to the extent the applicant is relying on advisors;
- (3) the applicant's statements of current and pro forma assets and liabilities; and
- (4) financial commitments the applicant has obtained or made in support of the construction and operation of the proposed facility.

N.H. Code Admin. Rules, Site 301.13, (a)(1)-(4).

a. Positions of the Parties

(1) Applicant

The Applicant argued that it has provided sufficient evidence to determine that it has the financial capability to construct and operate the Project in continuing compliance with a Certificate. *See Applicant's Post-Hearing Memorandum*, at 36-40.

The Applicant asserted that Northern Pass Transmission, LLC would be the developer and owner of the Project. App. 1, at 50; Tr., Day 2, Afternoon Session, 04/14/2017, at 124. The Applicant's witness, Michael J. Auseré, estimated that the Project would cost approximately \$1.6 billion. App. 1, at 50; App. 7, at 7; Tr., Day 2, Afternoon Session, 04/14/2017, at 127.

The Applicant relied on the following to establish its financial capacity to construct and operate the Project in accordance with a Certificate: (i) the financial strength of NPT's principal, Eversource; (ii) the Transmission Service Agreement executed between the Applicant and Hydro Renewable Energy Inc.; and (iii) the financial strength of Hydro Renewable Energy's principal, Hydro-Québec. App. 7, at 2.

According to the Applicant, Eversource would ensure funding of construction of the Project. App. 1, at 51. Eversource is a public utility holding company subject to regulation by the Federal Energy Regulatory Commission (FERC) under the Public Utility Holding Company

Act of 2005. App. 7, at 4. Eversource is engaged in the energy delivery business through the following wholly-owned utility subsidiaries: (i) the Connecticut Light and Power Company; (ii) NSTAR Electric Company; (iii) PSNH, (iv) Western Massachusetts Electric Company; (v) NSTAR Gas Company; and (vi) the Yankee Gas Services Company. App. 7, at 4. Mr. Auseré claimed that Eversource's ability to fund construction of the Project is evidenced by the fact that, as of June 19, 2016, Standard and Poor's rated Eversource as A positive, Moody's rated it as Baal stable and Fitch rated it as BBB+ positive. App. 8, Appx. 1, Att. I. Eversource was ranked number 343 on the 2016 Fortune 500 list of the largest United States companies with an equity market capitalization of approximately \$17.5 billion. App. 8, Appx. 1, at 4. Within the last three years, Eversource had internally generated approximately \$5.3 billion in cash flow from operations. App. 8, Appx. 1, at 5. According to the Applicant, "Eversource has had an annual construction program well in excess of the annual cash requirements of Northern Pass." App. 1, at 51.

The Applicant also provided statements of assets and liabilities of Eversource (as of December 31, 2014-2016) and PSNH (as of December 31, 2014-2016) to demonstrate its ability to construct and operate the Project in accordance with the Certificate. App. 8, Appx. 1, Att. B, B-1. The Applicant acknowledged that NPT does not have statements of assets and liabilities. App. 1, at 54.

Mr. Auseré also claimed that, during construction of the Project, Eversource would make equity capital contributions to the Applicant, which, in turn, would use commercially reasonable efforts to maintain a capital structure of 50% equity and 50% debt. App. 1, at 52; App. 7, at 7. According to Mr. Auseré, Northern Pass Transmission, LLC is currently borrowing and may continue to borrow required funds from Eversource via intercompany loans. App. 8, Appx. 1,

at 6. As of December 31, 2016, Eversource provided approximately \$190.5 million to NPT for permitting and design of the Project: (i) \$83.9 million financed through intercompany loans from Eversource; and (ii) \$56.6 million financed by equity contributions from Eversource. App. 8, Appx. 1, at 6; Tr., Day 2, Afternoon Session, 04/14/2017, at 127. Mr. Auseré further acknowledged that the Applicant and Eversource anticipated a replacement of some or all of the intercompany loans with a third-party loan. App. 8, Appx. 1, at 7.

Mr. Auseré asserted that the TSA provided for a FERC approved formula rate for costs of development and construction plus a return on investment over a period of 40 years. App. 7, at 3, Att. D. The formula rate plan is a “cost tracker” that would allow the Applicant’s revenue to track its cost of service. App., 1 at 51. The Applicant would use a formula rate to calculate Hydro Renewable Energy Inc.’s payment obligations for transmission service over the line. App. 1, at 52. The formula rate recovers a return on investment plus associated income taxes, depreciation expense, operations and maintenance expense, administrative and general expenses, municipal tax expense and other expenses associated with the Project. App. 1, at 52; App. 7, at 8. Mr. Auseré further asserted that Hydro Renewable Energy Inc. would be responsible for the costs associated with the Project even if such costs exceed an estimated \$1.6 billion. Tr., Day 3, Afternoon Session, 04/17/2017, at 90-91. The Applicant would begin receiving revenue from Hydro Renewable Energy Inc. under the TSA upon commencement of operation of the Project. App. 1, at 52. Mr. Auseré claimed that the Applicant’s capital structure under the TSA would provide for strong cash flow credit metrics, which, in turn, would allow the Applicant to achieve an investment grade credit rating that would allow the Applicant to access the public bond markets. App. 7, at 8. In addition, the Applicant would continue to have access to Eversource’s short-term borrowing facilities, if needed. App. 7, at 8.

Mr. Auseré testified that the revenue that would be paid by Hydro Renewable Energy, Inc. would be guaranteed under the TSA by its principal, Hydro-Québec. App. 1, at 52; App. 7, at 9. According to the Applicant, Hydro-Québec is fully capable of complying with such obligations where it is Canada's largest electric utility and was rated by Standard and Poor's as A+, by Moody's as Aa2 and by Fitch as AA-. App. 1, at 51-52; App. 7, Att. J.

Mr. Auseré confirmed that the TSA filed with the Subcommittee does not address the Project and contemplates construction of the originally considered 1200 megawatts project. Tr., Day 2, Afternoon Session, 04/14/2017, at 133-134; Tr., Day 3, Morning Session, 04/17/2017, at 18-19. Mr. Auseré testified that the Agreement could be amended in the future, including for the purposes of addressing the results of the Massachusetts RFP that was pending at the time of his testimony. Tr., Day 3, Morning Session, 04/17/2017, at 21-24. He could not confirm or deny whether the Applicant would seek the Committee's approval of future modifications of the Agreement. Tr., Day 3, Morning Session, 04/17/2017, at 24.

Mr. Auseré also testified that the TSA may be terminated: (i) during development of the Project by the Applicant or by Hydro Renewable Energy, Inc.; (HRE) (ii) during construction of the Project by Hydro Renewable Energy, Inc.; or (iii) during commercial operation of the Project by Hydro Renewable Energy, Inc. Tr., Day 2, Afternoon Session, 04/14/2017, at 133, 141-143. If the Agreement is terminated during the development phase of the Project, both the Applicant and Hydro Renewable Energy, Inc. would be responsible for the costs of development. Tr., Day 3, Afternoon Session, 04/17/2017, at 140-141. Mr. Auseré testified that it is highly unlikely that Hydro Renewable Energy, Inc. would terminate the Agreement because under the terms of the Agreement the Applicant would recover its costs in the Project, the costs of decommissioning of

the line and other costs. Tr., Day 2, Afternoon Session, 04/14/2017, at 143-144; Tr., Day 3, Afternoon Session, 04/17/2017, at 102-103.

Mr. Auseré testified that, upon expiration of the initial term of the Agreement (40 years), the parties may elect to extend it and Hydro-Québec (or any other party) would pay a revenue amount that would allow the Applicant to recover its operating costs. Tr., Day 1, Afternoon Session, 04/13/2017, at 118-123.

Mr. Quinlan addressed the parties' concerns about Hydro-Québec's recent press release statements suggesting an unwillingness to pay for the Project. App. 83. Specifically, Mr. Quinlan submitted the latest joint press-release between the Applicant's and Hydro-Québec's executives stating Hydro-Québec's commitment to the Project and the TSA. App. 83.

Mr. Auseré stated that the Applicant and Hydro-Québec would respond to a Request for Proposals sponsored by the Commonwealth of Massachusetts (Massachusetts RFP). App. 8, n. 1. If the Project is selected, some costs may be passed through to customers in Massachusetts. App. 8, n. 1. Mr. Quinlan claimed, however, that construction and operation of the Project is not predicated on the outcome of this solicitation. App. 6, at 11; Tr., Day 1, Morning Session, 04/13/2017, at 136-137-140. However, Mr. Quinlan could not confirm with certainty that the Project would be constructed if the Applicant did not win the Massachusetts RFP bid. Tr., Day 2, Morning Session, 04/14/2017, at 72-81, 100-103. Mr. Quinlan and Mr. Bowes testified that the decision as to whether to go forward with construction and/or how to generate required revenue, would be made by the Applicant and Hydro-Québec after the results of the bid are known²¹. Day 2, Morning Session, 04/14/2017, at 72-81, 100-103; Day 3, Afternoon Session, 04/17/2017, at 142-144. Mr. Quinlan and Mr. Bowes also testified that it is highly unlikely that New

²¹ After the record closed we learned that the Applicant was selected as the winning bidder in the Massachusetts RFP.

Hampshire ratepayers would pay for costs of the Project considering that New Hampshire chose not to enter into a bilateral agreement with the Applicant, similar to the Massachusetts RFP. Tr., Day 1, Afternoon Session, 04/13/2017, at 42-45; Tr., Day 3, Afternoon Session, 04/17/2017, at 20-21. Mr. Bowes further testified that Hydro-Québec would be the only ratepayer for the Project. Tr., Day 3, Afternoon Session, 04/17/2017, at 23-24.

Based on a confidential report entitled “An Evaluation of All UG Alternatives for the Northern Pass Transmission Project” prepared by Burns & McDonnell, Mr. Bowes argued that construction of the entire Project underground would cost an additional \$1 billion and would cause the Project to become financially unfeasible. App. 10, at 2-4.

Finally, the Applicant will carry adequate insurance to provide coverage against liability or damage resulting from the construction or operation of the Project. App. 1, at 52; App. 7, at 8.

(2) Counsel for the Public

Counsel for the Public agreed that the Applicant has sufficient financial capacity to construct and operate the Project. *See* Counsel for the Public’s Post-Hearing Brief, at 9-10.

(3) Municipalities

George Sansoucy, on behalf of the Towns of Northumberland, Whitefield, Littleton, Sugar Hill, Franconia, Woodstock, Plymouth, Bridgewater, Bristol, New Hampton, Concord, Pembroke, Deerfield and the Ashland Water & Sewer Division, asserted that LEI failed to prepare a corrected and detailed revenue requirement to be used in calculating a proper tariff. SAN 43, at 11. He further claimed that he analyzed the Project’s revenue requirement and energy/capacity requirements and determined that the Project’s tariff would be too high to be economically feasible.²² SAN 43, at 11-13. Mr. Sansoucy also argued that the Subcommittee

²² Mr. Sansoucy’s calculations are based on an assumed capacity factor of 30% as opposed to the 83% that was assumed by Ms. Frayer. SAN 43, at 18.

should require the Applicant to provide assurances that New Hampshire ratepayers would be held harmless from any and all recovery of the Project's expenses, including, but not limited to: expenses associated with the Project's development; construction, operation and maintenance; depreciation; property tax; Forward New Hampshire Fund; and decommissioning. SAN 1, at 15, 17.

Kris Pastoriza, on behalf of Easton Conservation Commission, disputed the Applicant's financial ability to construct the Project. JTMUNI 112, at 1-4. Specifically, Ms. Pastoriza argued that the DOT's conditions required the Applicant to spend much more than originally expected. JTMUNI 112, at 1-4. She asserted that the Applicant failed to provide documentation supporting its claim that it continues to have financial capacity to construct the Project in compliance with the DOT's conditions. JTMUNI 112, at 1-4.

(4) Forest Society

Will Abbott, on behalf of the Forest Society, argued that the Applicant does not have financial capability to construct and operate the Project because: (i) the TSA is scheduled to expire on February 14, 2017, and there is no documentation that would prove that it would remain in effect; (ii) there is no evidence indicating that the TSA applies to the current Project; and (iii) the TSA does not cover the costs of construction of the Project. SPNF 2, at 1-4.

(5) Individual Intervenors

The Dummer/Stark/Northumberland Group of Intervenors argued that the Subcommittee cannot determine that the Applicant has sufficient financial capability because the Applicant failed to provide sufficient evidence of financial capability of Hydro-Québec and failed to present Hydro-Québec's representatives as witnesses. *See* Motion to Dismiss and Final Brief of the Dummer/Stark/Northumberland Group.

b. Subcommittee Deliberations

No formal vote was taken to address the Applicant's financial capability to construct and operate the Project. During the deliberations, however, we discussed and informally agreed that the Applicant has sufficient financial capability to ensure construction and operation of the Project. The Applicant's financial capacity was demonstrated by the fact that Eversource has a good credit rating from respected financial institutions and, consequently, has good access to capital markets. It also has access to substantial funds from its operating companies. The Applicant demonstrated that it would generate sufficient funds required for operation of the Project and repayment of the loans through implementation of the TSA. The Applicant provided sufficient evidence demonstrating that the TSA would remain in effect and would apply to the Project. It was also noted that Counsel for the Public agreed that the Applicant has sufficient financial capability to construct and operate the Project.

We recognize that HRE's obligations under the TSA are guaranteed by Hydro-Québec. Although some Intervenors argued that sufficient information was not provided to ascertain Hydro-Québec's financial capability to guarantee compliance with the TSA, we find that the Applicant provided sufficient information demonstrating that Hydro-Québec is financially sound. We agreed that HRE has sufficient financial capacity to comply with its obligations under the TSA, as long as it is guaranteed by Hydro-Québec and subject to the condition that such guarantee cannot be revoked until the Project is fully decommissioned.

We further note that the Applicant testified that the TSA may be amended to address the Project as currently proposed and to address the results of the Massachusetts RFP. The Applicant's financial capability is based, in part, on the TSA. The Subcommittee agreed that, if

a Certificate were to issue, the Applicant would be required to file the amended TSA with the Administrator of the Committee. This would be an informational filing.

The Subcommittee agrees that the Applicant has sufficient financial capability to construct the underground section of the Project.

Without taking a formal vote and mindful of the conditions suggested above, we agree that the Applicant met its burden of proof and demonstrated that it would have sufficient financial capability to construct and operate the Project.

D. Orderly Development of the Region

RSA 162-H:16, IV(b) requires the Subcommittee to consider whether the Project would unduly interfere with the orderly development of the region, with due consideration given to the views of municipal and regional planning commissions and municipal governing bodies. *See* RSA 162-H:16, IV(b). A Certificate of Site and Facility can only be issued if the Applicant establishes by a preponderance of the evidence that the Project will not unduly interfere with orderly development.

Under N.H. Code Admin. Rules, Site 301.15, when determining whether the Project would unduly interfere with the orderly development of the region, the Subcommittee is required to consider:

- (a) the extent to which the siting, construction, and operation of the proposed facility would affect land use, employment, and the economy of the region;
- (b) the provisions of, and financial assurances for, the proposed decommissioning plan for the proposed facility; and
- (c) the views of municipal and regional planning commissions and municipal governing bodies regarding the proposed facility.

N.H. Code Admin. Rules, Site 301.15 (a)-(c).

1. Orderly Development - Construction

a. Positions of the Parties

(1) Applicant

The Applicant acknowledged that construction of the Project would cause some temporary adverse effect on land use by causing traffic-related noise, traffic diversion, clearing of vegetation, use of marshaling yards and laydown areas for equipment and materials, installation of soil erosion and sedimentation controls, dust control, installation of foundations, structures, conductors and shield wire, use of heavy equipment, and other associated construction activities. App. 1, at 85; Tr., Day 6, Morning Session, 05/01/2017, at 119-120. The Applicant asserted that it would utilize best management practices and would follow state and federal permit requirements to minimize the temporary impact associated with construction of the Project. App. 1, at 85.

(a) Impact on Traffic

John Kayser testified that, prior to commencing construction a traffic management plan and a traffic control plan consistent with the Manual on Uniform Traffic Control Devices (MUTCD) will be provided for review and approval. App. 14, at 33. When appropriate, traffic will be maintained in accordance with the MUTCD. App. 14, at 34. In addition, a Traffic Management Plan (TMP) would be developed following the “Guidelines for Implementation of the Work Zone Safety and Mobility Policy NH DOT Policy #601.0.A.” App. 14, at 33. It would consist of the following components: (i) Traffic Control Plans (TCP); (ii) Transportation Operations (TO); and (iii) Public Outreach (PO). App. 14, at 34-35. The TMP would also include contingency plans, incident management plans, detailed notes and responsibilities of key personnel and an outline of strategies as to how the work zone impacts would be managed. App.

14, at 34. The TMP would be approved by DOT and would be included as a permit requirement in order for construction to progress. App. 15, at 5.

Louis Berger working with PAR Electrical Contractors, Inc., would be responsible for developing TCPs and TMPs for the underground portion of the Project. App. 19, at 1. Lynn Farrington would advise the construction planning team in relation to mobility, safety, and the maintenance and protection of traffic on roadways that might be affected by construction of the Project. App. 15, at 1.

Ms. Farrington explained how specific traffic control measures would be selected. App. 15, at 2. She testified that, once the construction plans were drafted, she would analyze and document the expected impacts. App. 15, at 2. She would then research how traffic operates on a specific highway or roadway by analyzing the traffic flow obtained by Automated Traffic Recorder (ATR) counts and/or Turning Movement Counts (TMCs). App. 15, at 2. Once current volumes were established, Ms. Farrington would compare them to known capacities. App. 15, at 3. She would examine the “Level of Service” which is related to the average delay a driver is expected to experience when traveling through an intersection or along a roadway. App. 15, at 3. A traffic control plan method would be chosen for each location consisting of a layout of barrels, cones, signing and striping to guide drivers through a construction area. App. 15, at 3. Ms. Farrington testified that possible traffic control measures for construction scenarios would include short term single lane closures on a two-lane roadway utilizing a flagger; long term single lane closures on a two-lane roadway utilizing a temporary signal; single or multiple lane closures on the highway; detour routes; and lane closures and/or turning movement restrictions at signalized intersections. App. 15, at 3-4.

Ms. Farrington stated that additional analysis is generally necessary when construction is within a signalized intersection, a detour route impacts heavily utilized intersections, or demand exceeds capacity for a two-way one-lane flagging operation. App. 15, at 4. In those instances, a computer software program would be employed. App. 15, at 4.

Ms. Farrington stated that development of traffic mitigation concepts would begin during the early stages of construction. App. 15, at 7. Traffic mitigation recommendations would include multiple detour routes; signal timing and phasing adjustments along detour routes; and public outreach campaigns. App. 15, at 5.

Corresponding TCPs and the TMP would be drafted and the final versions would be submitted with final design plans to DOT. App. 15, at 7. Once in place, mitigation would be maintained in accordance with DOT Guidelines. App. 15, at 5.

Based on the above process and procedures, Ms. Farrington opined that the traffic management components of the Project would provide appropriate mitigation of the temporary impact to traffic to ensure there would be no unreasonable adverse effects on public safety. App. 15, at 7-8.

Ms. Farrington admitted that she did not and would not analyze how many construction vehicles would be entering or leaving the right-of-way through public roads while determining whether traffic and associated delays would have unreasonable adverse impacts. Tr., Day 6, Morning Session, 05/01/2017, at 149-152; Tr., Day 6, Afternoon Session, 05/01/2017, at 123-130. She also stated that she was not in a position to opine whether the traffic associated with construction of the Project would interfere with the orderly development of the region. Tr., Day 6, Morning Session, 05/01/2017, at 149-152; Tr., Day 6, Afternoon Session, 05/01/2017, at 123-130. Ms. Farrington addressed road closures in the northern section of the Project by testifying

that the Applicant would use a rolling work zone not to exceed 1,600 feet. App. 91, at 4; Tr., Day 6, Afternoon Session, 05/01/2017, at 97-98. She claimed that it would allow traffic to access locations on either side of the work zone at any given time. App. 91, at 4. She opined that the proposed detour routes would have a minimal impact with an additional 4.4 miles of travel distance as the worst case. App. 91, at 4. She further opined that, based on comparison analysis and the fact that volumes on local roads where the Project would be constructed underground do not exceed the capacity of a one-lane alternating operation, construction of the Project would not cause long traffic delays. Tr., Day 10, Afternoon Session, 05/31/2017, at 12. Specifically, Ms. Farrington asserted that all roads requiring a lane closure have total expected hourly volume below 850 cars per hour. App. 91, at 2-3. She opined that impacts to the traveling public would be limited and would be considered acceptable by DOT. App. 91, at 4. She concluded that construction on the roads and the associated delay in traffic may simply be inconvenient for commuters in Grafton County. Tr., Day 9, Afternoon Session, 05/04/2017, at 119, 129.

Specific to the delays that might be caused by open trench construction, Mr. Scott testified that this construction would require excavators and dump trucks. Tr., Day 6, Afternoon Session, 05/01/2017, at 7. Mr. Scott testified that in order to keep one lane of road open for traffic, the Applicant would line dump trucks up with the excavators and fill the dump truck with the arm of the excavator that would swing around 180 degrees. Tr., Day 6, Afternoon Session, 05/01/2017, at 8. This would necessitate only a temporary stoppage of traffic to accommodate the swing of the excavator arm when such a swing would be made above the surface of the road. Tr., Day 6, Afternoon Session, 05/01/2017, at 15. Similarly, Mr. Scott testified that the Applicant intended to line up concrete trucks straight with the trench, or would temporarily stop the traffic to allow the trucks to pour concrete into the trenches. Tr., Day 6, Afternoon Session,

05/01/2017, at 10-11. Mr. Bowes testified that it would take approximately one day to complete from 20 to 100 feet of civil construction required for open trenching. Tr., Day 9, Afternoon Session, 05/04/2017, at 114.

Mr. Scott also testified that for installation of the splice pits, when necessary, the Applicant would use flatbed trucks in line with cranes with temporary stoppage of traffic to allow the arms of the cranes to swing 180 degrees from the truck into the excavation. Tr., Day 6, Afternoon Session, 05/01/2017, at 13. Installation of each splice pit would take approximately five days. Tr., Day 8, Afternoon Session, 05/03/2017, at 20; Tr., Day 9, Afternoon Session, 05/04/2017, at 116. It would take approximately ten additional days to install cables at each pit. Tr., Day 8, Afternoon Session, 05/03/2017, at 20.

Mr. Scott confirmed that the Applicant would have to stockpile the material that was excavated so that it could be put back in the event that DOT did not approve the use of fluidized backfill or another alternative. Tr., Day 6, Afternoon Session, 05/01/2017, at 29-33. As of the date of the hearing, the Applicant had not developed plans addressing potential stockpiling of soil that would be excavated and had not identified the areas where excavated soil would be stockpiled. Tr., Day 6, Afternoon Session, 05/01/2017, at 29-33.

Mr. Scott also testified that construction of the underground portion of the Project would require numerous concrete deliveries from the batch plants and/or mobile batch plants. Tr., Day 6, Afternoon Session, 05/01/2017, at 34-35. He confirmed that it is unclear which batch plants would be used by the Applicant. Tr., Day 6, Afternoon Session, 05/01/2017, at 34-35.

Mr. Scott testified that it would take approximately three to five weeks to conduct horizontal directional drilling (HDD) on each particular site. Tr., Day 6, Afternoon Session, 05/01/2017, at 44.

As to micro tunneling, Mr. Scott testified that the shaft for the receiving side of the micro tunnel would be approximately 20 feet in diameter and 30 feet deep while the shaft for the sending side would be approximately 25 feet in diameter. Tr., Day 6, Afternoon Session, 05/01/2017, at 46; Tr., Day 42, Morning Session, 09/29/2017, at 69. Mr. Scott confirmed that the receiving side of the micro tunnel in Franconia would be located in the roadway and the sending side would be located in the roadway and sidewalk with the work area crossing the centerline of the road. Tr., Day 6, Afternoon Session, 05/01/2017, at 47-48. Mr. Scott also testified that the installation of the Project under the Gale River could cause up to seven weeks of lane closures that would be required for open trenching across the intersection between Route 18 and Route 116 and micro tunneling under the River. Tr., Day 7, Morning Session, 05/02/2017, at 11-20. Following Mr. Scott's testimony in May, the Applicant filed a request for exception with DOT for the micro tunneling at this location. Tr., Day 42, Morning Session, 09/29/2017, at 66-67. If approved, micro tunneling would take from 14 to 20 weeks for both ends at this location. Tr., Day 42, Morning Session, 09/29/2017, at 66-68. Mr. Johnson also testified that the Applicant's experts developed a conceptual design according to which the micro tunneling under the River could be avoided and substituted with HDD. Tr., Day 42, Morning Session, 9/29/2017, at 38-39. Mr. Scott testified that, if the design comes to fruition, then one lane of Route 116, after the crossing of the Gale River, most likely would be closed to accommodate open trench construction, HDD, the installation of splice pits and to avoid impact on nearby wetlands. Tr., Day 7, Morning Session, 05/02/2017, at 19-25.

Mr. Scott testified that construction of the Project on Beecher Falls Road would cause a temporary road closure (both lanes) from three to five days for installing the splice pit and up to five weeks for the HDD. Tr., Day 6, Afternoon Session, 05/01/2017, at 51-60.

Mr. Scott also testified that it was anticipated that the work area would be located on Beecher Falls Road and that this section of the road would be potentially closed for traffic. Tr., Day 6, Afternoon Session, 05/01/2017, at 58-60. Mr. Johnson testified that the Applicant is proposing certain construction alternatives to DOT that would allow for the road to remain open. Tr., Day 12, Afternoon Session, 06/02/2017, at 112-113.

Mr. Scott also confirmed that Old County Road would be closed during installation of the splice pit and traffic would be detoured through the north/south lane. Tr., Day 6, Afternoon Session, 05/01/2017, at 67-70. As to the entry area work space for the HDD that would be located on Old County Road, Mr. Scott testified that the road would have to be modified to accommodate one-lane traffic during the HDD. Tr., Day 6, Afternoon Session, 05/01/2017, at 71-77. Mr. Scott also testified that the maps submitted to the Subcommittee indicated that the open trench along Old County Road would be partially located within the road. Tr., Day 6, Afternoon Session, 05/01/2017, at 77-79. He testified, however, that the Applicant consulted with DOT regarding the exact location of the trench. Tr., Day 6, Afternoon Session, 05/01/2017, at 77-79. As to the splice pit following the open trench, Mr. Scott testified that its installation could require closing of the road. Tr., Day 6, Afternoon Session, 05/01/2017, at 78-79. He further testified that the closure could change if DOT required the Applicant to construct the splice pit off of the travel way at this location. Tr., Day 6, Afternoon Session, 05/01/2017, at 79. He confirmed that such a requirement would cause the Applicant to relocate the splice pit and to cut trees along the road. Tr., Day 6, Afternoon Session, 05/01/2017, at 80-81. Mr. Scott further testified that the next three splice pits would be located within the road and would require road closures for up to five days for each location. Tr., Day 6, Afternoon Session, 05/01/2017, at 81-83. He also confirmed that the road would have to be closed for three to five weeks for the HDD

at the entrance pits. Tr., Day 6, Afternoon Session, 05/01/2017, at 84-85. Ms. Farrington testified that the Applicant anticipated that the residents of Old County Road would have to use the detour around the Old County Road work area to get over to Cream Poke Road for 2.7 miles. Tr., Day 6, Afternoon Session, 05/01/2017, at 104-106.

Mr. Scott also testified that North Hill Road would be closed for up to five weeks for “jack and bore”²³ underground construction. Tr., Day 6, Afternoon Session, 05/01/2017, at 85-87. The road would also have to be closed for open trench construction and installation of splice pits. Tr., Day 6, Afternoon Session, 05/01/2017, at 87-89. The proposed detour for the North Hill Road was 4.4 miles and consisted of travelling Cream Poke Road to Route 145 and over to Bear Rock Road and back to North Hill Road. Tr., Day 6, Afternoon Session, 05/01/2017, at 106-111.

Bear Rock Road would have to be closed for the HDD at the end of North Hill Road. Tr., Day 6, Afternoon Session, 05/01/2017, at 89-90. Mr. Scott and Ms. Farrington testified that Bear Rock Road would have to be closed for the HDD in at least three more locations. Tr., Day 6, Afternoon Session, 05/01/2017, at 89-97, 99. Installation of nine splice pits would also require closure of Bear Rock Road. Tr., Day 6, Afternoon Session, 05/01/2017, at 89-97, 99. The road would have to accommodate construction traffic, including traffic required for removal of approximately 30,000 cubic yards of ledge that would be blasted and removed to accommodate construction of Transition Station #4. Tr., Day 8, Afternoon Session, 05/03/2017, at 64. Mr. Johnson testified, however, that the Applicant was in the process of communicating with DOT to attempt to move the splice pits off the road into the ditch line. Tr., Day 8, Afternoon Session, 05/03/2017, at 69. He also testified that DOT had given the Applicant permission to temporarily expand the roadway to allow for one-lane of traffic to pass. Tr., Day 8, Afternoon Session, 05/03/2017, at 69. The proposed detour road for the residents of Bear Rock

²³ A technique used for a horizontal drilling. App. 13, at 3.

Road traveling from Colebrook to their residences would be 16 miles and would consist of travelling Route 145 to Colebrook, then Route 26 out of Colebrook to East Colebrook Road and back to Bear Rock Road. Tr., Day 6, Afternoon Session, 05/01/2017, at 111-115; Tr., Day 8, Afternoon Session, 05/03/2017, at 85-86. Ms. Farrington confirmed that a section of the proposed detour would be a Class VI road that would be improved to accommodate the potential traffic. Tr., Day 8, Afternoon Session, 05/03/2017, at 86-92.

Specific to New Hampton, Mr. Bradstreet opined that construction on Old Bristol Road would not require closing both lanes of traffic. Tr., Day 8, Morning Session, 05/03/2017, at 21-22. Mr. Johnson acknowledged that this road is a Class V road maintained by the Town with seasonal weight restrictions. Tr., Day 8, Morning Session, 05/03/2017, at 25-27. He testified that the Applicant did not intend to violate those restrictions, and, if incorporated into an agreement with the Town, would abide by them. Tr., Day 8, Morning Session, 05/03/2017, at 25-27, 113.

Ms. Farrington opined that the Project would not have a significant adverse effect on traffic on Route 106 in Pembroke. Tr., Day 8, Morning Session, 05/03/2017, at 85-86

Mr. Scott testified that one lane would have to be closed to accommodate construction of the Project near the intersection of Route 93 (before it turns toward Route 18) and where the open trench would be located within the road in Bethlehem. Tr., Day 7, Morning Session, 05/02/2017, at 7-8. Mr. Scott asserted that, for the section of the right-of-way from the turn of Route 302 up to the HDD, a two-lane closure would be required for constructing open trenches, splice pits and the three HDDs. Tr., Day 7, Morning Session, 05/02/2017, at 8-11.

Mr. Scott testified that it was most likely that one lane would have to be closed for up to two seasons to accommodate 26 HDD sites, including HDD sites in front of the Franconia and Woodstock Fire Departments between Route 116 in Franconia and Route 3 in Woodstock. Tr.,

Day 7, Morning Session, 05/02/2017, at 25-29. Ms. Farrington asserted, that, the Applicant could put two travel lanes in the currently existing left lane to provide two-way traffic at this location.

Tr., Day 7, Morning Session, 05/02/2017, at 52-53.

Mr. Bowes confirmed that it would take approximately two working seasons (April 15th to November 15th) to construct the Project on or adjacent to 52.3 miles of roads in Grafton County (Bethlehem to Plymouth). Tr., Day 9, Afternoon Session, 05/04/2017, at 119, 124, 138.

Mr. Scott confirmed that one lane would most likely be closed on Route 118 in Easton to accommodate construction of splice pits, HDD, and open trenching in close proximity to the Road. Tr., Day 7, Morning Session, 05/02/2017, at 35-38. Mr. Scott also testified that at least one of the lanes of Route 118 near Beaver Pond would have to be closed to accommodate HDD at this location. Tr., Day 7, Morning Session, 05/02/2017, at 39-44. He also testified that the sidewalk and parking space near the intersection of Route 112 and Route 3 in Woodstock would have to be closed to accommodate construction of open trenches at these locations. Tr., Day 7, Morning Session, 05/02/2017, at 44-47. One lane and parking on the side of the road would have to be closed at each location where open trenches would be constructed within Route 3 and in close proximity to Route 3 in Woodstock. Tr., Day 7, Morning Session, 05/02/2017, at 47-48.

As to construction of the Project in Plymouth, Mr. Scott and Mr. Johnson confirmed that the Applicant would have to deal with underground utilities and heavier traffic that would cause the construction to last for up to three months. Tr., Day 7, Morning Session, 05/02/2017, at 58-62. Mr. Bowes also acknowledged that construction of the Project through downtown Plymouth would be complicated. Tr., Day 3, Afternoon Session, 04/17/2017, at 182-183.

Ms. Farrington confirmed that construction of the Project would be conducted directly on the roundabout in downtown Plymouth causing the roundabout to be temporarily blocked. Tr., Day 7, Morning Session, 05/02/2017, at 64-65.

Ms. Farrington asserted that DOT cannot approve the detour route proposed by the Applicant because it uses local roads. Tr., Day 7, Morning Session, 05/02/2017, at 65. The Applicant asked the Subcommittee to approve this detour in Plymouth. Tr., Day 7, Morning Session, 05/02/2017, at 65. She acknowledged that such a detour would go through some residential communities and the Plymouth State University campus. Tr., Day 7, Morning Session, 05/02/2017, at 65. Ms. Farrington stated, that the Applicant intended to conduct construction on the roundabout and use the detour at times when the campus would be least occupied, *i.e.* breaks, holidays and vacations. Tr., Day 9, Afternoon Session, 05/02/2017, at 33-34. She also testified that such a detour would be shorter and more convenient for commuters as opposed to the alternative route along I-93. Tr., Day 7, Morning Session, 05/02/2017, at 65-66.

Mr. Johnson criticized photosimulations of construction techniques prepared by Counsel for the Public's experts. Tr., Day 7, Morning Session, 05/02/2017, at 69-75. He testified that photosimulation of construction at the southbound lane on Route 3 did not accurately depict the Project's impact because it reflected a side-by-side as opposed to in-line configuration of the excavator and dump trucks required for open trench construction. Tr., Day 7, Morning Session, 05/02/2017, at 69. Mr. Johnson testified that although in-line configuration would still impact parking, it allows the Applicant to keep both traffic lanes open and would allow the excavator to swing into the parking space (if the parking meters are removed). Tr., Day 7, Morning Session, 05/02/2017, at 69-70. As to another photosimulation depicting construction further south, Mr. Johnson testified that it inaccurately depicted the excavator-truck alignment further from the

location of the trench than they actually would be located. Tr., Day 7, Morning Session, 05/02/2017, at 72. Mr. Johnson further opined that, if the alignment was moved closer to the trench, the business parking spaces could be avoided. Tr., Day 7, Morning Session, 05/02/2017, at 72. As to another photosimulation depicting construction further south, Mr. Scott testified that it did not provide a good representation of in-line configuration and there was sufficient space for the excavator to swing its arm in the non-traffic side of the excavation. Tr., Day 7, Morning Session, 05/02/2017, at 72-75.

Mr. Johnson testified that approximately 20 parking spots in downtown Plymouth would be removed and municipal parking on Green Street located “a couple hundred feet” from businesses, would be available to potential customers. Tr., Day 7, Morning Session, 05/02/2017, at 76-77. Mr. Johnson acknowledged, however, that he did not know whether this parking would be able to accommodate all potential customers. Tr., Day 9, Morning Session, 05/04/2017, at 129-130.

Ms. Farrington asserted that the Applicant would communicate with businesses to establish less impactful times for construction and would try to do the most disruptive work in Plymouth during hours when businesses would be the least impacted by delays or unavailability of parking. Tr., Day 12, Morning Session, 06/02/2017, at 102-104. Mr. Bowes also testified that the Applicant considered other measures to minimize the Project’s impact on local businesses. Such measures could include construction at night, extending the construction hours, resulting in a shorter construction period, encouraging construction workers to use local businesses, and introduction of a claim process that would allow businesses to recover their losses. Tr., Day 9, Morning Session, 05/04/2017, at 123-125.

Mr. Bowes testified that the Applicant acknowledged the difficulties and inconveniences that may be caused by construction in downtown Plymouth and approached the Town of Plymouth with an alternative to construct the Project avoiding Route 3, away from the downtown area. Tr., Day 3, Afternoon Session, 04/17/2017, at 183-184. The Town of Plymouth refused to consider such an alternative. Tr., Day 3, Afternoon Session, 04/17/2017, at 183-184.

Mr. Johnson agreed that DOT requested that the Applicant construct splice pits outside of the paved surface, but approximately 23 of the splice pits would have to be located in the road. Tr., Day 7, Morning Session, 05/02/2017, at 119-120. He further indicated that the Applicant filed requests for exceptions to allow these splice pits to be located in the road. Tr., Day 7, Morning Session, 05/02/2017, at 120. Mr. Johnson confirmed that, as of September 29, 2017, DOT granted 20 requests for exceptions out of approximately 180 filed by the Applicant, including the requests for exceptions for 3 miles out of 7.5 miles that the Applicant sought to construct under the paved surface of the roadway. Tr., Day 42, Morning Session, 09/29/2017, at 22, 53; *see* Appendix A (summary of exception requests granted by DOT). Mr. Johnson asserted that he was confident that the requests for exceptions for the remaining 4 miles would be granted as well because they are similar in nature to the requests that have already been granted. Tr., Day 42, Morning Session, 09/29/2017, at 22.

Mr. Kayser determined that the impact of the laydown areas on traffic and orderly development could not be ascertained at the time of the hearing because only three laydown areas out of the 10 to 20 that would be required were identified by the Applicant. Tr., Day 6, Morning Session, 05/01/2017, at 119-120; 127-128.

Finally, the Applicant entered into Agreements with the Towns of Lancaster, Canterbury, Thornton and the City of Franklin that, in relevant sections, addressed the construction schedule and traffic control stating:

Construction Schedule. Upon request of the Town, prior to the commencement of construction activities for any Project Facilities, NPT shall provide the Town with a schedule for construction activities.

Traffic Control. NPT shall coordinate with Town representatives to reasonably minimize the impact of construction of the Project Facilities on traffic and businesses. To the extent that construction activities within the Town require traffic control, such services would be provided by qualified personnel engage by NPT.

App. 146, §§2.2, 2.3; App. 206, §§2.2, 2.3; App. 208, §§2.2, 2.3; App. 209, §§2.2, 2.3. The Agreement with the Town of Thornton contains the following added provisions relevant to the issue of traffic control:

To the extent practicable, NPT would work collaboratively with the Town to minimize any impact that construction activities may have on traffic on Route 175 in the Town, specifically during the annual Blue Grass Festival and Blues Festival located at the Sugar Shack Campground in the Town. NPT agrees to comply with applicable New Hampshire Department of Transportation regulations. NPT further agrees to comply with any traffic control plans and/ or traffic management plans, where applicable, to reasonably minimize the impact of construction activities of the Project Facilities on traffic.

App. 208, §2.3.

(b) Impact on Utilities

Mr. Bowes addressed concerns about the impact of the underground portion of the Project on utilities and claimed that, in general, the Project would be installed beneath existing utilities or other community infrastructure, except as otherwise permitted or directed by DOT.

App. 90, at 2-3. Mr. Johnson testified that the Applicant requested that DOT grant a variance and

allow the Applicant to construct the Project above certain utilities. Tr., Day 7, Morning Session, 05/02/2017, at 59-60. If that request is denied, the Applicant would consider modifying the Project and conduct additional HDD, micro tunneling or jack and bore at these locations. Tr., Day 7, Morning Session, 05/02/2017, at 60-64.

Mr. Bowes testified that as a condition of the exception requests that have been granted by DOT, the Applicant would be required to provide a self-supporting structure for any of the utilities over which the Project would be constructed. Tr., Day 42, Morning Session, 09/29/2017, at 103.

Mr. Johnson testified that Plymouth Village Water and Sewer is planning on working on their underground utilities. Tr., Day 43, Afternoon Session, 10/02/2017, at 31-32. He testified that the Applicant was working with Plymouth Village Water and Sewer to make sure that construction of the Project would not interfere with the construction of utilities and to develop a construction schedule so that all construction activities would be done before the road is repaved. Tr., Day 43, Afternoon Session, 10/02/2017, at 31-32. The Applicant filed a Memorandum of Understanding executed by the Applicant and Plymouth Village Water and Sewer. App. 207. According to the Memorandum of Understanding, the Applicant and Plymouth Village Water and Sewer agreed “to collaborate with each other in good faith to explore the practicality of installing the District Improvements during construction of the Project Facilities so that Route 3, Main Street is excavated only once to install both the Project Facilities and District Improvements.” App. 207, §2.1. The Memorandum states that “[p]rior to the expiration of the Term each of the Parties shall determine, in its sole and exclusive discretion, whether it wishes to move beyond exploration and into implementation.” App. 207, §3.1. The Memorandum will expire on March 31, 2018. App. 207, §1.

Mr. Bowes testified that the Applicant agreed to assist property owners with maintenance and repair of utilities that would be located in close proximity to the underground section of the Project. Tr., Day 42, Afternoon Session, 09/29/2017, at 69-70. Mr. Bowes agreed to condition in the Certificate that would require the Applicant to do so. Tr., Day 42, Afternoon Session, 09/29/2017, at 70.

(c) Impact on Mailboxes

Ms. Farrington addressed the Intervenors' concerns about the impact of the Project on mailboxes located along the underground section of the Project. Tr., Day 12, Morning Session, 06/02/2017, at 70. She testified that the Applicant would provide temporary mailboxes during the time when mailboxes could be affected by construction and would provide access to mailboxes with the help of contractors, or by installing them on the other side of the road. Tr., Day 12, Morning Session, 06/02/2017, at 70-71.

(d) Impact on Vegetation Along the Right-of-Way

Mr. Bowes testified that the owners of properties adjacent to the underground right-of-way would have to consider locations of splice pits while planting vegetation in close proximity to the pits. Tr., Day 10, Morning Session, 05/31/2017, at 82-86. Specifically, Mr. Bowes asserted that some vegetation would not be able to fully develop if planted in close proximity to the splice pits. Tr., Day 10, Morning Session, 05/31/2017, at 82-86. Mr. Bowes testified that the Applicant may prepare and disseminate a manual advising property owners of restrictions for planting adjacent to the duct bank or the splice enclosure. Tr., Day 10, Morning Session, 05/31/2017, at 86.

(e) Impact on Road Surfaces

Mr. Quinlan asserted that the Applicant committed to work with DOT and with local municipalities to restore the disturbed roadways to the same or better conditions as before construction. Tr., Day 2, Morning Session, 04/14/2017, at 79.

Mr. Bowes acknowledged that restoration of the roads that entails paving from “curb-to-curb” provides better protection from water penetration and associated damage. Tr., Day 3, Morning Session, 04/17/2017, at 43-48. He testified that the Applicant is proposing to restore only the lane in which construction would be conducted, if the construction impacts less than half of the roadway. Tr., Day 6, Afternoon Session, 05/01/2017, at 134, 136-137. In general, Mr. Bowes asserted that the extent of the repairs and paving that would be performed by the Applicant would depend on DOT’s requirements and agreements entered into by the Applicant with impacted municipalities. Tr., Day 3, Morning Session, 04/17/2017, at 43-44.

Mr. Johnson testified that the Applicant would not necessarily comply with the municipal requirements and requests on local roads. Tr., Day 6, Morning Session, 05/01/2017, at 155. Mr. Johnson asserted that, if there is no agreement with the municipalities requiring otherwise, the Applicant would restore the roads consistent with DOT’s standards. Tr., Day 6, Morning Session, 05/01/2017, at 154-157.

As to access roads, including roads near Wagner Forest, Mr. Kayser testified that the Applicant would use public roads, existing private roads or would construct new roads as access roads. Tr., Day 6, Morning Session, 05/01/2017, at 28-29, 137-139, 141; App. 499. Mr. Kayser testified that the Applicant would upgrade the roads, if necessary, and would use them to the maximum extent practical. Tr., Day 6, Morning Session, 05/01/2017, at 28-29, 137-139, 141. Mr. Johnson testified that the Applicant would work with the owners of the land, including

Wagner Forest, to determine whether permanent improvements, such as culvert upgrades, should remain. Tr., Day 6, Morning Session, 05/01/2017, at 30, 139. As to other upgrades such as enhancement of the road with gravel or anything else, Mr. Johnson testified that the Applicant would work with the owners to determine whether the upgrades should be taken out or the roads should be left as is. Tr., Day 6, Morning Session, 05/01/2017, at 30, 139.

Mr. Bowes testified that, for the underground portion of the Project, the Applicant would be using fluidized thermal backfill that would harden around the conduits in the bottom of the trench. Tr., Day 3, Afternoon Session, 04/17/2017, at 146-147. Mr. Bowes explained that it would provide a consistent thermal condition around the cables which would allow for the dissipation of heat evenly and consistently. Tr., Day 3, Afternoon Session, 04/17/2017, at 146-147. He asserted that the fluidized thermal backfill would provide a better base for the roads because it would be much harder than compacted gravel. Tr., Day 3, Afternoon Session, 04/17/2017, at 146-147. Mr. Johnson testified that DOT denied the exception request that would allow the Applicant to use fluidized thermal backfill through the entire part of the duct bank to the surface of the road. Tr., Day 42, Morning Session, 09/29/2017, at 103-104. He asserted that DOT authorized the use of: (i) backfill from wherever the actual ducts are to the bottom of the structural box; and then (ii) the filling from the structural box up. Tr., Day 42, Morning Session, 09/29/2017, at 101-102.

Mr. Scott testified that the line would be buried at least 42 inches under the surface of the road. Tr., Day 6, Afternoon Session, 05/01/2017, at 141-142. He opined that the heat that could be caused as a result of the operation of the line would have no adverse effect on the surface of the roads, including gravel roads. Tr., Day 6, Afternoon Session, 05/01/2017, at 141-143. In support, Mr. Scott filed a report entitled "Cable Interaction with Soil Temperature Analysis at

32° F” prepared by ABB. App. 88, Att. A. The Report states that the maximum operating temperature of the power cable is 70° C (158° F) and that this cable temperature only occurs when the cable system is operating in the warmest part of the season at full load. App. 88, Att. A, at 1. All the heat would dissipate from the conductor to the surface of the ground and would create a temperature gradient from the conductor to the surface of the ground. App. 88, Att. A, at 1. The Report explains that the heat that would be generated by the cable would dissipate to the surface because the surface of the earth is cooler than the core of the earth. App. 88, Att. A, at 2. While conducting its analysis, ABB assumed that a native soil thermal resistivity is 2.0 K-m/W and the trench would be backfilled to the surface with fluidized thermal backfill that has a maximum thermal resistivity of 1.0 K-m/W. App. 88, Att. A, at 4. The Report acknowledges that “[i]t cannot be assumed that there would not be some special condition where the air temperature is changing so fast that the soil holds a temperature different than the air and a potential for ice to form, or ice to melt, could happen but this would be for a short time period and the surrounding soils would be experiencing the same temperature difference.” App. 88, Att. A, at 5. The Report concludes that the cable would have a negligible impact on the surface temperature and “[i]n essence, there would be no perceptible impact on surface or subsurface conditions relative to cable installation.” App. 88, Att. A, at 1, 5. The Report also concludes that “the potential for frost heaves caused by cable system being warmer than the surrounding soils is negligible.” App. 88, Att. A, at 5.

The Applicant entered into Agreements with the Towns of Lancaster, Canterbury, Thornton and the City of Franklin that, in relevant sections, address the Project’s potential impact on the surface of local roads as follows:

Public Roads. In the even that NPT wishes to utilize Town roads for the travel of over-size or over-weight vehicles, and/or use during posted weight limit time periods, the NPT shall:

- (a) Identify and notify the Town of local public roads to be used within the Town to transport equipment and parts for construction, operation or maintenance for the Project Facilities; and
- (b) Create a record of pre-construction road conditions and, if necessary, promptly repair, at NPT's expense, any local road damage caused directly by NPT or its contractors at any time, and restore roads to the same or better condition.

App. 146, §3.1; App. 206, §3.1; App. 208, §3.1; App. 209, §3.1.

(f) Impact of Construction Noise

Mr. Kayser and Mr. Bowes testified that the Project would not comply with the noise restrictions, restrictions on timing of construction work and weight limits contained in the Town's ordinances, if not otherwise obligated to do so under the Agreements with the Towns. Tr., Day 7, Afternoon Session, 05/02/2017, at 115-117; Tr., Day 9, Morning Session, 05/04/2017, at 109-115, 118. Mr. Bowes testified that, in order to mitigate the impact of construction noise, the Applicant would limit the construction activity hours, make sure that all construction equipment would meet either federal or state requirements for noise emissions, make sure that the equipment is functional, advise the local residents about expected activities and address any noise complaints on a case-by-case basis. Tr., Day 8, Morning Session, 05/03/2017, at 45-47. Mr. Johnson testified that abutting property owners, including businesses, would be provided information prior to construction on how to make complaints about noise and other construction inconveniences. Specifically, abutting property owners would be able to complain to the construction crew directly, call a hotline, or send e-mails to a contact community relations person. Tr., Day 12, Morning Session, 06/02/2017, at 96-98.

Mr. Bowes testified that a sound study prepared for the Department of Energy Draft EIS, indicated that an approximately 83 decibel rating would be caused by construction equipment

during construction periods from 7:00 a.m. to 7:00 p.m. Tr., Day 10, Morning Session, 05/31/2017, at 142-143, 146-147. Mr. Bowes testified that the study performed by the Department of Energy determined that there would be impacts based on noise levels caused by construction, but they would not constitute significant adverse impacts and would be temporary in nature. Tr., Day 10, Morning Session, 05/31/2017, at 143. He also testified that, depending on the proximity of construction to the residences, the Applicant considered using acoustic curtains around generators. Tr., Day 10, Morning Session, 05/31/2017, at 143-144.

The Applicant entered into Agreements with the Towns of Lancaster, Canterbury, Thornton, and the City of Franklin that, in part, addressed Project work hours:

Work Hours. Normal work hours for NPT and its contractors would be a window of twelve (12) consecutive hours during each day, Monday through Saturday. The Town recognizes that the first hours of normal work hours may vary based on the nature of the work. NPT and/or its contractor(s) normally would work between 7:00 a.m. and 7:00 p.m. Normal work hours may be extended, however, due to exigent circumstances (including, without limitation, as appropriate to maintain a safe work environment), when required for system reliability or integrity, and other rules pertaining to the operation of the Project Facilities, including testing, and equipment outages, or to perform critical work activities for construction and testing purposes. When practical, NPT would advise the Town of circumstances that would likely require extended work hours and the duration of such periods, including any necessary work on Sundays.

App. 146, §2.4; App. 206, §2.4; App. 208, §2.4; App. 209, §2.4.

With regard to hours of operation for construction vehicles on municipal roads, the Agreements state as follows:

(a) The start-up and idling of trucks and equipment would conform to all applicable New Hampshire Department of Transportation regulations. In addition, the start-up and idling of trucks and equipment on the Project Facilities would normally be conducted between 6:00 a.m. and 7:00 p.m., Monday through Friday and between 6:30 a.m. and 7:00 p.m. on Saturday and Sunday. When

practical, NPT would advise the Town of circumstances that require start-up and idling times to vary, consistent with the reasoning set forth in Section 2.4 [Work Hours] of this Agreement.

(b) Notwithstanding anything in this Agreement to the contrary, over-sized vehicles delivering equipment and supplies may, with advance notice, travel on Town roads between the hours of 7:00 p.m. and 6:00 a.m. Monday through Sunday so that the timing of such over-sized deliveries would minimize potential disruptions to area roads.

App. 146, §2.9; App. 206, §2.9; App. 208, §2.9; App. 209, §2.9.

(g) Impact on the Rights of Private Property Owners

As to concerns about the intrusion of the Project on privately owned properties adjacent to the roads under which the Applicant sought to construct the Project, Mr. Scott testified that the Project would be constructed without using private property that is not currently burdened by the road right-of-way or owned by the Applicant or its affiliates. App. 89, at 3. Mr. Bowes testified that, if any section or part of the Project had to be constructed within real estate not owned by the Applicant or where the Applicant did not have legal right to construct the same, the Applicant would seek the owner's permission to accommodate such construction and, if denied, would remove and relocate that section or the part of the Project. Tr., Day 10, Morning Session, 05/31/2017, at 88-89. Mr. Bowes testified that if construction of the Project required the acquisition of additional property rights, the Applicant would attempt to acquire these rights from the owners through private arrangements. Tr., Day 10, Afternoon Session, 05/31/2017, at 37-38. Mr. Bowes also asserted that the Applicant would seek exceptions from DOT in order to avoid construction on private property. Tr., Day 43, Morning Session, 10/02/2017, at 111.

At the time of the hearing, on May 4, 2017, Mr. Kayser and Mr. Bowes asserted that the Applicant's contractors had surveyed the public highway right-of-way along the underground route. App. 89, at 5; App. 90, at 2; Tr., Day 7, Morning Session, 05/02/2017, at 94-95. Mr.

Bowes stated that the Applicant's contractors confirmed that there is sufficient room within the existing right-of-way for all construction activities. App. 90, at 2; App. 130. The Applicant's contractors prepared a report that identified three levels of certainty for the location of the right-of-way: (i) Bold Determined – the most accurate; (ii) Bold Dashed Approximate - “not necessary deemed accurately determined”; and (iii) Dashed Approximate – “where there was no or very limited physical evidence found, the majority of the sidelines were based on the record layout widths and offset from the centerline of the existing travel way pavement.” Tr., Day 7, Morning Session, 05/02/2017, at 96-101; App. 142, at 2. Mr. Johnson testified that the Applicant's contractors did not rate as “Bold Determined” any sections of the right-of-way, and rated as “Dashed Approximate” along stretches of the right-of-way where land has not been developed in 50 years or more. Tr., Day 7, Morning Session, 05/02/2017, at 105-111.

Following the testimony of the construction panel regarding identification of right-of-way boundaries and surveys, DOT issued a letter stating that: (i) it needed more foundational evidence to move off of the “approximate” right-of-way boundary lines; and (ii) the field reviews revealed that several locations identified in the requests for exceptions had existing facilities that were incorrectly shown/described or not shown on the plans. App. 220; Tr., Day 42, Morning Session, 09/29/2017, at 7-8. Mr. Johnson admitted that some comments from DOT regarding the Applicant's survey report referred to it as having “the lowest level of accuracy.” Tr., Day 42, Morning Session, 09/29/2017, at 152-153. Mr. Johnson testified that after the Applicant received the letter from DOT, the Applicant's contractors went back and revisited historic documentation to verify with more accuracy previously identified boundaries of the right-of-way. Tr., Day 42, Morning Session, 09/29/2017, at 10. The contractors also identified locations where the right-of-way boundaries would have to be determined through prescriptive rights. Tr.,

Day 42, Morning Session, 09/29/2017, at 10. The Applicant also retained other contractors to physically verify the utilities, edge of pavement, street signs and other physical signs and characters relative to identification of right-of-way boundaries. Tr., Day 42, Morning Session, 09/29/2017, at 10-11. Mr. Johnson asserted that revised results of the survey would be re-filed with DOT once completed. Tr., Day 42, Morning Session, 09/29/2017, at 11. Mr. Johnson testified that it was possible that the property owners would not know where the estimated boundary line would be identified by the Applicant and approved by the DOT prior to such approval. Tr., Day 43, Afternoon Session, 10/02/2017, at 92-94. Mr. Bowes testified that, generally, the abutters would be notified about the specific survey that would determine the border line of the right-of-way approximately six weeks prior to the construction. Tr., Day 12, Morning Session, 06/02/2017, at 7-8. At this point, the abutters would have an opportunity to raise their concerns and assert their rights. Tr., Day 12, Morning Session, 06/02/2017, at 8. However, it is unclear at this point whether the property owners would have any rights to dispute DOT's determination. Tr., Day 43, Afternoon Session, 10/02/2017, at 92.

Mr. Johnson addressed Mr. Ahern's statements that the right-of-way near his property is 3-rod-wide as opposed to 4-rod-wide as determined by the Applicant's contractors. Tr., Day 11, Morning Session, 06/01/2017, at 6. Mr. Johnson stated that it does not matter whether the right-of-way is 3-rod-wide or 4-rod-wide at this location because the Project would be constructed on the side of the right-of-way opposite to Mr. Ahern's property and well within the disturbed area of the road. Tr., Day 11, Morning Session, 06/01/2017, at 6-7. When the Applicant's Construction Panel was recalled in September, Mr. Johnson confirmed that the Applicant filed a request for exception with DOT that clearly stated that some sections of the right-of-way would be 3-rod-wide as opposed to 4-rod-wide. Tr., Day 42, Afternoon Session, 09/29/2017, at 16-17.

(h) Access to Private Property During Construction

Ms. Farrington testified that splice enclosures would be located away from all access points to residential and commercial properties, and, therefore, only trenching area work zones would interfere with property access. App. 91, at 4. She claimed that for a driveway that would be located within the work zone where trenching would be located, the trench would be dug to the halfway point of the driveway or metal plates would be slid over the trench to allow driveway access. App. 91, at 4.

The Applicant also entered into an Agreement with Ms. Mary Lee and agreed to ensure that Ms. Lee and her guests, as well as emergency vehicles would have access to her residence during construction of the Project. App. 502, §§3.9, 3.10. The Applicant also agreed to provide to Ms. Lee final Project Plans depicting the section of the Project that would be located near her residence. App. 502, §3.2.

(i) Proposed Conditions

Originally, the Applicant requested that the Subcommittee delegate to DES the authority required to approve of marshaling yards, laydown areas, storage areas, wire pulling areas, crane pads, temporary access roads (both on and off the right-of-way), any permanent access roads (both on and off the right-of-way). *See* Correspondence from the Applicant (Dec. 12, 2017); App. 14, at 19-21. That condition however, was not identified or proposed by the Applicant in its Post-Hearing Memorandum. *See* Applicant's Post-Hearing Memorandum, at 399-403.

Mr. Bowes testified that the Applicant wanted the Subcommittee to delegate authority for final design approval and permits for construction under municipal roads to DOT. Tr., Day 43, Morning Session, 10/02/2017, at 6. Mr. Bowes testified that once constructed, maintenance of local roads will be the responsibility of the municipality. Tr., Day 43, Morning Session,

10/02/2017, at 49-50. Mr. Bowes stated that DOT is well aware of the Applicant's request to delegate the Subcommittee's authority over locally-maintained roads. Tr., Day 43, Morning Session, 10/02/2017, at 10. In its final Post-Hearing Memorandum, after review of the DOT's comments, the Applicant changed its position and proposed the following conditions relevant to installation of the underground section of the Project in locally-maintained roads in the Towns of Stewartstown and Clarksville:

- A properly qualified consultant selected by, and subject to the supervision of the Administrator of the Committee, and paid for by the Applicants, is authorized to review and approve all requests relative to curb cuts, driveways, detours, *etc.*, involving locally-maintained highways in the Towns of Stewartstown and Clarksville in the same manner that it reviews and approves comparable requests for state-maintained highways;
- A properly qualified consultant selected by and subject to the supervision of the Administrator of the Committee and paid for by the Applicants is authorized to monitor the construction of the Project in locally-maintained highways and enforce the relevant requirements of the DOT Utility Accommodation Manual²⁴ to the Applicants' request to install lines underground in the Towns of Stewartstown and Clarksville; and
- A properly qualified consultant selected by, and subject to the supervision of the Administrator of the Committee, and paid for by the Applicants, is authorized to review and approve traffic control measures and a traffic management plan for the underground installation in locally-maintained roads in the Towns of Stewartstown and Clarksville.

See Applicant's Post-Hearing Memorandum, at 400-401.

Mr. Bowes acknowledged that under the Application, it is unclear who would be responsible for the cost of relocating the Project to accommodate future construction or relocation of municipal utilities. Tr., Day 43, Afternoon Session, 10/02/2017, at 47-49. Mr. Bowes testified that the Applicant agreed to a condition in the Certificate requiring it to be responsible for additional costs that a municipality could incur due to the maintenance, operation, renewal or extension of the utilities or facilities within the limits of the roads. Tr., Day

²⁴ The Manual that has been prepared to establish a uniform practice for addressing the accommodation of utilities within highway and railroad right-of-way of the State of New Hampshire.

43, Afternoon Session, 10/02/2017, at 130-131. That condition however, was not proposed by the Applicant in its Post-Hearing Memorandum. *See Applicant's Post-Hearing Memorandum*, at 399-403. Instead, the Applicant agreed to “assume such additional cost as a municipality may incur due to the maintenance, operation, renewal, or extension of the underground installation *components of the Project or appurtenances thereto* within the locally-maintained roads.” *See Applicant's Post-Hearing Memorandum*, at 401 (emphasis added). The Applicant also agreed to correct “[a]ny future surface distortion within the trench area in locally-maintained roads, due to settlement or other causes attributable to the construction . . . as required during construction and for a period of two (2) years following the commencement of commercial operations of the Project.” *See Applicant's Post-Hearing Memorandum*, at 401.

As to construction of the overhead portion of the Project, the Applicant agreed to “employ traffic controls in accordance with the 2009 edition of the Manual on Uniform Control Devices and DOT policies.” *See Applicant's Post-Hearing Memorandum*, at 401.

(j) Conclusion

The Applicant's expert on orderly development, Robert Varney, acknowledged that he did not study whether the existence of splice vaults and their location would impact the development or use of any specific property along the underground section of the Project. Tr., Day 35, Afternoon Session, 09/18/2017, at 50-51. He testified that he had not studied the impact of the Project on the existing underground infrastructure in the towns along the route. Tr., Day 35, Afternoon Session, 09/18/2017, at 54. Mr. Varney testified that construction of the overhead section of the Project would not interfere with local land use because the Applicant and DOT would make sure that the construction process was sufficiently conditioned to minimize such impacts, if any. Tr., Day 35, Afternoon Session, 09/18/2017, at 64-65. Mr. Varney concluded

that the construction impacts would be carefully managed and testified that he did not “see any reason why there would be any significant adverse effects beyond the temporary impacts.” Tr., Day 35, Afternoon Session, 09/18/2017, at 12-13.

(2) Department of Transportation’s Response to the Applicant’s Proposed Conditions

On December 22, 2017, the Subcommittee received correspondence from DOT addressing the Applicant’s request to delegate authority for construction of the Project under municipal roads to DOT. *See* DOT Correspondence (Dec. 22, 2017). DOT provided comments addressing the Applicant’s request for delegation:

- Monitoring and compliance authority with respect to the use of locally and state maintained roads during construction and operation of the Project – The DOT agreed to monitor the construction of the Project “within the Department’s Maintenance jurisdiction, for compliance with the NHDOT permits and agreements, consistent with any other utility construction project.” The Applicant should be responsible for any costs associated with that construction monitoring effort. The DOT further stated that it does not have the resources to monitor the work on municipally maintained local roadways. The DOT argued that such monitoring would require knowledge of local ordinances and municipal operations which it does not have. The DOT also stated that it “does not believe it should be approving and overseeing construction and making decisions that may impact long term operations and maintenance on roadways that others would have maintenance responsibilities for nor [sic] authority over.”
- Approval of exception requests submitted to DOT pursuant to the Utility Accommodation Manual – The DOT agreed to approve exception requests for work within state maintained highways once the Applicant has satisfied all of the DOT’s concerns. The DOT further argued that it has no jurisdiction over municipally maintained roadways. Finally, the DOT argued that, since it does not have long term maintenance responsibility or authority for the locally maintained sections, it should not be making decisions which could impact the long term operation and maintenance of locally maintained roadways.
- Approval of detours on locally maintained roads and I-93 – The DOT asserted that it “does not have the authority to approve detours on local roads and does not want to set the precedent that would usurp local authority with regard to usage of their roadways.” It further argued that all official detours for State Highway projects are required to use state maintained highways and there is no reason for changing this requirement.

- Approval of the traffic management plan and traffic controls prior to construction – The DOT advised the Subcommittee that it has a policy of not using local roadways for project traffic control unless approved by the local community. It would not look favorably on using non-state roads for detours and traffic control on the Project “unless this was a request and/or approved by the local community that is responsible for roadway operations and maintenance.”
- Approval of curb cut permits, driveway permits, and other specific access permits to the right-of-way construction – The DOT agreed to approve all permits required for access to state maintained highways. It asserted, however, that it does not have the authority or resources to issue permits for local roadways.

See DOT Correspondence (Dec. 22, 2017).

(3) Counsel for the Public

Counsel for the Public’s expert, Rusty Bascom, filed a report titled “Pre-Filed Technical Report Regarding the Assessment of HVDC Underground Cable Segments Proposed for the Northern Pass HVDC Project.” CFP 135, Att. B. Mr. Bascom identified the following issues the Applicant needed to address while constructing the underground portion of the Project:

Clarkesville (Near Canadian Border/Old Canaan Road and HDD)	Work space restricted to the public right-of-way would be a challenge. This HDD location would have to follow the sweeping curvature of the road which means that an HDD installation would need to consider a compound bend to the alignment.
Heath Road (Transition Station Areas)	Exposed bedrock may challenge and/or prolong the underground construction.
Franconia (Bridge, HDD)	The space near the intersection of Route 116 and Route 18 in Franconia is near the Gale River and the cables must pass below the river. The close proximity of the bridge to the intersection would complicate getting down to the required burial depth. The space near the intersection seems like achieving the required burial depth to cross under the Gale River while connecting to the prevailing duct bank would be difficult.
North Woodstock (Route 3, Gordon Pond Brook Crossing near Woodstock Firehouse, HDD)	Construction in one lane of traffic would be a challenge while maintaining and managing traffic flow.
West Thornton (Route 3, Pemigewasset River)	There are curves to the road on either end. Construction using HDD would require a compound bend. Pipe-jacking may be used,

Crossing, HDD)	but the depth of the pits and length can be challenging.
Thornton (West Branch Brook Crossing, HDD – Narrow Roads)	The cable route would cross the road. There are residences and structures built up to the edge of the road. This limits the available work area.
Plymouth (Route 3, Baker River/Bridge Crossing, HDD)	The bridge over the Baker River and adjacent roadway present a challenge for the application HDD due to the curvature of the road in the area and the deep elevation difference of the river bottom relative to the prevailing Route 3 road adjacent to the bridge/river.
Plymouth (Downtown)	Construction in this area is likely to be difficult in terms of siting the cable duct bank due to the likely existence of multiple existing utilities.
Italian Farmhouse (Route 3, Rock Excavations)	There are significant quantities of bedrock through which the cable trench would be excavated or trenchless boring would be conducted. There are also existing constraints (railroad tracks) in the vicinity that could make construction difficult off of the main roadway. With the road falling away sharply on one side, construction and controlling erosion and sediments disturbed during construction would be a challenge.

CFP 135, Att. B. 24-38. While Mr. Bascom’s report notes that work space restricted to the public right-of-way will be a challenge in some locations, he acknowledged on cross-examination that: (i) he has not identified any specific areas where the Applicant cannot stay within the right-of-way; (ii) the DOT permit requires the Applicant to stay within the right-of-way; and (iii) the Applicant has not sought an exception to the requirement to stay within the right-of-way. Tr., Day 51, Afternoon Session, 10/24/2017, at 73.

Mr. Zysk and Mr. Alexander argued that the Applicant failed to provide sufficient information to ascertain the impact of construction of the Project on traffic and roads. CFP 131, at 3-5; CFP 134, at 3-5. Specifically, Mr. Zysk and Mr. Alexander argued that the Applicant failed to identify the locations of existing concrete batch plants that would be used for construction of the Project and, consequently, precluded the parties in this docket from ascertaining the impact on roads and traffic associated with heavy truck travel to and from such plants. CFP 131, at 3-4; CFP 134, at 3-4. Mr. Zysk and Mr. Alexander also opined that traffic associated with construction of the Project would cause local traffic delays and could

permanently damage roads that would be used for construction activities. CFP 131, at 4-5; CFP 134, at 4-5. Mr. Zysk acknowledged, however, that the Applicant has committed to fixing any damage caused by construction and that oversized or overweight vehicles, which may or may not be utilized during portions of the construction, would be more likely to cause damage than other vehicles and equipment. Tr., Day 51, Afternoon Session, 10/24/2017, at 115.

Mr. Zysk testified that construction of the underground portion of the Project would cause closures of the following roads: (i) 0.70-mile segment – single-lane road on both sides of the Connecticut River and intersection at Route 3 and Beecher Falls Road; (ii) 7.5-mile segment – lane closures and full road closures along most of this section with detours around Old County Road, North Hill Road and Bear Rock Road; (iii) 52.3-mile segment – lane closures along Route 18 and Route 116 in Franconia, along Route 116 and Route 112 in Easton, along Route 112 and Route 3 in Woodstock, along Route 3 in Thornton, and along Route 3 in Plymouth. Supp. CFP. 132, at 5-6.

Mr. Zysk opined that construction in Plymouth would cause significant destruction, lane closures for significant periods of time and the detour of traffic around the downtown area. CFP 132, at 6. Mr. Zysk raised concerns about the Applicant's failure to submit detailed traffic control plans with construction sequencing. CFP. 132, at 7.

Mr. Bascom testified that there are several areas where narrow roads would pose challenges to underground construction and maintenance of traffic. CFP. 135, at 3. He further asserted that, considering possible constraints on subsurface ground material, constraints of effective traffic control plans and the ability to maintain access to residential, tourist, commercial, and emergency vehicles, the Applicant set forth unrealistic rates of construction for open cut trenching. CFP. 135, at 3. He also stated that, at some areas, it would be impossible to

construct underground portions of the Project without entering private property and without impacting traffic in the area. CFP. 135, at 3-4. Mr. Bascom further testified that the Applicant’s traffic control plans failed to account for the amount of work that would be required and, considering the amount and extent of work required for construction of the underground portion of the Project, failed to clarify how the Applicant would ensure that the residents would be able to access their residences and how emergency vehicles would be able to access certain places in case of emergency. CFP. 135, at 4. Mr. Bascom’s report, CFP. 135, at Ex. B., identified the specific traffic and access constraints located along the underground portion of the Project:

Clarkesville (Near Canadian Border/Old Canaan Road and HDD)	<p>Working within a single-lane road to keep the road open in one direction would be a challenge given the required footprint for typical medium- to large-scale horizontal directional drilling operations.</p> <p>Horizontal directional drill installation under the Connecticut River would impact the road on either side of the River. The duration of the impact should be clarified to assess the viability of blocking Route 3.</p> <p>The Applicant failed to specifically indicate how driveway and emergency access would be maintained despite the closure of the routes, including Old County Road in Clarksville.</p>
Stewartstown (Old County Road)	Construction in this area without widening the road while maintaining traffic would be a challenge. This area has only limited alternative routes for public traffic.
Stewartstown (N. Hill Road)	A very difficult construction area that would potentially require an extended work period (weeks) during which the area would be inaccessible or effectively blocked to vehicle traffic, including emergency services. The blockage would be constant throughout the work window.
Stewartstown (Bear Rock Road)	The road is the only route to residential homes along the road. It would be closed temporarily. It is unclear for how long and how often the closures would take place.
Franconia (Bridge, HDD)	Traffic control in the area would be challenging considering the proximity to the intersection and the I-93 exit and entrance ramps where some construction activity would take place.
White Mountain National Forest	Construction in the road would impede traffic.
North Woodstock (Route	Construction in one lane of traffic would be a challenge while

3, Gordon Pond Brook Crossing near Woodstock Firehouse, HDD)	maintaining and managing traffic flow. Open cut trench near the fire house would interfere, potentially for 3-5 weeks, with access to emergency vehicles entering and leaving the Woodstock Firehouse.
Thornton (West Branch Brook Crossing, HDD – Narrow Roads)	Management of access to the residences in the area would be required.
Plymouth (Downtown)	Construction activities would require closing at least one lane of traffic and displacing parking spaces for the duration of construction in the area. Construction would block access to multiple commercial businesses and would disrupt limited parking.

CFP. 135, Ex. B. 24-38. Mr. Bascom acknowledged on cross-examination that although he raised concerns regarding the impact of the Project on traffic, he is not a traffic engineer and does not have experience dealing with the creation of traffic control plans. Tr., Day 51, Afternoon Session, 10/24/2017, at 70-71.

On cross-examination, Mr. Taylor acknowledged that he has no concerns with DOT’s ability to assess and approve impacts of the Project. Tr., Day 51, Afternoon Session, 10/24/2017, at 27-28. Mr. Taylor also acknowledged that the Applicant intends to utilize protective measures on Bear Rock Road and other roads to avoid the need for road closures and it is possible that these measures may successfully avoid some road closures. Tr., Day 51, Afternoon Session, 10/24/2017, at 47-48. Mr. Bascom acknowledged that the Applicant has committed to giving homeowners access to their driveways at all times. Tr., Day 51, Afternoon Session, 10/24/2017, at 50.

Counsel for the Public argued that the Applicant failed to provide sufficient information that would allow it to ascertain impacts of construction of the Project on the orderly development of the region. *See* Counsel for the Public’s Post-Hearing Brief, at 63. Counsel for the Public requested that the following conditions be placed on the issuance of any Certificate in this matter:

[A]ll municipal roads that are damaged by construction of the Project shall be restored in compliance with all existing municipal rules and regulations, subject to the review of the municipal engineer, road agent or other authorized municipal officer and approval the SEC administrator²⁵ . . .

[P]rior to construction of the underground portion of the Project, Applicants shall hold a public meeting with the combined Boards of Selectmen for (1) Clarksville/Stewartstown; (2) Bethlehem/Sugar Hill/Franconia/Easton; and (3) Woodstock / Thornton / Campton / Holderness / Plymouth, to discuss the construction schedule in their respective towns and to coordinate the construction in order to avoid or minimize impacting local or regional events that are scheduled to be held in said towns²⁶ . . .

[T]he Applicants shall provide each host town and the Administrator of the SEC with copies of Applicants' proposed construction plans, blasting plans, schedule and other public information (Ref. RSA 91-A:5) to be made available to the public²⁷

. . .

[T]he construction plans, schedule and other information provided to each host town and Administrator of the SEC shall be updated to reflect changes in the Project's schedule or other changes during construction²⁸ . . .

[T]he meetings between Applicants and the host towns shall be attended by persons knowledgeable with Applicants' construction plans and responsible for managing construction activities²⁹ . . .

[T]he meetings between Applicants and the host towns shall be public meetings under RSA 91-A, moderated by the towns' Board of Selectmen, except as provided by RSA 91-A:3³⁰ . . .

²⁵ The Applicant accepts a local role as the primary means of assessing the adequacy of restoration, which will be performed consisted with DOT requirements, but suggests an amendment to make clear that if there is any dispute between the Applicant and a town that it should be resolved by the SEC Administrator.

²⁶ The Applicant is willing to meet with the host communities, however, it believes that the logistics associated with this condition, as proposed, make it unworkable.

²⁷ The Applicant agrees to providing, in electronic format, project maps, blasting plans (if they exist) and the schedule as it pertains to a specific town.

²⁸ The Applicant agrees to providing, in electronic format, changes, if any, to the Project maps and the schedule on a monthly basis as it pertains to a specific town. *See Applicant's Post-Hearing Memorandum*, at 410.

²⁹ The Applicant agrees to a condition to make knowledgeable Project representatives available during meetings between the Applicant and the host towns. *See Applicant's Post-Hearing Memorandum*, at 410.

³⁰ The Applicant asserts that it is inappropriate for Counsel for the Public to dictate meeting requirements between host towns and the Applicant. *See Applicant's Post-Hearing Memorandum*, at 411. The Applicant agreed to work in good faith to establish a reasonable schedule of meetings with each host town to provide relevant information to that town as reasonably practicable to meet the town's needs. *See Applicant's Post-Hearing Memorandum*, at 411. To the

[T]he Applicants shall provide to the SEC for posting on the SEC's website information concerning complaints during construction, if any, and their resolution, except that confidential, personal or financial information (Ref. RSA 91-A:5) regarding the complaint should be redacted³¹ . . .

[I]n the event of significant unanticipated changes or events during construction that may impact the public, the environment, compliance with the terms and conditions of the Certificate, public transportation or public safety, Applicants shall notify the Board of Selectmen of all affected host towns or their respective designee and Administrator of the SEC in writing as soon as possible but no later than seven (7) days after the occurrence.³²

See Counsel for the Public's Post-Hearing Brief, at 167-68.

(4) Grafton County Commissioners

Grafton County Commissioner Linda Lauer, expressed her concern about the inaccuracy and incomplete nature of the Project's maps and design. GRAFTON 1. She argued that, based on the plans submitted, the Project would have significant adverse impacts on commuters and visitors due to traffic restrictions and the Applicant's inability to minimize impacts.

GRAFTON 1. She further expressed her concerns about the Applicant's inability to construct the Project without encroaching on private properties. GRAFTON 1.

Grafton County Commissioners argued that the Applicant failed to provide construction plans and surveys that would allow the parties to ascertain the construction impacts of the Project on the orderly development of the region. *See* Grafton County Commissioner's Closing Argument at 12-16.

extent a town and the Applicant are not able to reach an agreement on a schedule of meetings, the town can seek resolution of the SEC Administrator. Applicant's Post-Hearing Memorandum, at 410.

³¹ The Applicant argued that this proposed condition is vague and unworkable as drafted. *See* Applicant's Post-Hearing Memorandum, at 411.

³² The Applicant noted that this condition is acceptable subject to the comments subsumed within its Post-Hearing Memorandum. *See* Applicant's Post-Hearing Memorandum, at 411.

(5) Municipalities

A member of the Conservation Commission and Planning Board of the Town of Deerfield, Kate Hartnett, expressed the Town's opposition to the construction and operation of the Project. JTMUNI 155, at 1-2. Ms. Hartnett opined that, if the Subcommittee decides to issue a Certificate, it should be conditioned certain requirements: (i) the Applicant should post a performance bond or other financial surety; (ii) the Applicant should work with the Town Administrator, Planning Board and Road Agent to identify likely problem areas, including roads used to access the right-of-way, stockpile, laydown areas and substation; (iii) the Applicant shall reimburse the Town's cost associated with the Applicant's compliance with these conditions; (iv) all areas of construction should be photo-inventoried to document existing conditions; (v) avoidance, minimization and mitigation measures and/or best management practices, including provisions addressing hours of operation and plans for extreme weather conditions and emergencies, should be developed jointly with the Town of Deerfield and approved by the Town of Deerfield; (vi) current and future noise associated with operation of substation should be significantly reduced; and (vii) an independent entity (Town Engineer) should evaluate the Applicant's performance and sign off on satisfactory completion of the Project in the Town. JTMUNI 155, at 11-12.

George Sansoucy, on behalf of the Towns of Northumberland, Whitefield, Littleton, Sugar Hill, Franconia, Woodstock, Plymouth, Bridgewater, Bristol, New Hampton, Concord, Pembroke, Deerfield, and the Ashland Water & Sewer Department, argued that the underground portion of the Project as designed would be too shallow. SAN 1, at 11-13. He argued that it was unclear how heat t caused by the line would dissipate without creating an uneven thaw in the soil and road base. SAN 1, at 11-13. He asserted that there was no discussion or proposed mitigation

measures addressing the potential impact of a short circuit failure, manhole explosion or electrification of surrounding underground metallic components. SAN 1, at 11-13. Mr. Sansoucy opined that construction of the Project under municipal roads would interfere with the community because: (i) all flexible utilities which have access to abutting properties would have to be constructed under or over the line; (ii) construction near or next to the line would require boring and/or additional construction administration with oversight by independent observers for the utility; (iii) the application for a crossing, coordination and expense would be more lengthy and more expensive; (iv) the utilities that must be built to grade would have to be constructed under the line and such construction would be more complicated and expensive; (v) impact slab would largely eliminate the ability to construct flexible utilities over the line; and (vi) the municipalities would lose a substantial portion of the use of the right-of-way due to restrictions on the proximity of interference of other current and future utility needs on the streets. SAN 1, at 11-13.

Ms. Pastoriza, on behalf of Easton Conservation Commission, claimed that, considering the width of the right-of-way, it is unlikely that the Applicant would be able to construct the underground portion of the Project in the Town of Easton within the easement and would have to encroach on private property. JTMUNI 111, at 7-8. Ms. Pastoriza questioned the accuracy of the right-of-way survey conducted by the Applicant's contractors. Tr., Day 9, Morning Session, 05/04/2017, at 68-97. She argued that the research and analysis conducted by the Applicant's contractors' did not address a number of historically relevant documents. Tr., Day 9, Morning Session, 05/04/2017, at 68-97.

(6) Individual Intervenors

Bradley Thompson, on behalf of Clarksville to Stewartstown Abutting³³ and Non-Abutting³⁴ Property Owners Group of Intervenors argued that construction of the underground section of the Project under Bear Rock Road would require closure of the road for a significant time and would cause unreasonable adverse effects on the orderly development of the region. CS 1. He also argued that the Subcommittee did not have authority to allow construction and operation of the Project under locally-maintained roads. *See* Post-Hearing Memorandum of CS-Group I North Abutters and Non-Abutters, at 32-36.

Mr. Thompson argued that it is unclear how much heat would be caused by the buried line and the impact it would have on the roads in Clarksville and Stewartstown. CS 14, at 6-7. He opined that the Applicant should be required to construct a similar line under a similar road and to document the effect of the line on the surface of the road over one year prior to construction of the Project. CS 14, at 7.

Mr. Thompson opined that the Applicant's plan for restoration of the paved section of Bear Rock Road is inadequate because it would result in patched paving as opposed to before disturbance condition. CS 14, at 8. Mr. Thompson asserted that the Applicant should be required to complete new pavement from North Hill Road to where the gravel road begins and that such paving activities should comply with DOT specifications. CS 14, at 8-9.

Mr. Thompson also opined that the Applicant should be required to identify the location of each and every staging area prior to the construction of the Project. CS 14, at 9.

³³ Charles and Donna Jordan (Clarksville), Sally Zankowski (Stewartstown), Jon and Lori Levesque (Stewartstown), Roderick and Donna McAllaster (Stewartstown), Lynne Placey (Stewartstown), Arlene Placey (Stewartstown), Brad and Daryl Thompson (Stewartstown), David Schrier (Exeter) and Nancy Dodge (Stewartstown). CS 1.

³⁴ Robert Martin (Clarksville), Roderick Moore, Jr., Joseph John Dunlap, Shawn Patrick Brady, Christopher Thompson, and E. Martin Kaufman, Bradley J. Thompson and John Petrofsky on behalf of 44 residents of Stewartstown and East Colebrook. CS 1.

Stephan T. Nix, Attorney and Licensed Land Surveyor, on behalf of Bradley Thompson and Daryl Thompson, asserted that he reviewed the plans for the Project and concluded that they were inaccurate and inconsistent with the law. CS 67, 68. He argued that the Applicant's surveyor failed to perform a boundary survey of the public rights-of-way that met the requirements of the New Hampshire Board of Licensure for Surveyors. CS 67, at 3. Mr. Nix testified that the plans contained several deficiencies: (i) lack of mathematical metes and bounds and dimensions for the widths; (ii) lack of identification of abutting surveys and mathematical ties to those surveys; (iii) lack of reconciliation between existing surveys and deed descriptions with field evidence; (iv) conflicts between boundary monuments; (v) conflicts between existing fence lines and stone walls; (vi) lack of evidence of field mapping and location; (vii) depicted monuments were not mathematically tied to the boundary of the Project; and (viii) cemeteries that would be crossed by the Project were not adequately field mapped and depicted. CS 67, at 6-7. Mr. Nix also testified that the plans lack bearings and horizontal distances on the right-of-way lines and/or centerline, lines of possession, abutter title references and assessor's parcel numbers, the easement and right-of-way record document references, references to plots and data records, and the name and seal of the licensed land surveyor that prepared the plans. CS 68, at 8-9. Mr. Nix opined that the plans identified right-of-way boundaries that "jog" without explanation, right-of-way lines that cross buildings, evidence of walls and fences that are not held, iron pins that are not held, and right-of-way widths that vary within short distances without explanation. CS 68, at 14-19.

Mr. Nix argued that, because the plans provided by the Applicant are deficient, the Applicant failed to provide documentation demonstrating that the proposed underground section of the Project would be constructed within the right-of-way. CS 67, at 4. Mr. Nix argued that it

is highly probable that the Project would encroach on private properties because the public right-of-way was incorrectly depicted on the plans. CS 68, at 5.

Mr. Nix also identified additional construction design issues: (i) construction of the Project underground at a minimum of 30” would preclude or compromise the municipalities’ ability to install new culverts under the road; (ii) tying of existing pavement with new pavement post-construction would destroy road integrity and cause premature deterioration. CS 67, at 7-8. He asserted that the Applicant failed to address post-construction usage of underground sections of the road that would be occupied by the Project by other authorized users and failed to state who would be responsible for relocation of the underground section of the Project, if needed. CS 67, at 7-8.

Bruce A. Ahern expressed his concerns about the Applicant’s ability to construct the underground portion of the Project within the identified right-of-way without encroaching on private property. APOBP 3, at 3.

The Bethlehem-Plymouth Abutting Property Owners Group of Intervenors³⁵ argued that underground sections of the Project in Easton and Franconia would be too close to a number of private properties located along Route 116. APOBP 1, at 1. They argued that the Project and associated vegetation clearing would alter the character of this area and its land use. APOBP 1, at 5.

b. Subcommittee Deliberations

The Subcommittee heard extensive testimony about the inability of the parties to ascertain the impact of construction of the Project on the orderly development of the region due to the fact that the Applicant failed to provide final surveys of the right-of-way, final

³⁵ Eric and Barbara Meyer from Easton, Robert Thibault from Easton, Russell and Lydia Cumbee from Franconia, Walter Palmer and Kathryn Ting from Franconia, Carl and Barbara Lakes from Easton, Bruce Ahern for Plymouth and Peter and Mary Grote from Franconia.

construction plans and final traffic management plans for the underground section of the Project. When the Application was filed, the Applicant was aware that the Utility Accommodation Manual did not authorize construction of utilities under the travel portion of roads and required construction outside of paved areas as close to the edge of right-of-way as possible. That fact was evidenced by the letter from the Applicant's attorney to DOT. *See* App. 1, Appx. 9, at 12235-12245. The Applicant nonetheless developed and submitted construction plans locating the underground portion of the Project under the paved surface of the roads. The plans were rejected by DOT. *See* App. 107, at 4. DOT, in response, required the Applicant to revise its plans and construct the Project as close to the edge of the right-of-way as possible. DOT also required that the Applicant conduct a survey identifying the boundaries of the right-of-way. While the Application was already pending in this docket, the Applicant attempted to comply with DOT's requirements and provided a survey that the Applicant believed accurately described the boundary of the right-of-way. *See* App. 107, at 3. That survey was widely criticized in this docket and was rejected by DOT. *See* App. 220; Tr., Day 42, Morning Session, 09/29/2017, at 7-8, 152-153; Tr., Day 9, Morning Session, 05/04/2017, at 68-97. When we closed the record, we did not have a final survey of the right-of-way that was deemed acceptable by DOT. To this day, DOT has not approved the final boundary survey of the right-of-way. Without knowing the boundaries of the right-of-way, the Applicant could not determine the number and nature of exceptions that should be filed with DOT. As a result, the Applicant did not know the precise location of each component of the underground section of the Project and could not prepare final construction plans reflecting such locations. The HDD drilling layout was not finalized. In the future, we expect applicants wishing to construct projects under State or local roads and in

energy infrastructure corridors to present a right-of-way boundary survey that is acceptable to DOT.

In this case, the lack of final construction plans for the sections underneath State roads is problematic, but does not necessarily preclude the Subcommittee from ascertaining the construction impacts on orderly development³⁶. In this case, regardless of the status of the current plans, the Applicant would be required to construct the Project within the right-of-way. Once the boundaries of the right-of-way were established and the survey accepted by DOT, the Applicant would have to revise its plans and seek exceptions to ensure that private property was not encroached and the Project was sited within the right-of-way. It is likely that DOT would grant such exceptions to ensure that the Project remains within the right-of-way.

The impacts associated with construction under and over locally-maintained roads present a greater problem. The Project would be constructed under locally-maintained roads. The Project also crosses locally-maintained roads in multiple locations, and would require the construction of multiple access points from local roads. DOT clearly indicated that it did not have the authority and did not want the authority to regulate and enforce construction of the Project over and under locally-maintained roads and the Applicant did not want the municipalities to have the authority to regulate such construction. Instead, the Applicant asserted that construction under locally-maintained roads in the Towns of Stewartstown and Clarksville could be accomplished if the Certificate contained the following conditions:

- A properly qualified consultant selected by, and subject to the supervision of the Administrator of the Committee, and paid for by the Applicants, is authorized to review and approve all requests relative to curb cuts, driveways, detours, *etc.*, involving locally-maintained highways in the Towns of Stewartstown and Clarksville in the same manner that it reviews and approves comparable requests for state-maintained highways; and

³⁶ There may be cases where the lack of constructions plans might cause an application to be denied.

- A properly qualified consultant selected by and subject to the supervision of the Administrator of the Committee and paid for by the Applicants is authorized to monitor the construction of the Project in locally-maintained highways and enforce the relevant requirements of the DOT Utility Accommodation Manual to the Applicants' request to install lines underground in the Towns of Stewartstown and Clarksville.

The Applicant also offered to correct “[a]ny future surface distortion within the trench area in locally-maintained roads, due to settlement or other causes attributable to the construction . . . as required during construction and for a period of two (2) years following the commencement of commercial operations of the Project.” *See Applicant’s Post-Hearing Memorandum*, at 400-401.

Apart from proposing these conditions in its Final Brief, the Applicant failed to provide testimony or evidence demonstrating how the conditions should be implemented. The DOT raised significant concerns about usurping the authority of municipalities over locally-maintained roads. The Applicant acknowledged the concerns raised by DOT. The Applicant ultimately did not request that the Subcommittee delegate its authority to regulate construction under locally-maintained roads to DOT, but offered the conditions referenced above. *See Applicant’s Post-Hearing Memorandum*, at 400-401. The Applicant failed to provide testimony or evidence explaining how the Administrator or a consultant could avoid the same concerns expressed by DOT.

Long-term impact of the underground construction on locally-maintained roads substantially overlaps with the seasonal and routine maintenance of these roads and is not easily implemented or regulated. Locally-maintained roads do not exist in isolation. They are part of the road system that is used and maintained by municipalities in an integrated manner. Regulation of construction under these roads and the future maintenance of these roads requires a thorough understanding of each municipality’s plan for the use of these roads as a part of

municipal infrastructure. The Subcommittee received testimony demonstrating substantial disagreements between the Applicant and municipalities over an appropriate manner of regulation and oversight of construction under and over local roads. Construction of the Project under locally-maintained roads and subsequent maintenance of these roads would require the resolution of many issues concerning multiple parties with opposing interests. The Applicant did not provide testimony that would indicate how the Administrator and a consultant would be in any better position than DOT to resolve these issues. There is good reason for long standing statutory and state agency policy of vesting municipalities with control over their own roads. The Applicant failed to convince us, by a preponderance of evidence, that a delegation of authority to the Administrator and her consultant would better resolve opposing viewpoints and inherent conflicts that would arise between the Applicant and the municipalities.

In its Post-Hearing Memorandum, the Applicant did not propose any conditions addressing responsibility and authority for aerial crossings over locally-maintained roads or access roads on the overhead section of the Project. The Applicant requested that the Subcommittee approve crossings of the locally-maintained roads as indicated in the Application. Aerial crossings of municipal roads as well as using municipal roads for access or construction of access points is not as simple as suggested by the Applicant. It involves resolution of various issues that must be considered, *i.e.* traffic control, impact on environment, impact on the road surface, impact on water and access for emergency vehicles. The Subcommittee needs to understand which roads and where the Applicant intends to cross. The Applicant failed to provide documentation that clearly identified crossings over locally-maintained roads and instead provided a list which did not differentiate between State and local roads. This oversight is

consistent with the Applicant's failure to provide serious consideration and planning with respect to the impact of the Project on local roads, especially in the northern portion of the State.

The Applicant did not file a Traffic Management Plan with the Subcommittee. A Traffic Management Plan cannot be completed without knowing the precise location of the Project. The Applicant was required to have a final Traffic Management Plan for state-maintained roads approved by DOT prior to commencement of construction of the Project. The Applicant would not be allowed to commence construction if such a plan was not approved by the DOT. DOT has rejected the notion of exercising any authority over local roads and, consequently, the Applicant does not have a Traffic Management Plan for local roads. The Applicant stated it would "employ traffic controls in accordance with the 2009 edition of the Manual on Uniform Control Devices and DOT policies." *See Applicant's Post-Hearing Memorandum*, at 401. The Applicant offered a condition pertaining to the construction in the Towns of Clarkesville and Stewartstown:

[a] properly qualified consultant selected by, and subject to the supervision of the Administrator of the Committee, and paid for by the Applicants, is authorized to review and approve traffic control measures and a traffic management plan for the underground installation in locally-maintained roads in the Towns of Stewartstown and Clarksville.

See Applicant's Post-Hearing Memorandum, at 401. The Applicant did not address and did not provide any recommendations as to the development and approval of a Traffic Management Plan for the other municipalities where the Project would be constructed under and over local roads. The Applicant did request that the Subcommittee pre-empt municipal jurisdiction over construction activities on and under municipal roads.

The testimony and evidence demonstrated that construction of the Project would have an impact on traffic in affected communities and that the degree of the impact would vary. Some

communities have a low volume of traffic that can be regulated through implementing a properly developed Traffic Management Plan. Other areas are more complicated. An area of particular concern is the impact of the traffic on orderly development of Plymouth. The Applicant committed to minimizing the impacts, to the extent possible, by employing various construction techniques and conducting construction activities when Plymouth State University is not in session. The Applicant admitted that a portion of the roundabout in downtown Plymouth would be closed. The Applicant requested that the Subcommittee preempt Plymouth's authority over its roads and approve a detour through locally-maintained roads. Similar traffic control issues will occur in the downtown area of Franconia.

The Subcommittee also heard numerous public comments from business owners in Plymouth and other communities stating that impacts on traffic would devastate their businesses. Although the Applicant did conduct outreach to the businesses, the Subcommittee found the outreach to be mostly passive. The Applicant should have done more to engage local businesses and address their concerns and potential for economic loss.

The Subcommittee is concerned that inadequate traffic management strategies, combined with a lack of communication and consideration of business access, may have an unreasonable impact on certain communities. The issue is whether the degree of traffic interference caused by construction would not unduly interfere with orderly development of the region. The Applicant did not meet its burden of proof in this regard.

As to the impact of the Project on existing utilities, the Applicant agreed to comply with the following conditions: (i) the Applicant should assume such additional cost as a municipality may incur due to the maintenance, operation, renewal, or extension of the underground installation components of the Project or appurtenances thereto within the locally-maintained

roads; and (ii) the Applicant should correct any future surface distortion within the trench area in locally-maintained roads, due to settlement or other causes attributable to the construction as required during construction and for a period of two years following the commencement of commercial operations of the Project. *See* Applicant’s Post-Hearing Memorandum, at 401. It is unclear, however, whether a two-year limitation would be sufficient to address surface distortions that could be caused by the Project considering potential emission of heat and changes in weather conditions.

2. Employment

a. Positions of the Parties

(1) Applicant

The Applicant asserted that construction and operation of the Project would have a positive impact on employment in the region. App. 1, at 85-91. In support, the Applicant submitted pre-filed testimony (original and updated) of Julia Frayer, and a report entitled “Cost-Benefit and Local Economic Impact Analysis of the Proposed Northern Pass Transmission Project” dated October 16, 2015³⁷ (App. Appx. 43)³⁸; App. 28; App. 82; App. 101; App. 81; App. 102.

³⁷ Ms. Frayer used the PI+ model developed by Regional Economic Models, Inc. (REMI) to analyze the potential local economic benefits of the Project in terms of the employment and GDP impacts to New Hampshire and other states in New England. App. 1, Appx. 43, at 69. The PI+ model uses jobs inputs as per the US Bureau of Economic Analysis and US Bureau of Labor Statistics. App. 1, Appx. 43, n. 73. The US Bureau of Economic Analysis employment series for states and local areas comprises estimates of the number of jobs, full-time plus part-time, by place of work. App. 1, Appx. 43, n. 73. Full-time and part-time jobs are counted at equal weight. App. 1, Appx. 43, n. 73. Estimated local economic benefits of the Project were not updated. App. 82, at 12-13.

³⁸ Ms. Frayer updated this report on March 17, 2017 and April 17, 2017. App. 81, 102. Analysis of the Project’s impact on employment of the region was not updated. App. 82, at 12-13.

Based on her modeling, Ms. Frayer concluded that the Applicant would create the following jobs in New England during planning and construction of the Project:

State	Planning	Construction				Construction Average
	2015	2016	2017	2018	2019	
New Hampshire	52	38	1249	976	132	582
Massachusetts	7	9	439	349	53	213
Connecticut	9	5	14	12	4	9
Rhode Island						
Maine	1	4	295	233	34	142
Vermont	4	3	92	73	11	45
Total:	73	60	2089	1642	234	1006

App. 1, Appx. 43, at 71, Figure 40.

In her live testimony, Ms. Frayer clarified that the construction jobs estimated as being created in 2016, were also counted in estimated jobs in 2017 if the same job existed in both years. Tr., Day 13, Morning Session, 06/08/2017, at 65. She confirmed that, based on the information provided by the Applicant, a little over half of the direct jobs from construction would be in New Hampshire. Tr., Day 13, Morning Session, 06/08/2017, at 67-68.

Ms. Frayer claimed that the indirect jobs³⁹ created during construction of the Project would be created in the administrative services sector; the professional and technical sector; the agriculture and forestry support services; the food services sector; the wholesale trade sector; the forestry, logging, fishing, hunting and trapping sector; the repair and maintenance sector; the non-metallic mineral product manufacturing sector; the monetary authorities sector (banks and other financial institutions); wood product manufacturing sector; and other sectors⁴⁰. App. 1, Appx. 43, at 74-75, Figure 44.

³⁹ Jobs created by spending that feed into other intermediary industries. App. 1, Appx. 43, at 84.

⁴⁰ The Report does not identify in which “other” sectors 29% of indirect jobs will be created. App. 1, Appx. 43, at 74-75; Tr., Day 14, Afternoon Session, 06/09/2017, at 28-29.

To estimate employment during operation of the Project, Ms. Frayer used projected annual operation and maintenance expenses and funding for community development programs data that was provided by the Applicant. App. 1, Appx. 43, at 72. She also included additional jobs based on her estimate of the annual reduction in retail electricity costs to electricity consumers in the region. App. 1, Appx 43, at 73. Ms. Frayer estimated that, during the first 11 years of operation there would be an increase by 1,148 total jobs⁴¹ per year on average in New Hampshire, primarily as a result of consumer savings in retail electricity costs:

Jobs	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Average
Direct	2	2	2	2	2	2	1	2	2	2	1	2
Indirect	39	119	222	279	306	266	165	80	31	6	(9)	137⁴²
Induced⁴³	301	934	1735	2167	2341	1979	1168	519	142	(38)	(142)	1010
Total:	342	1054	1959	2448	4649	2246	1334	601	175	(30)	(149)	1148

App. 1, Appx. 43, at 78-79, Figure 49. Ms. Frayer acknowledged that local employment benefits would decline from 2024 onward. App. 1, Appx. 43, at 79. She asserted that the negative employment effects from 2028 and 2029 would be due to a decline in disposable income which would be caused by the change in electricity costs (the electricity market benefits would dissipate by then). App. 1, Appx. 43, at 79. She opined that “the employment loss is not a reduction in direct jobs; rather it is a reduction in induced labor effects and caused by the fact the households are scaling back and spending less on consumer expenditures.” App. 1, Appx. 43, at 79.

Ms. Frayer testified that most of the estimated induced jobs in New England would not be created if the Applicant did not qualify for and clear the Forward Capacity Auction or did not qualify and clear 1,000 megawatts. Tr., Day 13, Morning Session, 06/08/2017, at 73-74. In

⁴¹ Direct, indirect, induced, full-time, part-time and seasonal jobs. Tr., Day 14, Afternoon Session, 06/09/2017, at 30-31.

⁴² Should be 150.

⁴³ Jobs created as a result of increased consumer spending which is driven by retail electricity cost savings and economic development funding. App. 1, Appx. 43, at 84.

addition, although Ms. Frayer disagreed that it would happen, she testified that the number of induced jobs could be reduced as a result of the closure of some generating facilities. Tr., Day 13, Morning Session, 06/08/2017, at 74-78.

Ms. Frayer confirmed that the number of estimated jobs would be lower considering the decrease in wholesale electricity market benefits addressed in her updated Report. Tr., Day 13, Morning Session, 06/08/2017, at 115-117. Ms. Frayer did not, however, update her calculation and estimate how many jobs would be created in New Hampshire based on updated wholesale electricity market benefits. Tr., Day 13, Morning Session, 06/08/2017, at 115-117. On cross examination, Ms. Frayer testified that a 25 percent reduction in wholesale electricity market savings would correspond to a similar size decrease in economic benefits. Tr., Day 13, Morning Session, 06/08/2017, at 115-117.

Ms. Frayer opined that Counsel for the Public's experts' estimate of the jobs that would be created as a result of construction of the Project is not reliable due to an input error in the model. Tr., Day 16, Morning Session, 06/14/2017, at 39-42.

Mr. Quinlan testified that the Applicant committed to the "New Hampshire First" approach which would ensure that new jobs created by the Project would be made available to New Hampshire workers first. App. 5, at 5; Tr., Day 2, Afternoon Session, 04/14/2017, at 18-19. Mr. Quinlan explained that the Applicant has already developed and implemented the New Hampshire Energy Jobs Partnership training program and entered into contracts with labor unions and contractors. App. 5, at 5; Tr., Day 2, 04/14/2017, Afternoon Session, at 12-15.

Mr. Quinlan asserted that the Applicant had also established a \$7.5 million North Country Jobs Creation Fund. App. 5, at 5. The Coos County Job Creation Association oversees the Fund. CFP 49. It is overseen by a board of directors composed of local businessmen. CFP

49. Mr. Quinlan testified that the Applicant had already contributed \$200,000 into the Fund to be spent on economic development and job creation opportunities in the region. App. 5, at 5; Tr., Day 1, Morning Session, 04/13/2017, at 64. Mr. Quinlan acknowledged that grants from the Fund have been distributed to a variety of businesses in the North Country for their expansion and disagreed with Mr. Kavet's conclusion that distributions are haphazard and poorly targeted for achieving meaningful economic development. Tr., Day 1, Afternoon Session, 04/13/2017, at 64-70.

(2) Businesses and Organizations with Economic Interests

Dixville Capital, LLC, Balsams Resort Holdings, LLC, and IBEW, supported the Applicant and argued that the Project will create a significant number of construction jobs that will benefit the economy. BUS 1, at 6; BUS 10; and BUS 11.

(3) City of Berlin and City of Franklin

Paul Grenier, on behalf of the City of Berlin, opined that the Project would have a positive impact on local employment if the Applicant was ordered to comply with its commitments to the North Country Jobs Creation Fund. FRANKLIN-BERLIN 1, at 3-5. To ensure, however, that resources distributed from this Fund would benefit the City and the local economy, the City requested that the Subcommittee include a condition in the Certificate ordering the Applicant to "continue to emphasize the distribution of the [North Country Jobs Creation Fund] monies to business opportunities and initiatives in Coos County," particularly in the City of Berlin. FRANKLIN-BERLIN 1, at 6-7; Post-Hearing Memorandum of the City of Berlin.

Elizabeth A. Dragon, on behalf of the City of Franklin, opined that the Project would create new jobs and would have a positive effect on the local economy by attracting new workers

to the area. FRANKLIN-BERLIN 2, at 2-3. Ms. Dragon asserted that these benefits, in turn, would assist the City with rebuilding the local economy and providing better services to its residents. FRANKLIN-BERLIN 2, at 2-3.

(4) Counsel for the Public

Counsel for the Public's experts, Dr. Nicolas O. Rockler and Thomas E. Kavet, opined that, during construction, the Project would create 1,050 jobs in New Hampshire and an additional 2,213 jobs in the other New England states. CFP 146, at 3; CFP 147, at 3.

Dr. Rockler and Mr. Kavet opined that, if the Forward New Hampshire Fund and the Northern Country Job Creation Fund are maintained and administered by independent economic development professionals following best practices for rural economic development, it would be possible to create 150 jobs in New Hampshire per year on average over the 20 year program life, which would result in about \$15 million per year in additional annual economic output while the programs are operational. CFP 146, at 5; CFP 147, at 5.

Dr. Rockler and Mr. Kavet testified that the Project would have a particularly adverse effect on employment and economy in Plymouth. CFP 146, at 9; CFP 147, at 9. Dr. Rockler and Mr. Kavet stated that construction of the Project in Plymouth would entail road closures, including Main Street, loss of parking and loss of business. CFP 146, at 9; CFP 147, at 9. They estimated that 70 days of construction with road closures and total loss of parking spaces would result in a 30% reduction in business leading to direct income reductions of \$1.2 million and the loss of more than 50 direct jobs and more than 80 jobs as a secondary impact. CFP 146, at 9; CFP 147, at 9; CFP 148, at 2. They estimated that 100 days of construction with lane closures, loss of parking, but no road closures would also result in a 30% reduction in business leading to direct income reductions of \$1.8 million and the loss of 80 direct jobs; and that more than 130

days of construction would result in a 50% reduction in business leading to direct income reductions of \$3.8 million and the loss of more than 175 direct jobs. CFP 146, at 9; CFP 147, at 9; CFP 148, at 2. Secondary effects could amplify these losses, causing total one-year local job losses between 120 and 250 jobs and income losses between \$4.5 and \$9.6 million. CFP 148, at 2.

Dr. Rockler and Mr. Kavet concluded that the Project would have the following aggregate impacts on employment (annual average - number of jobs):⁴⁴

Employment Impacts	Construction Period	Near-Term Operational Period	Mid-Term Operational Period	Late-Term Operational Period	Long -Term Operational Period
Impact element	2016-2020	2020-2030	2030-2040	2040-2050	2050-2060
Construction and Development	1,157	-61	-1	16	19
Electricity Market Effects	40	131	-192	-183	-198
Operations and Maintenance	2	13	8	6	4
Property Tax Effects	66	249	122	64	27
Forward NH Plan	147	170	87	0	0
Tourism Effects	-80	-189	-214	-260	-320
Construction Disruptions	-17	0	0	0	0
TOTAL:	1,315	313	-190	-357	-468

CFP 147, at 11; CFP 148, at 4; *see also* Counsel for the Public’s Memorandum Regarding Correction Provided in Connection With KRA Testimony of 10/11/2017, Table 24.

⁴⁴ Based on the following assumptions: (i) Kavet Rockler Project construction and development expenditure estimates; (ii) Kavet Rockler property tax payments that are distributed equally for the purpose of retiring debt and increasing state and local government spending; (iii) The Brattle Group’s “Scenario 2” energy market assumptions, with 500 MW of terminated generation capacity and 500 MW of mothballed capacity distributed throughout the New England region; (iv) Kavet Rockler “conservative” viewshed-limited tourism loss assumption; (v) no negative property valuation impacts; (vi) Forward New Hampshire Fund expenditures that assume independent management and administration of the various funds; and (vii) a “best-case” traffic disruption scenario including “best-case” downtown Plymouth disruption and/or other possible areas of traffic delay. CFP 147, at 10.

(5) Other Parties

Linda Lauer, on behalf of Grafton County Commissioners, Cassandra Laleme, on behalf of the Bethlehem Board of Selectmen, Kate Hartnett, on behalf of the Town of Deerfield, Robert Cote and Bruce Adami, and Thomas and Madelyn Foulkes argued that the Applicant failed to carry its burden of proof to demonstrate that the Project will have a positive effect on employment. GRAFTON 1; JTMUNI 155, at 10-11; DFLD-ABTR 32, at 4; AD-N-ABTR 16, at 3-4.

b. Subcommittee Deliberations

It is undisputed that construction of the Project would generate a significant number of new jobs. While most of these jobs would be temporary in nature, they would have a positive effect on employment in the region during the construction period. As to the argument that some of the jobs would be provided to out-of-state employees, the testimony and evidence indicates that even if jobs were provided to out-of-state employees, New Hampshire's economy would benefit from induced and indirect jobs as a result of construction activities.

There was testimony that a number of businesses would have to let employees go due to the effect of construction of the Project. Although no testimony was provided comparing the number of jobs that would be lost to the number of jobs that would be created, it appears that more jobs would be created as compared to the jobs that would be lost.

After construction, the number of new jobs estimated by the Applicant's experts is overinflated and does not reflect the actual number of jobs that would be created using the Applicant's expert's methodology. The Applicant's estimated number of jobs was based on the assumption that the Project would generate approximately \$80 million a year in retail electricity savings from the Energy and Capacity Markets. The savings calculation was updated and

reduced. The Applicant provided revised and updated testimony indicating that the Project would generate approximately \$62 million (\$42 million in present value terms) per year in savings from the Energy and Capacity Markets. The updated information reduced the estimated savings from the Energy and Capacity Markets by approximately 25% in nominal terms and by almost 50% when savings are quantified in 2020 dollars. The Applicant's expert, Ms. Frayer did not, however, recalculate the Project's impact on GDP⁴⁵ and employment based on this updated number. She testified that a 25% decrease in savings would result in a similar decrease in GDP and employment. Employment, especially during operation of the Project, could be even lower if forward capacity market benefits were not realized at all. The amount of savings from the forward capacity market was the subject of much debate, discussed below.

We find that the Project is likely to create a significant number of jobs during construction. After construction direct jobs are estimated to be 2 per year, for employees working for Northern Pass. The remainder of jobs after construction is completed depends primarily on the amount of savings from the retail electricity market. We find that, if there are retail savings, there will be a positive impact on the economy and employment, but that impact is difficult to quantify based on the record, and has been overstated by the Applicant. The other effects of the Project on the economy of the region are discussed in the next section.

3. Wholesale Electricity Market Savings and Various Effects on Economy

a. Positions of the Parties

(1) Applicant

Beyond the construction period, the Applicant asserted that construction and operation of the Project would benefit the economy. App. 1, at 85.

⁴⁵ Throughout the proceedings the economist witnesses and the parties appeared to use gross domestic product (GDP) and gross state product (GSP) interchangeably.

Ms. Frayer opined that the Project would reduce the wholesale market price of electricity (wholesale energy and capacity market benefits) in the ISO-NE markets. App. 82, at 4-5, 8-9, Figure 1. She estimated reductions in wholesale electricity costs from 2020 to 2030 averaging \$602 million per year for New England including \$61.6 million per year for New Hampshire in nominal terms. App. 82, at 4-5; App. 82, Table 1. In response to a record request, Ms. Frayer estimated that the present value of the average annual wholesale electricity market benefit is \$41.6 million. App. 180, at 1⁴⁶. She testified that capacity market savings make up the largest share of wholesale electricity price benefits. Tr., Day 13, Morning Session, 06/08/2017, at 107.

Ms. Frayer acknowledged that the Project's benefits were calculated based on the assumption that all 1,000 megawatts of the Project would qualify and clear the Forward Capacity Auction. Tr., Day 13, Afternoon Session, 06/08/2017, at 24-25; Tr., Day 15, Afternoon Session, 06/13/2017, at 59. She testified that her calculations did not address the possibility of an additional bidder with a similar project. Tr., Day 15, Afternoon Session, 06/13/2017, at 172-174. She agreed that the wholesale electricity market savings are not unique to this Project. If another supplier qualified and cleared the Auction with the same amount of capacity, the savings from the wholesale electricity market would be the same. Tr., Day 16, Morning Session, 06/14/17, at 7.

Ms. Frayer testified that her calculation of the impact of the Project on the retirement of energy generation facilities was based on: (i) information disclosed in FERC Forms 1⁴⁷ or United States Energy Information Administration (EIA) Forms⁴⁸; and (ii) estimates that were based on information available to the general public. Tr., Day 13, Afternoon Session, 06/08/2017, at 35-

⁴⁶ \$5.8 million annual average benefit from Energy Market, and \$39.3 million annual average benefit from Capacity Market.

⁴⁷ FERC Form 1 (Electric Utility Annual Report) is a comprehensive financial and operating report submitted for Electric Rate regulation and financial audits.

⁴⁸ EIA's statistical surveys encompass each significant electric supply and demand activity in the United States.

36. She acknowledged that her modeling failed to predict the retirement of the Pilgrim Nuclear Plant and the Bridgewater Harbor 3 facility. Tr., Day 13, Afternoon Session, 06/08/2017, at 31-32.

32. Ms. Frayer also testified that her report and modeling incorrectly assumed the amount of megawatts that would be retiring in FCA 12. CONFIDENTIAL Tr., Day 14, Morning Session, 06/09/2017, at 106-110. She confirmed that her forecast of the clearing price for Forward Capacity Auction #10 and Forward Capacity Auction #11 was not accurate. CONFIDENTIAL Tr., Day 13, Afternoon Session, 06/08/2017, at 42-46; CONFIDENTIAL Tr., Day 14, Afternoon Session, 06/09/2017, at 54-58. She also failed to correctly estimate the amount of new generation entering the market for Forward Capacity Auction #10 and the amount of new demand resources entering and clearing Forward Capacity Auction #11. Tr., Day 13, Afternoon Session, 06/08/2017, at 47-48. Ms. Frayer explained that, in her opinion, the underestimation of the amount of new resources that entered and cleared Forward Capacity Auction #11 caused her overestimation of the clearing price. Tr., Day 15, Morning Session, 06/13/2017, at 7-8.

Ms. Frayer testified that the ISO-NE Internal Market Monitor, while determining the minimum offer price through application of the Minimum Offer Price Rule (MOPR) for the Forward Capacity Auction, would not consider the costs of constructing the Canadian portion of the Project (79 kilometers) because it would be funded through existing transmission tariffs that would be paid by Hydro-Québec Production to Hydro-Québec TransEnergie. Tr., Day 13, Afternoon Session, 06/08/2017, at 72-91. She opined that the only cost that would be considered by the Internal Market Monitor with regard to the cost of the Canadian portion of the Project would be the additional contribution that HQP would need to make to HQT for the Québec line, *i.e.* \$5 million. Tr., Day 15, Afternoon Session, 06/13/2017, at 29-32. She confirmed that, if the Internal Market Monitor disagreed with her conclusion and included the cost of construction of

the Canadian section of the portion (approximately \$450 million) as part of the MOPR analysis, it would increase the Project's offer price in the Forward Capacity Auction. Tr., Day 13, Afternoon Session, 06/08/2017, at 91-92. That, in turn, could affect the Project's ability to clear 1,000 megawatts in the Auction. Tr., Day 13, Afternoon Session, 06/08/2017, at 72-92.

Ms. Frayer could not verify that the Internal Market Monitor would use the same depreciation amortization term as she used for the purposes of calculating the Project's Minimum Offer Price. CONFIDENTIAL Tr., Day 14, Morning Session, 06/09/2017, at 29-49; Tr., Day 15, Afternoon Session, 06/13/2017, at 177-178. She stated, however, that she was "extremely confident" that the Project would qualify and clear the Forward Capacity Auction. Tr., Day 15, Afternoon Session, 06/13/2017, at 56-57. She confirmed that she has not reviewed an actual case that was proceeding through ISO-New England for a MOPR analysis of an electric transmission upgrade (ETU). Tr., Day 14, Morning Session, 06/09/2017, at 5.

Ms. Frayer testified that her report and modeling might have failed to account for the capital costs of upgrades that could be required as a result of an ISO-New England Capacity Deliverability Study. Tr., Day 14, Morning Session, 06/09/2017, at 87-89. She stated, however, that costs associated with such upgrades would be insignificant and would not have any measurable effect on her analysis. Tr., Day 16, Morning Session, 06/14/2017, at 55-56.

While addressing criticism contained in reports prepared by The Brattle Group and Mr. Fowler, Ms. Frayer asserted that her analysis demonstrated that Hydro Québec Production has sufficient surplus energy and capacity to sell into New England, without reducing its sales of energy and capacity to other New England entities. App. 101, at 3. Ms. Frayer claimed that "[t]here is . . . no evidence to suggest that Northern Pass would be constrained in qualifying capacity technically or economically, due to the ISO-NE's technical qualification process for

new resources of the [Minimum Offer Price Rule].” App. 101, at 3. She also opined that, given the economic revenues for capacity sales, it would not be economically rational for Hydro Québec Production to forego the capacity sales. App. 101, at 3.

Ms. Frayer also argued that the model used by experts for Counsel for the Public is “overly simplistic” and does not reliably project market outcomes. App. 101, at 3. She also claimed that there is no plausible basis for considering the scenarios hypothesized and analyzed by Counsel for the Public’s experts. App. 101, at 4.

Ms. Frayer estimated that production cost savings caused by the operation of the Project would be approximately \$389 million⁴⁹ on average per year for New England with Massachusetts and Connecticut receiving the largest benefits. App. 82, at 5, 12; Tr., Day 14, Morning Session, 06/09/2017, at 21-22.

Ms. Frayer opined that New Hampshire economic activity during construction of the Project, would expand GDP by \$111 million per annum (p.a.) on average or approximately 0.16% of the New Hampshire GDP based on 2014 GDP levels. App. 1, Appx. 43, at 74. Once operational, the Project would reduce the commodity component of retail costs of electricity across New England as much as \$577.7 million a year,⁵⁰ allowing residential consumers to spend the money they save from lower retail costs of electricity on other goods and services and, as a result, stimulating the economy and expanding the GDP. App. 1, Appx. 43, at 78. She testified the majority of economic benefits during operation of the Project would be produced by savings

⁴⁹ Between \$330 million and \$425 million per year according to the original report and testimony. App. 28, at 6, Figure 1.

⁵⁰ Ms. Frayer testified that, based on her updated analysis, using her blended rate savings calculation (all types of customers), over the forecasted time frame, retail rate savings for a typical customer in New Hampshire using 300 kW hours per month would be \$18 a year. Tr., Day 15, Morning Session, 06/13/2017, at 68-70.

from the electricity market, Tr., Day 15, Afternoon Session, 06/13/17, at 68-69; and the majority of those savings are associated with the capacity market. App.1, Appx 43, at 14.

Ms. Frayer claimed that lower retail costs of electricity, as well as operation and maintenance spending, and community development funding, would result in a GDP increase on average of \$162 million per annum in New Hampshire and the GDP of the other New England states would increase by an average of \$1,156 million per annum during the first 11 years of the Project’s operation. App. 1, Appx. 43, at 78. Ms. Frayer summarized the estimated increase in GDP during the first 11 years of commercial operation in the following table:

\$-Million	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Average
Connecticut	34	108	337	479	566	498	278	103	13	(31)	(58)	205
Maine	6	51	114	155	179	161	104	55	28	13	4	79
Massachusetts	(51)	324	914	1292	1534	1374	835	384	157	38	(36)	615
New Hampshire	31	113	225	297	341	311	208	120	69	43	25	162
Rhode Island	(8)	35	103	146	172	150	85	34	9	(4)	(12)	65
Vermont	2	17	42	59	69	63	40	21	11	6	2	30
Total:	(54)	648	1734	2426	2860	2557	1550	717	287	65	(75)	1156

App. 1, Appx. 43, at 81, Figure 51.

Ms. Frayer confirmed that a majority of estimated increases in GDP associated with operation of the Project would not occur if the Applicant did not qualify for the Forward Capacity Auction or its offer price did not clear in the Auction. Tr., Day 13, Morning Session, 06/08/2017, at 106-107. She also confirmed that the actual increase in GDP would be lower if the wholesale electricity market benefits decreased. Tr., Day 13, Morning Session, 06/08/2017, at 115-117. Ms. Frayer testified that there was no reason for her to update her report and account for reduction in GDP that would be caused by a reduction of wholesale electricity market benefits. Tr., Day 13, Morning Session, 06/08/2017, at 115-125.

In conclusion, Ms. Frayer opined that “even in the face of shifting market conditions due to changes in underlying drivers and evolving market rules, a project like Northern Pass would

create substantial wholesale electricity market benefits in the form of lower electricity costs, benefiting consumers across New England.” App. 82, at 13.

Mr. Varney argued, based on the analysis conducted by Ms. Frayer, that the energy transmitted over the Project would displace the production of older, less efficient generation, including fossil fuel-plants and, consequently, would decrease emissions of carbon dioxide (CO₂), sulfur dioxide (SO₂) and nitrous oxide (NO_x) in New England from 2020-2030: (i) CO₂ – approximately 3.2 million metric tons would be avoided per year⁵¹; (ii) SO₂ would decrease by approximately 107 to 198 short tons per year; and (iii) NO_x would decrease by approximately 565 to 650 short tons per year. App, 28, Figure 1; App. 82, at 39; App. 141, at 1. Ms. Frayer further opined that the Project would create approximately \$189 million in annual, incremental social benefits from CO₂ reductions to New England. App. 81, at 25.

William J. Quinlan testified that the New Hampshire economy would benefit from establishment of the Forward New Hampshire Fund. App. 5, at 4. According to Mr. Quinlan, the Forward New Hampshire Fund would be funded with \$10 million annually for 20 years to “support community betterment, clean energy innovation, tourism and economic development”⁵² of New Hampshire with particular emphasis on host communities in the North Country.⁵³ App. 5, at 6; Tr., Day 1, Morning Session, 04/13/2017, at 173-177. The Forward New Hampshire Fund would function as a non-profit corporation subject to oversight by the New Hampshire Attorney General’s Office, Charitable Trust Division. App. 6, at 3. It would operate under New Hampshire law subject to by-laws that would be adopted by its Board of Directors. App. 6, at 3.

⁵¹ Equivalent to removing approximately 675,000 passenger vehicles from the road per year. App. 141, at 1.

⁵² Articles of Agreement of the Fund define its purpose as to “promote the economic well-being of the State of New Hampshire by supporting programs associated with stimulating economic development and economically distressed area, including enterprise zones, urban renewal areas, the North Country of New Hampshire, targeted industrial development areas and low income neighborhoods.” CFP 34.

⁵³ Mr. Quinlan defined “North Country” as the land north of Franconia Notch. Tr., Day 1, Morning Session, 04/13/2017, at 65.

According to Mr. Quinlan, the Fund would operate through a Board of Directors that would include “municipal and community leaders, representatives of the business community, environmental organizations, North Country leaders and other key stakeholders.” App. 5, at 6; App. 6, at 3. The Board of Directors would consist of nine members that would be selected by incorporators. App. 6, at 3; Tr., Day 1, Morning Session, 04/13/2017, at 67. It would consider proposals or requests for funding from New Hampshire residents, businesses, municipalities, communities and non-profit groups and, after considering the Advisory Board⁵⁴ recommendations, would make final decisions as to the allocations of funds. App. 6, at 3-4. Mr. Quinlan asserted that the Applicant has already distributed approximately \$5.5 million from the fund, including a loan to the Balsams Resort (\$2 million). App. 6, at 4, 6. Mr. Quinlan acknowledged that the Applicant agreed to provide an additional \$3 million to the Balsams Resort as a loan and allow the Public Utilities Commission to allocate \$20 million of the Fund over a ten year period to fund clean energy and energy efficiency initiatives in the State. App. 6, at 4, 6; App. 78; Tr., Day 1, Morning Session, 04/13/2017, at 67, 161; Tr., Day 2, Afternoon Session, 04/14/2017, at 108-109. Mr. Quinlan agreed to a condition in the Certificate, if granted, ordering the Applicant to set up the Fund and make distributions from the Fund as indicated in the Application and his testimony. Tr., Day 1, Morning Session, 04/13/2017, at 181.

The Applicant also argued that the Project would have a positive effect on the economy by improving the Coos Transmission Loop and unlocking up to 100 MW of existing and future sources of renewable energy for the State and region. App. 5, at 7; Tr., Day 2, Morning Session, 04/14/2017, at 34-36. According to Mr. Quinlan, it is unlikely that the Coos Loop would be

⁵⁴ North Country Development Advisory Board, Economic and Community Development Advisory Board, Clean Energy Innovation Advisory Board and New Hampshire Tourism Enhancement Advisory Board. CFP 35, at 10.

upgraded in the near future without the Applicant's assistance. Tr., Day 2, Morning Session, 04/14/2017, at 34-36.

Another aspect of economic impact affecting the orderly development of the region is the impact of the Project on small businesses. The Applicant recognized that there may be some impacts on small business in the region and offered commitments and conditions to ameliorate some of the impact.

Mr. Johnson confirmed that installation of Transition Station #4 would require blasting and removal of approximately 30,000 cubic yards of ledge in some proximity to Mr. Thompson's property and glacial springs. Tr., Day 8, Afternoon Session, 05/03/2017, at 64. Mr. Bowes testified, however, about the Applicant's commitment to establish a monitoring program that would monitor the glacial springs located on Mr. Thompson's property before, during, and after construction to ensure that construction of the Project would have no adverse effect on the springs. Tr., Day 8, Afternoon Session, 05/03/2017, at 45-46. Mr. Kayser further testified that a blasting plan would account for the springs and would consider their location and proximity to blasting activities. Tr., Day 8, Afternoon Session, 05/03/2017, at 53.

As to the dairy farm owned by Mr. McAllaster, the construction panel confirmed that construction of the Project would take place in front of the access road to the farm. Tr., Day 8, Afternoon Session, 05/03/2017, at 83-84, 92-94. Ms. Farrington testified that the Applicant would ensure that the McAllasters would have access to the farm. Tr., Day 8, Afternoon Session, 05/03/2017, at 93. Mr. Johnson also testified that, if the farm's truck would not be able to transport milk from the farm to consumers due to the traffic constraints associated with construction of the Project, the Applicant would purchase the milk. Tr., Day 8, Afternoon Session, 05/03/2017, at 94-95.

Mr. Bowes also testified that the Applicant would work with the Concord Equestrian Center and would assist it with relocating animals during construction of the Project. Tr., Day 12, Morning Session, 06/02/2017, at 77.

Mr. Bowes also testified that the Applicant considered other measures to minimize the Project's impact on local business such as night-time construction, extending the construction hours resulting in a shorter construction period, encouraging construction workers to use local businesses, and introducing a claims process that would allow businesses to recover their losses. Tr., Day 9, Morning Session, 05/04/2017, at 123-125. Mr. Bowes testified that, as outreach efforts, the Applicant has met with a number of businesses located on the underground section of the Project and would meet with others to describe the Project, to ascertain the needs and concerns of the business owners and, hopefully, to accommodate them. Tr., Day 43, Afternoon Session, 10/02/2017, at 63-66. As to the claims process, Mr. Bowes testified that, similar to other Eversource projects, business owners that would be impacted by the Project would be provided the opportunity to receive reimbursement for damages sustained, direct losses, and lost opportunities, upon submission of documentation verifying the damages and subject to verification and confirmation of damages. Tr., Day 12, Morning Session, 06/02/2017, at 132-135; Tr., Day 42, Afternoon Session, 09/29/2017, at 129-130. Mr. Bowes testified that business owners would be notified about the availability of the claims process by the Applicant prior to the commencement of construction. Tr., Day 12, Morning Session, 06/02/2017, at 132-135.

The Applicant's expert on orderly development, Robert Varney, testified that he had not specifically studied and addressed the impacts of construction of the underground section of the Project on businesses in Bethlehem, Franconia, Woodstock and Plymouth. Tr., Day 35, Afternoon Session, 09/18/2017, at 65-71. He asserted that he understood the concerns expressed

by various business owners along the underground section of the Project and stated his belief that the Applicant, with the assistance of Louis Karno Company, would conduct extensive outreach and would address the owners' concerns prior, during, and after construction of the Project. Tr., Day 38, Morning Session, 09/22/2017, at 20; Tr., Day 40, Morning Session, 09/26/2017, at 100-101, 104-105. He testified that the Applicant sent outreach letters to business owners and residents along the underground section of the Project in 2015 and March 2017. Tr., Day 38, Afternoon Session, 09/22/2017, at 73-74; Tr., Day 40, Morning Session, 09/26/2017, at 97, 110-111. Without specificity, he asserted that the Applicant has conducted some additional outreach to the business owners throughout the years.⁵⁵ Tr., Day 40, Morning Session, 09/26/2017, at 102-103. Mr. Varney opined that "the Project can be carried out in such a way that there would be minimal short-term impacts on those businesses during the construction process." Tr., Day 35, Afternoon Session, 09/18/2017, at 72.

Mr. Varney acknowledged that he had not considered the impacts of the construction of the overhead portion of the Project on any specific business along the route. Tr., Day 35, Afternoon Session, 09/18/2017, at 62-64.

The Applicant claimed that the Project would have a positive effect on local real estate taxes. App. 1, at 87-89. The Applicant offered testimony (original and supplemental) from Lisa Shapiro, Ph.D. App. 29, App. 103; App. 1, Appx. 44. Dr. Shapiro authored and filed a report entitled "Northern Pass Transmission Project – Estimated New Hampshire Property Tax Payments." App. 29, App. 103; App. 1, Appx. 44. Dr. Shapiro testified that she conducted modeling based on total town-by-town cost allocations that were provided by the Applicant. App. 29, at 1. She estimated the Applicant's property tax payments and local fiscal community

⁵⁵ Summary of the Applicant's outreach efforts to businesses and their results were filed with the Subcommittee as Applicant's Exhibit 216.

impacts by running simulations using historical data and a range of growth rate assumptions. App. 29, at 1-2. Based on her calculations, Dr. Shapiro opined that, during construction of the Project, the Applicant would pay approximately \$56 million in property taxes. App. 29, at 4.

Dr. Shapiro testified that, in the first full year of operation, the Applicant would pay between \$35 and \$40 million in New Hampshire property taxes: (i) \$21-\$26 million municipal and local education property taxes; (ii) \$4 million county taxes (approximately 10% share of the total taxable base in Coos County, 3.7% in Grafton County, 3.1% in Merrimack County, and 0.3% in Belknap and Rockingham Counties); and (iii) \$10 million state utility education property taxes redistributed to local communities for education accounting for approximately a 25% increase in that revenue. App. 29, at 2-3; App. 1, Appx. 44, Figures 6-7. She claimed that the Applicant's contribution in the aggregate is estimated to be approximately 11% of the total local taxable base across 31 host communities in the first full year of operation making it, most likely, "the largest or among the largest taxpayers in most of the host communities." App. 29, at 2.

Dr. Shapiro acknowledged that "[i]t is very difficult to estimate the Northern Pass property tax payments over time because many different factors, and the interaction of them, would determine the future property taxes made by the Project." App. 29, at 4. She estimated that, using the estimated net book value of the Project as fair market value for tax purposes, the Applicant would pay approximately \$564-\$692 million in total New Hampshire property taxes over the first 20 years of operation. App. 29, at 4; App. 1, Appx. 44, at 15-16, Figure 9.

Mr. Quinlan testified that the Applicant has pledged that, for twenty years from placement of the Project in service, it would not to seek to abate tax assessments of "transmission infrastructure" that are consistent with the straight line depreciation method. App. 6, at 8; Tr., Day 1, Afternoon Session, 04/13/2017, at 48-55. A copy of the pledge was provided

as Attachment I to Mr. Quinlan's testimony. App. 6, Att. I. Mr. Quinlan asked that the pledge be incorporated as a condition of the Certificate. App. 6, at 8.

(2) Businesses and Organizations With Economic Interests

Leslie Otten, on behalf of Dixville Capital, LLC and Balsams Resort Holdings, LLC, opined that the Project would benefit redevelopment and operation of The Balsams Resort. BUS 1, at 3-5. Specifically, Mr. Otten opined that the Project would introduce low-cost hydropower that would be required for operating the Resort and would enable the Resort to reduce its operating expenses by approximately \$200,000 per year over current prices. BUS 1, at 4-5. Mr. Otten testified that introduction of low cost energy by the Project would be beneficial for other businesses in the region that require substantial electric resources for their operation and spend substantial funds on paying for such resources. BUS 1, at 5. Mr. Otten also acknowledged that the Project has already had a positive impact on the Resort where substantial funds from the Forward New Hampshire Fund have been distributed as a loan to the Resort. BUS 2, at 5.

The Coos County Business and Employers Group, represented by Allen Bouthillier, also weighed in. BUS 3. This Group consists of four or five members and was formed, in part, to support the Project. Tr., Day 39, Afternoon Session, 09/25/2017, at 87, 92-93, 152. It has not acted as a board except to intervene in these proceedings. Tr., Day 39, Afternoon Session, 09/25/2017, at 87, 92-93, 152. Mr. Bouthillier opined that the Project would have positive impacts on the local economy by increasing tax revenues and, consequently, providing funds for improvements required for development of local communities. BUS 3, at 6. He also stated that construction and operation of the Project would have a positive impact on the local economy because the Applicant committed to performing road work on certain roads in the North Country. BUS 3, at 6. According to Mr. Bouthillier, improving the roads would stimulate transportation

and growth of the local economy. BUS 3, at 6-7. Mr. Bouthillier testified that proposed upgrades to the Coos Loop would benefit the local economy allowing the Berlin biomass facility to increase its output, would increase demand for biomass provided by local businesses, would allow for construction of additional renewable energy facilities in the region and would allow local businesses to benefit from constructing and serving these facilities and from leasing land required for their operation. BUS 3, at 7. Mr. Bouthillier also testified that the local economy and businesses would benefit from distributions made from the Forward New Hampshire Fund and jobs provided as a result of implementation of the North Country Job Creation Fund. BUS 3, at 7-8.

(3) City of Berlin and City of Franklin

Paul Grenier, on behalf of the City of Berlin, opined that the Project would have a positive impact on the economy by upgrading the Coos Loop. FRANKLIN-BERLIN 1, at 3-5. Mayor Grenier asserted that the electric generation facilities located in the city and transmit generated power through the Coos Loop⁵⁶ are unable to transmit their full capacity due to thermal, voltage, and stability constraints associated with the Coos Loop. FRANKLIN-BERLIN 1, at 3. The Applicant offered to perform certain upgrades of the Loop that would allow for a greater production of electricity and would reduce forced shut-downs for facilities located in the City. FRANKLIN-BERLIN 1, at 4. Upgrades would allow the facilities to transmit and sell more electricity and, consequently, would increase their taxable values. FRANKLIN-BERLIN 1, at 4. As a result, the City of Berlin would receive greater tax revenues and/or reduce the City's tax rates. FRANKLIN-BERLIN 1, at 4-5. Mayor Grenier concluded that the proposed upgrades to the Coos Loop, ultimately, would have a positive impact on the City's economy. FRANKLIN-

⁵⁶ The Burgess Biomass Plant, Jericho Wind, and four unidentified hydro-electric facilities. Ex. Franklin-Berlin 1, at 3.

BERLIN 1, at 5. Mayor Grenier opined it was unclear whether the proposed upgrades would accommodate new or expanded generation facilities. FRANKLIN-BERLIN 1, at 5. Mayor Grenier requested, as a condition of a Certificate, if one was granted, that the Subcommittee require the Applicant, prior to commencement of operation of the Project, to upgrade the Coos Loop so that it would be capable of accommodating expanded or new generation facilities along the Loop without the shut-downs presently experienced by existing generators. FRANKLIN-BERLIN 1, at 5; Tr., Day 1, Morning Session, 04/13/2017, at 60-64.

Mayor Grenier opined that the Project would have a positive impact on the local economy due to establishment of the Forward New Hampshire Fund. FRANKLIN-BERLIN 1, at 5-7. To ensure that the resources distributed from this Fund would benefit the City and local economy, the City asked that the Subcommittee require the advisory board managing the Fund to adopt guidelines “emphasizing the benefit and need for the disbursement of monies to projects located within Coos County and the City, specifically.” FRANKLIN-BERLIN 1, at 5.

Finally, Mayor Grenier asserted that construction and operation of the Project would cause a decrease of the City’s county tax responsibility by increasing Coos County’s tax base. FRANKLIN-BERLIN 1, at 8. Mayor Grenier argued that any and all tax benefits associated with the Project would be “meaningfully experienced” only if the Project is taxed at its fair market value using a methodology different from the one favored by the Applicant. FRANKLIN-BERLIN 1, at 8. Therefore, Mayor Grenier requested a condition in the Certificate requiring the Applicant to follow taxation methodology that is based on new replacement cost, less depreciation on the basis of the assets’ physical life. FRANKLIN-BERLIN 1, at 8.

Elizabeth A. Dragon, on behalf of the City of Franklin, opined that the Project would have a positive impact on the economy because it would substantially increase the City’s tax

base and would result in distribution of approximately \$7 million within the first year of operation of the Project. FRANKLIN-BERLIN 2, at 1-2. Ms. Dragon asserted that these benefits, in turn, would assist the City with rebuilding the local economy and providing better services to its residents. FRANKLIN-BERLIN 2, at 2-3.

(4) Counsel for the Public

Counsel for the Public submitted pre-filed testimony from Samuel Newell and Jurgen Weiss (original and supplemental), together with a report entitled “Cost-Benefit and Local Economic Impact Analysis of the Proposed Northern Pass Transmission Project” (original and revised). CFP 142; CFP 142, Att. C; CFP 143, 144.

Dr. Newell and Dr. Weiss argued that while calculating wholesale energy and capacity market benefits, Ms. Frayer failed to account for the uncertainty factor as to the quantity and price of reliable capacity that Hydro-Québec would transmit via the Project. CFP 142, at 3. They asserted that it is possible that the Project would not be qualified by ISO New England for participation in the forward capacity market if Hydro-Québec could not demonstrate that it had enough surplus capacity to reliably export power during the winter when its own system demand peaks. CFP 142, at 3. They also claimed that the capacity that would qualify could fail to clear the market depending on Hydro Québec’s offer price which would be reviewed by ISO-NE’s Internal Market Monitor. CFP 142, at 3.

Another uncertainty identified by Counsel for the Public’s experts is how competing suppliers would respond to entry of the Project into the market. CFP 142, at 3. They asserted that it is impossible to predict whether the Project would displace another similar transmission project or other clean energy resources. CFP 142, at 3. According to Counsel for the Public’s experts, estimating capacity displacement and the prices at which displacement might occur is

important because it produces an offsetting effect on prices and, consequently, reduces the net impact of the Project. CFP 142, at 3-4. Considering these uncertainties, Counsel for the Public's experts modeled four scenarios:

- Scenario 1 – the Project would expand the supply of clean energy into New England without displacing other similar projects and would provide 1,000 MW of capacity;
- Scenario 2 - the Project would expand the supply of clean energy into New England, would provide 1,000 MW of capacity and would induce 500 MW of existing generation capacity to retire;
- Scenario 3 - the Project would expand the supply of clean energy into New England without displacing other similar projects, but would not provide any capacity; and
- Scenario 4 – the Project would displace competing clean energy projects and would not provide more clean energy than if the Project was not constructed.

CFP 142, at 4.

The experts testified that the models demonstrated the following: (i) Scenario 1 - \$32 million per year in total market savings (\$10 million per year in energy market savings and \$22 million per year in capacity market savings); (ii) Scenario 2 - \$22 million per year in total market savings (\$10 million per year in energy market savings and \$11 million (*sic*) per year in capacity market savings); (iii) Scenario 3 - \$5 million per year in total market savings (\$12 million per year in energy market savings and -\$7 million per year in capacity market savings); and (iv) Scenario 4 - \$0 million per year in total market savings (\$0 million per year in energy market savings and \$0 million per year in capacity market savings). CFP 142, at 6, Table 1; CFP 142, Att. C, at 30-52. They concluded that the Project could fail to provide any wholesale electricity market benefits to New Hampshire customers if it was displaced by a similar competing project. CFP 144, at 2. They opined that this scenario is quite possible, considering the Applicant's acknowledgment that construction of the Project depended on winning a competitive solicitation for clean energy. CFP 144, at 2. They opined that, if the Project provided incremental clean

energy, it would be uncertain whether it would qualify and clear as capacity in ISO New England's capacity market. CFP 144, at 2. Under these circumstances, the Project would provide energy market benefits, but would not provide capacity market benefits. *See* CFP 144, at 2. If the Project qualified and cleared incremental capacity, energy and capacity market prices would decrease and the amount of savings would depend on market conditions. CFP 144, at 2.

Counsel for the Public's experts further assumed that the wholesale market impacts of the Project that would reduce the costs of procuring energy and capacity by retail electric service providers would be passed through to retail customers. CFP 142, at 6. Based on this assumption, they determined that the Project could provide New Hampshire customers with retail rate savings of 0 to 0.28 cents/kWh on average from 2020 to 2032 (in constant 2020 dollar terms). CFP 144, at 2. These savings are in relation to 2016 baseline retail rates of approximately 18 cents/kWh. CFP 142, at 6; CFP 142, Att. C, at 53; CFP 144, at 2. This would provide annual bill savings of \$0 to \$21 per residential customer (assuming 621 kWh per month) and \$0 to \$34 million statewide each year. CFP 144, at 4. Over the 13-year period studied, these savings are worth between \$0 and \$307 million at a 7% discount rate. CFP 144, at 2. Under "the most extreme alternative assumption," they estimated that benefits associated with the Project could amount to 0.5 cents/kWh, \$37 per year per household, \$66 million per year statewide, with a \$572 million net present value. CFP 144, at 2-3. They concluded that, under these scenarios, it "would be a meaningful reduction, but not enough to fundamentally change electric rates in New Hampshire." CFP 144, at 3.

As to estimated savings associated with reduction in carbon emissions, Counsel for the Public's experts opined that such savings could be realized only if incremental clean energy displaced fossil generation as opposed to just shifting supply of already existing clean energy

from one place to another. Tr., Day 52, Morning Session, 10/26/2017, at 50-51. With the exception of Scenario 4, they generally accepted as reasonable the Applicant's estimate that the Project would reduce greenhouse gas emissions by approximately 3.3 million metric tons per year. Tr., Day 52, Afternoon Session, 10/26/2017, at 63-65.

Dr. Newell and Dr. Weiss explained that economists often look at the societal benefits of projects in terms of production cost savings when evaluating whether a project is beneficial. Tr. Day 53, Morning Session, 10/27/17, at 36-45. In this proceeding, however, the benefit analysis is focused on wholesale electricity market and ratepayer savings. Tr. Day 53, Morning Session, 10/27/17, at 36-45. Dr. Newell and Dr. Weiss testified that production cost savings should not be counted as a benefit when wholesale electricity market savings are being used to quantify benefits. Tr. Day 53, Morning Session, 10/27/17, at 36-45. The two are not additive, but rather different ways of looking at the benefits of a project. Tr. Day 53, Morning Session, 10/27/17, at 36-45.

Counsel for the Public's experts, Dr. Rockler and Mr. Kavet opined that during three years of construction, New England's GSP would increase by approximately \$199.4 million and New Hampshire's GSP would increase by approximately \$93.6 million. CFP 147, at 3; CFP 148, at 2; CFP 148, at 4; *see* Counsel for the Public's Memorandum Regarding Correction Provided in Connection With KRA Testimony of 10/11/2017, Table 7.

Dr. Rockler and Mr. Kavet asserted that four different scenarios of the impacts on retail electricity prices from operation of the Project were prepared and evaluated. CFP 146, at 4; CFP 147, at 4. The savings ranged from \$0 to \$28 million per year over 11 years (2020 to 2030). CFP 146, at 4; CFP 147, at 4. The sensitivity analysis demonstrated that the maximum New Hampshire electricity price savings would average \$62-million per year. CFP 146, at 4; CFP

147, at 4. Without presuming any probability of occurrence, the higher of the two midpoint scenarios was assumed as a reasonable intermediate impact estimate. CFP 146, at 4; CFP 147, at 4. This resulted in a projected reduction in electricity prices of \$17 million per year which would increase New Hampshire's GSP average of \$33 million per year. CFP 146, at 4; CFP 147, at 4.

Dr. Rockler and Mr. Kavet further considered that five direct jobs would be created in New Hampshire as a result of ongoing operation expenditures for the Project. CFP 146, at 4; CFP 147, at 4. Induced consumption expenditures from this increased employment would increase the GSP over 11 years (2019 to 2029) by an annual average amount of \$4.8 million and would result in 27 jobs. CFP 146, at 4-5; CFP 147, at 4-5.

As to the economic impact that would result from property tax payments, Dr. Rockler and Mr. Kavet asserted that over 11 years (2020 to 2030), the Applicant's payment of property taxes would increase the GSP by an annual average of \$19 million and create 249 jobs. CFP 146, at 5; CFP 147, at 5.

Dr. Rockler and Mr. Kavet concluded that the Project would have the following aggregate impacts on the economy:⁵⁷

GSP	Construction Period	Near-Term Operational Period	Mid-Term Operational Period	Late-Term Operational Period	Long -Term Operational Period
Impact element	2016-2020	2020-2030	2030-2040	2040-2050	2050-2060
Construction and Development	94 ⁵⁸	-5	1	2	2
Electricity Market Effects	4	10	-30	-40	-54
Operations and Maintenance	0	2	2	2	2
Property Tax Effects	5	19	10	6	3
Forward NH Plan	8	10	5	0	0
Tourism Effects	-5	-14	-18	-24	-33
Construction Disruptions	-1	0	0	0	0
TOTAL:	105	22	-30	-54	-80

CFP 146, at 11; CFP 147, at 11; CFP 148, at 4; Counsel for the Public’s Memorandum Regarding Correction Provided in Connection With KRA Testimony of 10/11/2017, Table 25.

Dr. Rockler and Mr. Kavet also analyzed the Project’s impact on restaurants in the area and determined that a decline in sales associated with views of the Project could be approximately 5%. CFP 146, at 7; CFP 147, at 7. It would result in the loss of approximately \$500,000 per year in restaurant sales. CFP 146, at 7; CFP 147, at 7. Counsel for the Public’s experts also addressed the Project’s impact on other local businesses. *See* Section VD2a(4), above.

⁵⁷ Based on the following assumptions: (i) the Kavet Rockler Project construction and development expenditure estimates; (ii) the Kavet Rockler property tax payments that are distributed equally for the purpose of retiring debt and increasing state and local government spending; (iii) The Brattle Group’s “Scenario 2” energy market assumptions, with 500 MW of terminated generation capacity and 500 MW of mothballed capacity distributed throughout the New England region; (iv) Kavet Rockler “conservative” viewshed-limited tourism loss assumption; (v) no negative property valuation impacts; (vi) Forward New Hampshire Fund expenditures that assume independent management and administration of the various funds; and (vii) a “best-case” traffic disruption scenario including “best-case” downtown Plymouth disruption and/or other possible areas of traffic delay. CFP 147, at 10.

⁵⁸ Annual Average – Millions of 2016 Dollars.

Dr. Rockler and Mr. Kavet acknowledged errors that impacted their modelling of the Project benefits. Tr., Day 44, Morning Session, 10/06/2017, at 136-138; Tr., Day 45, Morning Session, 10/11/2017, at 65-67. Dr. Rockler also acknowledged that some of their criticisms of LEI's modelling resulted from a misunderstanding of LEI's modelling procedures. Tr., Day 45, Morning Session, 10/11/2017, at 57-60. They further acknowledged that their economic impact assessment was not intended to serve as a forecast of likely Project impacts. Tr., Day 45, Morning Session, 10/11/2017, at 25-26. Specifically, Mr. Kavet explained that the analysis showed "the projected impact" based on the "assumptions that underlie" each impact category. Tr., Day 45, Morning Session, 10/11/2017, at 26.

Counsel for the Public requested that, if the Certificate is granted, that it include the following conditions:

Independent Claims Process.

[T]he SEC shall appoint an attorney or retired judge (the "Claims Administrator") who shall independently administer a claims process for all claims relating to damage to property, loss of business or loss of income caused by construction of the Project (the "Claims Process"). Counsel for the Public and Applicants shall jointly or separately file with the SEC proposed procedures for filing and deciding said claims, including criteria for eligibility, a procedure for filing claims, required proof of the damage or loss, the presentation and consideration of claims, the basis for recovery and the manner of deciding claims. Applicants shall establish a fund for the payment of claims ("Claims Fund") which fund shall be solely administered by the Claims Administrator, who shall provide to the SEC a quarterly report of the Claims Fund, including all disbursements. The Claims Administrator shall be paid an hourly rate to be determined by the SEC, and said compensation and all expenses of the Claims Administrator shall be paid from the Claims Fund, subject to approval by the SEC. Upon issuance of a certificate, Applicants shall deposit Five Hundred Thousand (\$500,000) Dollars to establish the Claims Fund, and shall deposit any additional funds necessary to pay all claims awarded by the Claims Administrator and to pay the Claims Administrator's compensation and expenses. The Claims Administrator shall

accept written claims until the five-year anniversary date of the date when the SEC's order granting a certificate shall become a final order. The Claims Administrator shall process and provide a written decision on all written claims filed with the Claims Administrator prior to said deadline. The Claims Administrator's decision and any reconsideration thereof shall be final and non-appealable. The Claims Process is not mandatory. Any party may file a claim in any court of competent jurisdiction in lieu of filing a claim in the Claims Process. If a party files a claim in the Claims Process, that party waives the right to file the same claim in court, and the Claims Process becomes the exclusive forum for deciding all claims filed in the Claims Process. All funds remaining in the Claims Fund after the payment of all timely filed claims and the payment of the Claims Administrator's compensation and expenses shall be returned to Applicants⁵⁹ . . .

The Forward New Hampshire Fund

[T]he Forward New Hampshire Fund ("FNHFund") shall have a board of directors who have no financial affiliation (employment, vendor, etc.) with Applicants . . . The FNHFund shall employ an independent economic development professional to establish written criteria for the application and receipt of loans or grants from the FNHFund. . . and . . . The FNHFund shall file annually with the SEC and with the Director of Charitable Trust in the Office of the Attorney General a report of its activities, including a report of its expenditures, all loans or grants made by the FNHFund and a review of how each loan or grant was used and their results in creating jobs or economic development.⁶⁰

North Country Jobs Fund.

[T]he North Country Jobs Fund (the "Fund") shall employ an independent economic development professional to provide advice on the selection of Fund recipients, and file annually with the SEC a summary of Fund disbursements and the use and results of grants awarded by the Fund.⁶¹

⁵⁹ The Applicant noted that it has proposed procedures for dealing with these kinds of claims and the Applicant believes that in the first instances, those procedures should be used, if any party is unsatisfied with the outcome of the claim procedure, the Applicant is open to some form of an appeal mechanism to the Committee's Administrator or an independent 3rd party appointed by the Subcommittee. *See* Applicant's Post-Hearing Memorandum, at 412-13. The Applicant expressed its concern however that the proposal is unworkable, cumbersome, and inefficient. *See* Applicant's Post-Hearing Memorandum, at 413.

⁶⁰ The Applicant argued that this proposed condition is inappropriate as Certificate conditions cannot bind a third party and it solely within the purview of the New Hampshire Forward Fund to make decisions about disbursement of funds. Applicant's Post-Hearing Memorandum, at 414.

⁶¹ The Applicant argued that this proposed condition is inappropriate. *See* Applicant's Post-Hearing Memorandum, at 414. The Applicant asserted that the North Country Jobs Fund is an independent entity that is unrelated to the Applicant and Certificate conditions cannot bind such a third party. *See* Applicant's Post-Hearing Memorandum, at

See Counsel for the Public’s Post-Hearing Brief, at 168-169.

(5) Grafton County Commissioners

Commissioner Linda Lauer opined that by impacting traffic, scenic views and the rural character of the region, the Project would have an adverse effect on tourism and related economy. GRAFTON 1. Specifically, Ms. Lauer asserted that the Project would have a negative impact on tourism by causing traffic constraints and difficulties in reaching such popular tourism destinations as the Crawford Notch State Park and Lost River Gorge and Boulder Canyon. GRAFTON 1. She also argued that the Project would have a negative impact on local businesses by impacting commuters who have to travel to the places of their employment. GRAFTON 1. She stated that construction of the underground portion of the Project would have an adverse effect on local businesses by making access difficult for potential customers. GRAFTON 1. She opined that the Applicant should be required to compensate local businesses for losses they would sustain as a result of construction of the Project. GRAFTON 1. Ms. Lauer also opined that the Project would have a negative impact on the local economy by impacting property values and, consequently, lowering tax revenues. GRAFTON 1. Finally, she stated that the Project would cause additional expenditures to municipalities by destroying roads. GRAFTON 1.

(6) Municipalities

George Sansoucy, on behalf of the Towns of Northumberland, Whitefield, Littleton, Sugar Hill, Franconia, Woodstock, Plymouth, Bridgewater, Bristol, New Hampton, Concord, Pembroke, and Deerfield and Ashland Water & Sewer Department, asserted that the Applicant’s position that the value of the Project for tax purposes should be calculated based on original cost less depreciation (book value) does not consider inflation, unrealistically reflects the true value

414. The Applicant asserted that it is solely within the purview of the North Country Jobs Fund to make decisions about the disbursement of funds. *See* Applicant’s Post-Hearing Memorandum, at 414.

of the Project over time, and is against New Hampshire law. SAN 1, at 27. Mr. Sansoucy opined that if the Applicant's valuation method is followed, the impacted communities would face a steady erosion of value and revenue while experiencing negative impacts associated with operation of the Project. SAN 1, at 28. Mr. Sansoucy claims that another transmission line that used this method of evaluation, Hydro Québec Phase 2, has already depreciated 93% of its value over 26 years of its existence and caused significant litigation and legal costs to communities that disagreed with the "book value" method of evaluation advocated by its owners. SAN 1, at 29-30.

Cassandra Laleme, on behalf of the Bethlehem Board of Selectmen, asserted that construction of the Project would have an adverse impact on the Town of Bethlehem's economy. JTMUNI 89, Appx. A, at 1-2. Ms. Laleme claimed that the Applicant would construct one of the structures associated with the Project at the entrance to the Town on Route 302. JTMUNI 89, at 2. According to Ms. Laleme, the Town has been struggling with re-growing its economy since 2008. JTMUNI 89, Appx. A, at 2. Ms. Laleme opined that construction of this structure would have a devastating effect on the Town's ability to attract businesses that are consistent with the Town's values. JTMUNI 89, Appx. A, at 2.

Cheryl K. Jensen, on behalf of Bethlehem Conservation Commission, argued that the Project would interfere with the orderly development of the region. JTMUNI 97, at 5. She claimed that the Applicant has already acknowledged that fact by agreeing to relocate Transition Station #5 so that Mr. Yizchok Rudich could develop and construct a Hilton Homewood Suites. JTMUNI 97, at 5-6.⁶² She asserted that construction on Route 302 would cause road closures and would have a significant negative impact on businesses located along the road. JTMUNI 97,

⁶² Mr. Bowes and Ms. Johnson testified that the Applicant had not agreed to move Transition Station # 5 and that the plan was to construct it as indicated in the existing plans. Tr., Day 10, Morning Session, 05/31/2017, at 54-58.

at 6-8. She stated that business owners, Melissa Sheehan and Nik Storella, have already expressed their concerns about the impact construction may have on their businesses during the meeting of the Board of Selectmen and stated that they may have to close their businesses or fire their employees. JTMUNI 97, at 7-8.

Ms. Hersom and Mr. Lombardi, on behalf of the Whitefield Board of Selectmen and Planning Board, opined that the Project would have adverse effects on the Town's economy where 10.4 miles of overhead lines would be constructed within the Town and would be visible to its visitors and residents. JTMUNI 95, at 11-12. They claimed that the Project would impact the Town's rural character and attractiveness to the tourists and, consequently, would affect the Town's economy that heavily relies on tourism. JTMUNI 95, at 11-12. They also asserted that the Town's economy would be affected by the Project because numerous properties would decrease in value due to increased visibility of the Project and numerous property owners would seek abatements to reflect the decrease in property values. JTMUNI 95, at 12-13. They also asserted that any initial tax benefits associated with construction and operation of the Project would be negated by tax abatements. JTMUNI 95, at 13. Ms. Hersom and Mr. Lombardi opined that the Project would have an adverse effect on the Town's infrastructure where the Town would be required to reconstruct impacted roads and provide emergency and other services to address incidents that would take place as a result of construction and operation of the Project. JTMUNI 95, at 12-13.

Margaret Connors, on behalf of Sugar Hill Board of Selectmen, opined that the Project's construction would have a negative impact on two businesses on Streeter Pond Road and three businesses on Route 18. JTMUNI 99, at 4.

Ned Cutler, on behalf of the Town of Easton's Board of Selectmen, testified that construction of the Project would have a negative impact on the Tamarack Tennis Camp. JTMUNI 102, at 1. According to Mr. Cutler, the Camp owns the property on both sides of Route 116 and construction of the Project on Route 116 would negatively affect its business. JTMUNI 102, at 1.

Mr. Cutler also asserted that the Project would have an adverse impact on the Town's economy where it would cause a negative impact on real estate values and consequential decrease in revenues generated as a result of real estate taxes. JTMUNI 102, at 2-3; JTMUNI 110.

Ms. Pastoriza, on behalf of the Easton Conservation Commission, asserted that construction of the underground portion of the Project in Easton would have a significant adverse effect on the town's economy by reducing value of real estate located in Easton and, consequently, decreasing Easton's tax base. JTMUNI 111, at 9.

Brian Murphy, on behalf of the Town of Plymouth, asserted that construction of the Project under the Main Street in the Plymouth would have a negative impact on Plymouth's economy where it would disrupt businesses located along and near Main Street and other restaurants and businesses in the area, including Plymouth State University. JTMUNI 105, at 5-6; JTMUNI 106, at 9.

Neil Irving, on behalf of the Board of Selectmen of the Town of New Hampton, asserted that the Project would have a negative effect on the economy of the Town of New Hampton. JTMUNI 124. Mr. Irving testified that the overhead portion of the Project that would be constructed in the Town of New Hampton would have a negative impact on values of properties it would be visible from. JTMUNI 124, at 4. As a matter of demonstration of the potential

impact of the Project on the Town's tax base, the Board evaluated 14 properties that did not have a view of the current transmission corridor, but would have visibility of the Project. JTMUNI 124, at 5-6. The Board determined that the current assessed value of these properties was \$3.2 million. JTMUNI 124, at 5-6. The Board opined that the Project would have an adverse effect on their values. JTMUNI 124, at 5-6. Reduction of assessed value of these properties and other properties that would have clear visibility of the Project would have an unreasonable adverse effect on the Town's tax base. JTMUNI 124, at 5-6.

Gail Matson and Candace Bouchard, on behalf of the Concord City Council, acknowledged that, according to the Applicant, the City of Concord's portion of the Project would have an estimated value of \$30,856,902 and would generate approximately \$548,636 in total tax payments for the first year to the City and the school district. JTMUNI 128, at 5-6. They opined, however, that this benefit is temporary because the Applicant uses the "net book" valuation methodology which assumes that the Project's value would decline over the first twenty years of its operations. JTMUNI 128, at 5. They further testified that the City's Director of Real Estate Assessments advised them that, while determining the value of the Project, she would not be employing a "net book" value methodology and would apply a "replacement cost net less depreciation" methodology instead. JTMUNI 128, at 5-6. Ms. Matson and Ms. Bouchard expressed concerns about the Applicant's willingness to accept the City's methodology and noted that the Applicant has already initiated litigation against towns that refuse to utilize the "net book" value methodology. JTMUNI 128, at 6. They also claimed that construction and operation of the Project would have an adverse effect on the business owned by Sabbow and Co., Inc. (Sabbow) by interfering with its operations. JTMUNI 129, at 9.

Beth Fenstermacher, Assistant City Planner for Concord, analyzed the potential impact of construction of the Project on 44 commercial properties located in the City. JTMUNI 137, at 7. She determined that construction of the Project could impact operation of the businesses at the following locations: (i) 146 Pembroke Road – construction pad would be located at the parking lot of this business and noise associated with construction could impact operation of this business; (ii) 54 Chenell Drive – construction pad would be located at the parking lot of this business and noise associated with construction could impact operation of this business; (iii) 75 and 77 Regional Drive and 12 Industrial Park Drive – construction pads, access drives and proposed lines would run through outdoor storage areas; (iv) 24 Industrial Park Drive - construction pads and access drives would run through outdoor storage areas; (v) 28 Industrial Park Drive – new poles would be constructed within existing parking areas; and (vi) 7, 19 and 25 Henniker Street – construction pads and access road would be located within or adjacent to parking lots. JTMUNI 137, at 7-8; JTMUNI 137, Ex. C. The remaining commercial properties would have increased visual impact due to the clearing and increased pole height. JTMUNI 137, at 7.

David Jodoin⁶³, on behalf of the Board of Selectmen of the Town of Pembroke, asserted that it is unclear to the Town how the Project could benefit the Town's economy. JTMUNI 143, Ex. A. Specifically, Mr. Jodoin stated that it is unclear how the Project would increase real estate taxes while causing a decrease in values of real estate in the Town. JTMUNI 143, Ex. A. Mr. Jodoin opined that "[t]he promises of extra tax revenue is likely to be offset by the reduction in property values due to a proximity and/or visual impact of the line, as well as abatements." JTMUNI 145, at 4. Mr. Jodoin also expressed concerns about the Applicant's commitments and

⁶³ Mr. Jodoin adopted the pre-filed testimony of Justine M. Courtemanche. JTMUNI 143, 144.

asserted that the Town was involved in litigation with Eversource over tax values of existing assets. JTMUNI 143, Ex. A.

Stephanie Verdile, on behalf of the Town of Pembroke, opined that any benefit associated with construction of the Project, *i.e.* jobs and expenditures on local business, would be temporary and would last only through the construction phase of the Project. JTMUNI 147, at 18-10. She testified that, considering the Applicant's history with seeking abatements⁶⁴ and the Project's impact on views and character of the Town, the Project would have a negative long lasting impact on the Town of Pembroke's economy. JTMUNI 147, at 18-19.

Kate Hartnett, on behalf of the Town of Deerfield, opined that, although the Project would generate some tax revenue, any increase would be offset by the costs that the Town would incur to maintain this revenue and loss of revenue generated by businesses in the long run. JTMUNI 155, at 10-11. R. Andrew Robertson, on behalf of the Board of Selectmen for the Town of Deerfield, asserted that the Project could have a negative impact on the Town's economy by causing the Town to spend additional funds to repair the Town's roads. JTMUNI 152, at 2. He also opined that the Board is concerned that tax benefits asserted by the Applicant would not benefit the Town considering the valuation method used by the Applicant and the Applicant's history with seeking abatements. JTMUNI 152, at 2.

(7) NEPGA

William Fowler, on behalf of NEPGA, opined that Ms. Frayer's testimony and report significantly overestimated the wholesale electricity market benefits attributable to the Project. NEPGA 1, at 3. Specifically, he argued that Ms. Frayer inaccurately reflected the design of the ISO-NE wholesale markets. NEPGA 1, at 3. Mr. Fowler opined that Ms. Frayer's analysis is

⁶⁴ The Subcommittee heard testimony from many municipal representatives that Eversource frequently litigated real estate property tax abatements causing significant expense to municipalities and their tax payers. *See* JTMUNI 143, Ex. A; JTMUNI 152, at 2.

flawed and is based on false assumptions. NEPGA 1, at 3. Mr. Fowler identified specific examples of assumptions and errors that led Ms. Frayer to overestimate the Project's benefits: (i) Frayer's modeled capacity was based on outdated Forward Capacity Market design that has been rejected by the FERC (straight-line, system-wide demand curve that does not include separate demand curves for zones and considers New Hampshire to be a part of the Rest of Pool Zone) and replaced with a different design (convex (non-linear) curve tied to different price points with each zone having its own, non-linear convex or concave demand curve and New Hampshire being as a part of Northern New England Zone);⁶⁵ (ii) the assumption that the Project's shippers would receive 1,000 MW of "qualified" capacity credit without considering that existing market rules may prevent that capacity from participating in the market; (iii) the assumption that the Project's shippers would offer their capacity for \$0; (iv) failure to consider the impact of existing FCM zones on pricing; and (v) the assumption that there would be no meaningful short- or long- term market response to lower prices. NEPGA 1, at 4, 11. Mr. Fowler testified that, in order for Ms. Frayer's report to provide a credible estimate of the Project's benefits, she should have: (i) used the correct FCM market design while making capacity-related calculations; (ii) addressed how the Project can meet ISO-NE's Minimum Offer Price Rule (MOPR); (iii) investigated the ability of the Project to meet ISO-NE's capacity deliverability standard and adjusted capacity downward to account for deliverability risks; (iv) recognized the obligations and penalty risks of nonperformance if awarded a Capacity Supply Obligation (CSO) and factored that cost and risk into expected FCM offers; (v) recognized how the Project's capacity deliveries into New Hampshire would be affected by appropriate modeling of FCM zones; and (vi) recognized that any material capacity sales by the Project would have a significant impact on revenues and

⁶⁵ Ms. Frayer's updated report and pre-filed testimony incorporated "the most recent FERC-approved demand curves ("Market Reliability" or "MRI" curves) for ISO-NE's Forward Capacity Market." App. 82, at 3-4.

ultimate viability of other generators in the three-state zone which includes New Hampshire. NEPGA 1, at 10.

(8) Individual Intervenors

Roderick McAllaster testified that he and his wife own a dairy farm with over 80 cows that produce milk for sale. CS 1. Every other day, a large tractor trailer picks up milk. CS 1. He also uses Bear Rock Road during the summer to access his hay fields. CS 1. Mr. McAllaster argued that closure of Bear Rock Road or closure of the road used by the tractor trailer would have adverse effects on his business and could potentially cause him to go out of business. CS 1. He urged the Subcommittee to deny the Applicant's request for the Certificate. CS 1.

Bradley Thompson, on behalf of Clarksville to Stewartstown Abutting⁶⁶ and Non-Abutting⁶⁷ Property Owners Group of Intervenors argued that the Project would have a negative impact on glacial spring water wells located on his property and, consequently, could negatively impact his fledgling glacial spring water business a/k/a Bear Rock Beverages. CS 14, at 6; CS 15, at 2; Tr., Day 8, Afternoon Session, 05/03/2017, at 45. He argued that the Applicant should be required to develop a plan for restitution prior to construction of the Project. CS 14, at 6.

John Petrofsky opined that the Project would have an adverse effect on Keazer Farm Bed & Breakfast by impacting views currently enjoyed by its visitors. CS 65, at 7.

Peter W. Powell, on behalf of the Abutting Property Group of Intervenors Dalton-Bethlehem, opined that the Project would have a negative impact on the economy by discouraging development of other renewable energy facilities and having a negative impact on

⁶⁶ Charles and Donna Jordan (Clarksville), Sally Zankowski (Stewartstown), Jon and Lori Levesque (Stewartstown), Roderick and Donna McAllaster (Stewartstown), Lynne Placey (Stewartstown), Arlene Placey (Stewartstown), Brad and Daryl Thompson (Stewartstown), David Schrier (Exeter) and Nancy Dodge (Stewartstown). CS 1.

⁶⁷ Robert Martin (Clarksville), Roderick Moore, Jr., Joseph John Dunlap, Shawn Patrick Brady, Christopher Thompson, and E. Martin Kaufman, Bradley J. Thompson and John Petrofsky on behalf of 44 residents of Stewartstown and East Colebrook. CS 1.

logging and other biomass dependent businesses. DWBA 10, at 12-16. Mr. Powell also asserted that the Project would have negative effect on property values in general and on value of the properties with the views of the Project specifically. DWBA 10, at 5-7.

Joshua Olson asserted that the Project would have an adverse effect on tourism and the related economy by effecting views and scenic qualities of Upper Ammonoosuc River and Route 110. DNA 12, at 4.

Robert Cote and Bruce Adami opined that Ms. Frayer significantly underestimated the growth of alternative sources of electricity while conducting her analysis of the Project's economic benefits. DFLR-ABTR 32, at 4. They also asserted that Ms. Frayer's assumption that other resources would not be coming on line fast enough to depress demand in the Forward Capacity Market is unsupported. DFLR-ABTR 32, at 4.

Thomas and Madelyn Foulkes argued that the Project's impact on taxes was overestimated where the Project would depreciate and Eversource has a reputation of litigating or threatening with litigating real estate taxes it pays while the municipalities do not have resources to defend their positions. AD-N-ABTR 16, at 2-3.

b. Subcommittee Deliberations

The Applicant characterizes the argument as to whether the Project would clear the capacity market as "intellectually interesting," but not "outcome-determinative." Testimony and evidence presented indicate that there would be some savings from the energy market associated with construction and operation of the Project regardless of whether the Project generated Capacity Market benefits. Although the level of Energy Market savings is estimated to be much smaller than wholesale market savings including Capacity Market savings (about \$5.8 million a year in 2020 dollars, compared to \$80 million a year in nominal dollars originally claimed by the

Applicant for wholesale market savings) any amount of energy savings would benefit the economy and would have some positive effect on the orderly development of the region. Considering that there is no disagreement that the Project would generate energy savings, we agree that the Project would have a small, but, positive impact on the economy although a much less significant impact than that predicted by the Applicant.

In the overall analysis of impact on the economy, savings from the Capacity Market could be outcome determinative, because those savings are the primary driver of induced jobs and economic growth in the model used by Ms. Frayer. The Applicant did not update its Report on the Local Economic Impact of the Project regarding the number of jobs and growth in GDP, even after it updated and reduced expected wholesale market benefits by 25%, based on revised market rules. Compare App.1, Appx 43 at 14, and App. 81 at 7. If the Project does not qualify and clear the Capacity Market, wholesale market benefits would be reduced by 90%. Tr., Day 13, Morning Session 06/08/17 at 73. Based on the record before us, and the Applicant's admission that qualifying and clearing the Capacity Market is merely an intellectual exercise, we cannot conclude there will be savings from the Capacity Market.

As to the savings associated with a decrease in carbon emissions, we agree with Counsel for the Public that no actual greenhouse gas emission reductions would be realized if no new source of hydropower is introduced and the power delivered by the Project to New England is simply diverted from Ontario or New York. The record is unclear as to whether the hydropower is new or will be diverted from another region. With respect to production cost savings, we find Counsel for the Public's testimony persuasive that the benefit from production cost savings should not be counted in addition to the benefits from wholesale electricity market savings.

As to the Project's impact on real estate taxes, it is undisputed that, if constructed, the Project would pay substantial property taxes to the communities where it would operate. We received some testimony indicating that the benefit associated with property taxes would be reduced by the Project's a negative impact on the value of existing properties and impacted taxpayers would seek abatements. No expert testimony or other credible evidence was presented to quantify the abatements that residents would seek. No further evidence was presented to demonstrate that the loss associated with the abatements would negate the benefits that the Project would bring. All we can conclude about the economic effects of property taxes based on the record before us, is that the Project, if constructed as proposed, would likely have a positive effect because of the substantial real estate taxes it would pay to the affected communities.

As to the impact on local businesses, the Applicant argued that the Project would have a positive impact on local businesses because it would bring new funds through the Forward New Hampshire Fund and new employees through the Job Creation Fund. Members of the Subcommittee did note that neither the Forward New Hampshire Fund nor the Job Creation Fund had a transparent structure of governance and were not associated with any economic or governmental entity that would be accountable.

The Applicant failed to account for negative impact on businesses that could be caused by construction of the Project. We received extensive testimony and public comments from local business owners indicating that construction of the Project, specifically the underground portion, would have a negative impact on their businesses. The Applicant agreed to address such concerns through implementation of a business loss compensation program. The program proposed by the Applicant does not specifically address the concerns raised. Specifically, although it addressed physical damages to the businesses' assets, it did not address and did not

provide a mechanism for compensation of business losses, *i.e.* loss of income. *See* App. 6, Att. M. The program also does not specify how the claims will be addressed and nor the criteria to be used in determining whether the losses should be reimbursed. The program does not guarantee compensation for the loss of business and, potentially, may subject the participants to extensive litigation. We did receive the Applicant's testimony indicating, however, the Applicant's willingness to work with local businesses and compensate them for loss that they could incur as a result of construction of the Project. Without an adequate assessment of the negative impacts of the Project, however, it is impossible for anyone to know what level of compensation or mitigation would be appropriate.

Additional components of the Project's impact on the economy are addressed separately below.

4. Property Values

a. Positions of the Parties

(1) Applicant

To demonstrate the effect of the Project on values of real estate, the Applicant filed the testimony of Dr. James Chalmers (original and supplemental) and a Report entitled "High Voltage Transmission Lines and Real Estate Markets in New Hampshire: A Research Report". App. 30; App. 104; App. 1, Appx. 46.

Dr. Chalmers acknowledged that he is not an expert in the New Hampshire real estate market or property valuation in New Hampshire. Tr., Day 24, Morning Session, 07/31/2017, at 12; Tr., Day 25, Afternoon Session, 08/01/2017, at 47. He testified, however, that he determined the impact of the Project on values of real estate in New Hampshire by: (i) summarizing existing knowledge and literature on the effects of high voltage transmission lines (HVTL) on real estate

markets; and (ii) supplementing this knowledge with New Hampshire-specific research initiatives. App. 30, at 2.

Dr. Chalmers testified about studies and literature indicating that HVTL generally have no effect on values of commercial and industrial properties. App. 30, at 3; App. 1, Appx. 46, at 11. The only exception, according to Dr. Chalmers, is when development is constrained in a way that reduces the income producing potential of the property. App. 30, at 3.

With vacant land, Dr. Chalmers asserted that general studies and the literature indicate that vacant land's value is typically not impacted by HVTL unless development is constrained by the right-of-way or the HVTL is the principal differentiating feature between otherwise similar parcels. App. 30, at 3.

As to residential properties, Dr. Chalmers claimed that about half of the literature finds some negative proximity effects. App. 30, at 3; App. 1, Appx. 46, at 2. Dr. Chalmers further said the effects tend to be small (1-6% range) and decrease rapidly with distance from the HVTL. App. 30, at 3; App. 1, Appx. 46, at 3, 6-7. He acknowledged that some of his prior reports, unrelated to the Project, identified effects from 3% to 6% and some other studies prepared by third parties found effects from 2% to 9% and, sometimes, up to 12%. Tr., Day 24, Morning Session, 07/31/2017, at 25-34; CFP 377, 379, 380, 381. He insisted, however, that his conclusion of 1% to 6% was accurate because it generally represented the results of the studies. Tr., Day 24, Morning Session, 07/31/2017, at 33-34.

Dr. Chalmers further asserted that three New Hampshire specific studies confirmed his conclusion: (i) case studies – analyzing 58 individual residential sales of properties crossed by or bordered by an HVTL; (ii) subdivision studies – analyzing the timing and pricing of lot sales in 13 subdivisions where some lots in the subdivision are crossed by, or bordered by, an HVTL and

others are not; and (iii) market activity research – a review of sale price to list price ratios and days on market for residential sales in different locational zones relative to an HVTL corridor. App. 30, at 4-10; App. 1, Appx. 46, at 16-18.

Dr. Chalmers testified that the case studies were conducted by certified appraisers retained by the Applicant. Tr., Day 24, Morning Session, 07/31/2017, at 44-79. He explained, after identifying the studied properties, the appraisers: (i) prepared appraisals determining what would be fair market value of the properties at the time of sale without the existence of the structures; and (ii) interviewed selling brokers to determine the reason, if any, for the actual selling prices. Tr., Day 24, Morning Session, 07/31/2017, at 44-79. Dr. Chalmers characterized the case studies as demonstrating an “infrequent sale price effect”: (i) 10 cases showed a sale price effect; (ii) 11 cases suggested a possible effect; and (iii) 37 cases saw no effect. App. 30, at 6; Tr., Day 26, Morning Session, 08/02/2017, at 65-66; Tr., Day 26, Afternoon Session, 08/02/2017, at 33-35. Out of 10 studies that found effect, one house was located more than 100 feet from the edge of the right-of way and 7 were located within 30 feet of the right-of-way. App. 30, at 6; App. 1, Appx. 46, at 3, 30. For 9 houses, values of which were affected by the transmission lines, close proximity was combined with clear visibility of the HVTL. App. 30, at 6; App. 1, Appx. 46, at 30.

Dr. Chalmers acknowledged that the case studies were intended to be limited to the sales of single family detached residences. Tr., Day 25, Morning Session, 08/01/2017, at 45, 89, 91, 93; Tr., Day 26, Afternoon Session, 08/02/2017, at 45-47, 72. He explained, however, that he has since investigated the condominium market as well. Tr., Day 25, Morning Session, 08/01/2017, at 45, 85-87.

On cross-examination Dr. Chalmers acknowledged that the case study approach is not as common as the statistical study approach and can be characterized as “pioneering.” Tr., Day 24, Morning Session, 07/31/2017, at 44-46; *see also* Tr., Day 26, Afternoon Session, 08/02/2017, at 10. Dr. Chalmers also agreed that structures in the transmission corridors that were used for case studies were not as tall as the Project’s proposed structures and had different configurations. Tr., Day 24, Morning Session, 07/31/2017, at 47-50. He acknowledged that the case studies did not encompass properties that had views of the lines but were not encumbered by the right-of-way or did not abut the studied right-of-ways. Tr., Day 24, Morning Session, 07/31/2017, at 50-58. His time-on-market research did not account for the properties that were listed on the market more than once but initially failed to sell. Tr., Day 24, Morning Session, 07/31/2017, at 82. Dr. Chalmers admitted that in his case study review he did not consider all cases with a negative sales price effect to be caused by the HVTL. Tr., Day 24, Morning Session, 07/31/2017, at 86-90. He found 10 properties in the case study (out of a total of 58) to be negatively impacted by the HTVL. App. 30, at 6. Dr. Chalmers testified that 10 properties of 58 or 17 % was an “infrequent” finding. App. 30, at 6; Tr., Day 26, Morning Session, 08/02/2017, at 65-66. He also testified that there were an additional 11 properties that sold for less than the appraised value. App. 30, at 6. However he found that he could not determine the HVTL to be the cause of the difference between the appraised value and the sales price. Tr., Day 24, Morning Session, 07/31/2017, at 105-113. He called these properties “indeterminate” properties. Tr., Day 24, Morning Session, 07/31/2017, at 107. Dr. Chalmers did not include the indeterminate properties in his analysis of how distance from the HVTL impacts sales price. Tr., Day 24, Morning Session, 07/31/2017, at 86-113. He did not consider the indeterminate properties in his

consideration of the extent of the impact on sale price caused by the HVTL. Tr., Day 24, Morning Session, 07/31/2017, at 105-107.

During cross-examination, Dr. Chalmers also acknowledged that some of the appraisals prepared for the study incorrectly identified square footage of the property, failed to account for improvements, and incorrectly identified the extent of the buyers' interest when only a single offer to sell was received for that property. Tr., Day 24, Afternoon Session, 07/31/2017, at 154-162. He also acknowledged that one case study did not accurately reflect the broker's statement about the visibility of the line. Tr., Day 24, Afternoon Session, 07/31/2017, at 162-165.

As to the subdivision studies, Dr. Chalmers asserted that 8 out of 13 subdivision studies demonstrated no sale price or marketing time effect associated with the HVTL. App. 1, Appx. 46, at 3, 93-94. Effects on the sale price were observed in cases where the lots were heavily encumbered and there was serious constraint imposed by the right-of-way on the development area of the lot. App. 1, Appx. 46, at 93-94. Dr. Chalmers further opined that discount in price tended to be small compared to the proportion of the lot encumbered. App. 1, Appx. 46, at 94. Dr. Chalmers acknowledged, during his cross-examination, that some of the data relied on in the subdivision studies was inaccurate, *i.e.* dates of sales of some lots were incorrectly determined; sales of six out of eleven lots in Allenstown were between family members, and the sale of a number of lots in a subdivision in Deerfield was to a single contractor and might have been sold at a discounted price. Tr., Day 24, Afternoon Session, 07/31/2017, at 109-130; DFLD 110-117. Dr. Chalmers also testified that, while analyzing time on the market, he did not consider and did not study the intent of the sellers and reasons why some properties were listed earlier than others. Tr., Day 24, Afternoon Session, 07/31/2017, at 109-130; DFLD 130-137.

While Dr. Chalmers acknowledged some errors in the case studies and the subdivision studies, he did not change his opinion about the validity of these studies. Tr., Day 25, Morning Session, 08/01/2017, at 59; Tr., Day 26, Morning Session, 08/02/2017, at 38.

As to the market activity research, Dr. Chalmers acknowledged that “caution must be used in drawing conclusions based on relatively small numbers of observations.” App. 30, at 10. He asserted, however, that the market activity research indicated “no systematic tendency for the DOM [days on the market] of the abutting, encumbered or proximate properties to be greater than for properties at a greater distance from the HVTL.” App. 30, at 10.

Dr. Chalmers testified that both the general literature and New Hampshire specific studies lead to the conclusion that “there is no evidence that the HVTL resulted in consistent measurable effects on property values, and, where there are effects, the effects are small and decrease rapidly with distance.” App. 30, at 10; Tr., Day 26, Morning Session, 08/02/2017, at 19-20, 21-22, 24; Tr., Day 26, Afternoon Session, 08/02/2017, at 30-31. Dr. Chalmers acknowledged, however, that, generally, the existence of a nearby HVTL is perceived as a negative attribute of the properties. Tr., Day 25, Morning Session, 08/01/2017, at 77-78. Dr. Chalmers concluded that “even though the presence of a HVTL corridor is generally perceived to be a negative attribute of a property, the weight attached to this particular attribute, compared to all the other considerations that go into market decisions, is apparently too small to have any consistent measurable effect on the market value of real estate.” App. 30, at 11; Tr., Day 26, Morning Session, 08/02/2017, at 19-20, 22, 24-25. Dr. Chalmers opined that the properties that could be affected are homes very close to the right-of-way that presently do not have clear visibility of the existing line, but would have clear visibility of the existing line or the Project after construction of the Project. App. 30, at 12; App. 104, at 3. Dr. Chalmers explained that

clear visibility means that there is an unobstructed view of Project structures such as conductors attached to an H-Frame; no visibility means that nothing can be seen; and, partial visibility could mean that a portion of the structure is visible or the structure is visible through foliage or some other barrier. Tr., Day 25, Morning Session, 08/01/2017, at 6, 8-9; Tr., Day 26, Morning Session, 08/02/2017, at 69-70. Dr. Chalmers further clarified, however, that his analysis considered structure⁶⁸ visibility as opposed to conductor⁶⁹ visibility as he deemed conductor visibility too ambiguous. Tr., Day 25, Morning Session, 08/01/2017, at 11-12; Tr., Day 25, Afternoon Session, 08/01/2017, at 102; Tr., Day 26, Morning Session, 08/02/2017, at 124-125; Tr., Day 26, Afternoon Session, 08/02/2017, at 40-41. Although the extent of the Project's visibility was considered by Dr. Chalmers, he acknowledged on cross examination that he is not a visual expert. Tr., Day 25, Morning Session, 08/01/2017, at 7.

Applying these findings to the Project, Dr. Chalmers evaluated the impact of the Project on properties that would be encumbered by its right-of-way which would abut the right-of-way. Tr., Day 24, Afternoon Session, 07/31/2017, at 51-52. He testified that the effect of the Project on real estate values was evaluated only for the properties located within 100 feet of the right-of-way because he determined that the real estate values of the properties that are located further than that distance would not be impacted by the Project. Tr., Day 24, Afternoon Session, 07/31/2017, at 54-81. He determined that the number of properties which could be affected by a change in view due to the Project was "very small." App. 30, at 12. Dr. Chalmers claimed that 40 miles of the Project that would be located in the northern parts of New Hampshire would be located in an area with sparse development. App. 30, at 12. Except for one house that is owned by the Applicant, there would be no homes within 100 feet of the right-of-way where the

⁶⁸ For the purposes of this section of the Decision, "structures" are defined as transmission towers.

⁶⁹ For the purposes of this section of the Decision, "conductors" are defined as power transmission lines.

overhead line would be located. App. 30, at 12. Dr. Chalmers further concluded that 60 miles of the Project that would be located underground would have no adverse effect on property values because the line would be invisible. App. 30, at 14. As to the remainder of the line, Dr. Chalmers claimed that there would only be 89 properties with homes located within 100 feet of the right-of-way boundary. App. 30, at 12; App. 104, at 3. He further argued that 80% of these properties either already have clear visibility of existing lines or have partial visibility and would continue to have the same category of visibility following construction of the Project. App. 30, at 12. He further claimed that another 10% of properties are sufficiently screened and would have no visibility of the Project following its construction. App. 30, at 12. As to the remaining properties⁷⁰, he asserted that “some would experience small market value effects and some would not.” App. 30, at 12. Dr. Chalmers acknowledged, however, that, while making his determination, he did not enter the properties, did not use photosimulations, and did not inspect the right-of-way encumbering or abutting the properties. Tr., Day 24, Afternoon Session, 07/31/2017, at 54-69. He further explained that he did not consider difference in heights between currently existing and new structures because his research indicated that changes in heights of the structures would have no effect on properties’ values. Tr., Day 24, Afternoon Session, 07/31/2017, at 69-70. He testified that “[d]efinitive conclusions with respect to individual properties would require on-site inspection.” App. 104, at 3.

Dr. Chalmers concluded “there is no basis in the published literature or in the New Hampshire-specific research initiatives . . . to expect that the Project would have a discernible effect on property values or marketing times in local or regional real estate markets.” App. 30, at 14; *see also* Tr., Day 25, Morning Session, 08/01/2017, at 76, 84-85, 89. Dr. Chalmers also determined that “the existence of market value effects does not imply economic damages to the

⁷⁰ 11 properties. App. 104, at 3.

property owner.” App. 1, Appx. 46, at 3. He explained that “the owner at the time of easement purchase would have been compensated for market value effects” and “if there were market value effects, subsequent owners would have purchased the property at a discount, so they would have suffered no economic damage.” App. 1, Appx. 46, at 3.

Dr. Chalmers testified that his conclusions applied to residential and commercial properties. Tr., Day 24, Morning Session, 07/31/2017, at 35-37. Dr. Chalmers acknowledged, however, that New Hampshire case studies did not include commercial property. Tr., Day 24, Morning Session, 07/31/2017, at 36-37. He testified that his conclusion about the Project’s effect on commercial properties was based solely on his review of the literature. Tr., Day 24, Morning Session, 07/31/2017, at 36-37. Dr. Chalmers acknowledged that the two sources of literature he relied on did not address tourist-specific markets and evaluated impact on real estate in geographic areas different from New Hampshire. Tr., Day 24, Morning Session, 07/31/2017, at 37-42. He acknowledged that tourist and resort regions are not his area of expertise and that he does not have an independent opinion of the Project’s impact on values of resorts and tourist destinations. Tr., Day 24, Morning Session, 07/31/2017, at 40. He explained that his conclusion that the Project would not have an adverse effect on values of tourism oriented properties assumed that there is no effect and the only effect that may be caused is not an effect on property value, but effect on businesses’ income flow. Tr., Day 24, Morning Session, 07/31/2017, at 40-41.

Dr. Chalmers also addressed testimony of Mr. Sansoucy. App. 104, at 4-8. Dr. Chalmers asserted that Mr. Sansoucy provided tax cards and maps only for the properties that are encumbered by the right-of-way and associated HVTL lines and failed to provide cards and maps for the properties that are adjacent to the right-of-way and properties that he identified as

“tertiary⁷¹.” App. 104, at 4-6. Therefore, Dr. Chalmers claimed that Mr. Sansoucy failed to verify estimated impact on property values of adjacent and “tertiary” properties. App. 104, at 4-6. Dr. Chalmers further testified that his independent review of the tax card and maps provided by Mr. Sansoucy demonstrated that assessed values of 21% of properties adjacent to the right-of-way were adjusted and no assessed values were adjusted for the “tertiary” properties. App. 104, at 4-6.

Dr. Chalmers also addressed Ms. Kleindienst’s claim that construction of the Project would cause a reduction in value of McKenna’s Purchase Association’s units by 30-50%. App. 104, at 8-11. Dr. Chalmers asserted that McKenna’s Purchase Association is already encumbered by the right-of-way on the southwest with three powerlines: (i) a distribution line on wood poles (40 feet high) 45 feet from the west right-of-way boundary; (ii) a 115 kV line on wood, H-frame structures (55 feet high) 95 feet from the west boundary; and (iii) a 115 kV line on steel monopoles (70 feet high) on the east side of the right-of-way, 195 feet from the west boundary. App. 104, at 8-9. The Project would add the 345 kV line to the center of the corridor on an H-frame structure with flanking 115 kV lines on steel monopoles on each side of the corridor. App. 104, at 9. The distribution line on wood poles would be removed and placed on the steel monopole on the far east side of the right-of-way. App. 104, at 9-10. Vegetation of the west boundary of the right-of-way would be maintained and the berm would be relocated closer to the west boundary. App. 104, at 10. The new configuration would have structures between 70 and 90 feet high. App. 104, at 10. Dr. Chalmers opined that the units located in Area 2 and Area 3 (on average 248 feet for Area 2 and 602 feet for Area 3) are removed from the right-of-way and would not be impacted by construction of the Project due to the distance from the right-of-way and because there is no evidence of effects from the existing corridor. App. 104, at 10. In

⁷¹ Properties portions of which are located within 600 feet of right-of-way and associated HVTL. App. 104, at 4-6.

making his calculations for McKenna's Purchase Association, Dr. Chalmers considered the distance between the units and the right-of-way. Tr., Day 5, Morning Session, 08/01/2017, at 104-105. The distance that he considered, however, was the distance between the units' front doors and the right-of-way, not the distance between the closest point of each individual unit and the right-of-way. Tr., Day 5, Morning Session, 08/01/2017, at 104-105. As to the units located in Area 1, approximately 89 feet from the right-of-way, Dr. Chalmers opined that they are oriented away from the right-of-way. App. 104, at 10. Dr. Chalmers acknowledged that the Project would be partially visible from some of the units. App. 104, at 10. He claimed, however, that the Project would not affect their value because sales data showed no evidence of value effects relative to the existing corridor. App. 104, at 10. As to the unit that was purchased in 2005 for \$210,000 and sold in 2012 for \$132,500, Dr. Chalmers opined that the decrease in value was not caused by the unit's location in close proximity to the right-of-way, but was associated with a depressed real estate market. App. 104, at 11.

Dr. Chalmers acknowledged that his Report did not consider the effect of HVTL on rental apartment properties. App. 104, at 12. He asserted, however, that he interviewed a number of rental apartment property managers for properties with clear visibility of HVTLs and all of them indicated that the lines had no adverse effect on rent commissions. App. 104, at 12.

Dr. Chalmers also acknowledged that he did not analyze the properties that were removed from the market and the reasons for removal. App. 104, at 15. He opined, however, that establishing specific reasons for the decisions to take the properties off the market would require extensive interviewing of property owners and, even then, attribution would be difficult and likely inconclusive. App. 104, at 8-15. Based on the fact that the case studies, subdivision studies and market activity analysis demonstrated that marketability was not a frequent issue, Dr.

Chalmers determined that additional investigation of withdrawn listings was not warranted. App. 104, at 15.

Jeanne Menard, a realtor from Deerfield, provided Dr. Chalmers with three sales in Deerfield suggesting that the Project has already had an effect on real estate values in that town. Dr. Chalmers dismissed those examples stating that the properties sold for fair market value and, therefore, sales price was not impacted by the Project. App. 104, at 16.

Peter Powell, a North Country realtor provided Dr. Chalmers with four sales in the North Country suggesting that anticipation of the Project had already decreased sales prices. Dr. Chalmers rejected Mr. Powell's opinion stating that the sale prices of the identified properties are consistent with the sale prices of similar properties in the area. App. 104, at 17-19. Dr. Chalmers further claimed that, if it is assumed that these properties sold for less than their fair market value, there was no evidence presented that would indicate that the decrease in value was caused by the Project or the existing right-of-way encumbering these properties. App. 104, at 18-19.

As to the potential impacts on Ms. Lee's property, Dr. Chalmers acknowledged that, if her home has only one access point which traverses under the transmission line, that is an issue that would make it more difficult to sell her home. Tr., Day 25, Morning Session, 08/01/2017, at 137-138.

Finally, Dr. Chalmers criticized the methodology used by Counsel for the Public's experts. App. 104, at 19-21. Specifically, he claimed that the Report relied on methodology articulated in a New Zealand study that was specific and unique for New Zealand and is not applicable to either the United States or New Hampshire. App. 104, at 19-20. Furthermore, he opined that the report improperly applied the methodology by analyzing a diminution factor as it relates to distance to the structures as opposed to distance to the transmission lines. App. 104, at

20. Finally, Dr. Chalmers asserted that the Report improperly addressed the effect of new projects on the value of real estate when a new line is added to an existing corridor. App. 104, at 20.

The Applicant offered a Property Value Guarantee Program addressing potential impacts on values of properties that, according to Dr. Chalmers, would most likely be impacted. App. 6, Att. L; Tr., Day 2, Morning Session, 04/14/2017, at 123-124. A program overview was provided to the Subcommittee as Attachment L to the supplemental pre-filed testimony of Mr. Quinlan. App. 6, Att. L. To be eligible for the program, the property must be: (i) encumbered by the right-of-way easement; (ii) improved with a single family home and some portion of the home is located within 100 feet of the right-of-way boundary; and (iii) notwithstanding any efforts to mitigate visibility effects that would be implemented by Eversource in conjunction with Project construction, structure visibility from the home increases due to the Project from no visibility to partial or clear visibility or from partial visibility to clear visibility. App. 6, Att. L, §2. According to this Program, an “eligible” property owner might either seek payment for diminution of market value or opt out. App. 6, Att. L. Eligible owners who opt out would be paid \$1,500. App. 6, Att. L, §3. Owners who choose to participate in the program and who sell their properties within 5 years of commencement of construction of the Project would be compensated for the difference between the sale price and market price that would be calculated in the following manner: (i) the owner, at his/her discretion, would notify Eversource within 30 days prior to the closing that he/she seeks payment under the program; (ii) upon receipt of the notice, Eversource would provide the owner with a list of a minimum of 3 qualified independent appraisers from which the owner would select one to determine the appraised market value of the property under the hypothetical assumption of no transmission line influence; (iii) Eversource

would order the appraisal and would be responsible for its cost; (iv) in the event the opinion of the market value under the hypothetical is greater than the sale price, Eversource would pay the owner the difference between the sale price and the market value; (v) if either party fails to accept the opinion of market value, the owner could select a second appraiser from the list of approved appraisers and pay for a second opinion as to the property market value under the hypothetical; and (vi) the final determination of market value under the hypothetical would be the mid-point of the two opinions. App. 6, Att. L, §5. Mr. Quinlan agreed that the 30-day notification requirement may have a chilling effect on potential buyers. Tr., Day 2, Morning Session, 04/14/2017, at 114-116. According to Mr. Quinlan, however, the Applicant did not intend such effect and agreed to work with each potential owner on a case-by-case basis. Tr., Day 2, Morning Session, 04/14/2017, at 114-116. Mr. Quinlan further testified that, at the time of the adjudicative hearing, only nine properties satisfied eligibility requirements. Tr., Day 1, Afternoon Session, 04/13/2017, at 27. He also confirmed that McKenna's Purchase and the Percy Lodge & Campground were not "eligible" properties, as defined by the Guarantee. Tr., Day 1, Afternoon Session, 04/13/2017, at 173-175. Mr. Quinlan further confirmed that the Guarantee does not provide any compensation for lost value of the properties that fail to sell due to absolute loss of marketability. Tr., Day 2, Afternoon Session, 04/14/2017, at 32-33.

The Applicant also offered a means of compensation for damage caused by the Applicant or its agents during construction and operation of the Project. App. 6, Att. M. The Applicant provided a form that would be used to submit damage complaints and assist the Applicant in making compensatory decisions, if any. App. 6, Att. M. Mr. Quinlan agreed that the form provided by the Applicant required a damage estimate to be provided by a licensed professional and some professionals for certain damages are not licensed in New Hampshire. Tr., Day 1, Afternoon

Session, 04/13/2017, at 28-30. He testified, however, that the Applicant would be willing to waive this requirement upon confirmation that damage could be estimated only by a professional who is not certified. Tr., Day 1, Afternoon Session, 04/13/2017, at 18-21.

(2) Businesses and Organizations with Economic Interests

Leslie Otten, on behalf of Dixville Capital, LLC and Balsams Resort Holdings, LLC, opined that the Project would not have adverse effect on real estate sales. BUS 1, at 2. He testified that, within the Balsams Resort, the Project will be visible from the skiing area, the top of the gondola, Table Rock, the golf course and the future development and real estate areas on the east side of the mountain. Tr., Day 44, Morning Session, 10/06/2017, at 15-16. Mr. Otten further asserted that, since 2015, more than 250 individuals have made \$1,200 reservation deposits to purchase condominiums at the Balsams. BUS 2, at 3-4. Since 2016, more than 90 of those individuals visited the Balsams Resort and made initial 5% deposits required for purchase of future residences. BUS 2, at 3-4. Based on this information, Mr. Otten opined that the Project would not impact the Resort's redevelopment and future real estate sales. BUS 1, at 3.

(3) Counsel for the Public

Counsel for the Public's experts, Dr. Rockler and Mr. Kavet, opined that Dr. Chalmers' report is not credible because it presents a selective and incomplete review of existing literature, relies on a flawed and unreliable market review and case studies, fails to examine visual property degradation and fails to consider impacts on multi-family structures, commercial properties and properties that rely on tourism. CFP 146, at 6; CFP 147, at 6. Counsel for the Public's experts testified that literature that was reviewed by Dr. Chalmers does not address impacts on tourist and recreational properties located in rural areas valued for their scenic and recreational features. CFP 148, Ex. B, at 17-22. As to the case studies evaluated by Dr. Chalmers, Counsel for the

Public's experts argued that they are unreliable because they are based on subjective determinations of appraisers, unverified reports of information, and unsubstantiated dates of research. CFP 148, Ex. B, at 22-27. They also do not address the impact of the Project's view and exclude the properties that, although have views of the lines, do not abut or are not crossed by the lines. CFP 148, Ex. B, at 22-27. They also asserted:

The Chalmers analyses, individually and in sum, fail to examine the most important conduit for potential property valuation diminution in an area of high recreational and scenic amenity values – visual property degradation. Property value loss is not a mere dark imagining of the many potentially affected parties to which this process has given voice. It is a real potential effect that should be studied and estimated, however, difficult to quantify.

.....

In no event, however, could it reasonably be considered to be zero, even if the inapplicable extant literature were to be the exclusive basis of such a determination.

CFP 148, Ex. B, at 26-27. Based on viewshed data that was prepared by Counsel for the Public's experts, Dr. Rockler and Mr. Kavet estimated how much residential property might have a view of the Project. CFP 146, at 6; CFP 147, at 6. They also estimated the loss and gains in the value of that property using values from existing literature that "were most relevant to the affected New Hampshire area." CFP 146, at 6; CFP 147, at 6. Thereafter, they transformed the value of a one-percent change in the assessed value of property into a flow of income by using the historical ratio of New Hampshire imputed rent income to assessed residential property values. CFP 146, at 6; CFP 147, at 6. As a result, Counsel for the Public's experts determined that every 1% decline in overall assessed property values potentially within the viewshed would represent \$11,628,154 in lost wealth by affected residential property owners. CFP 146, at 6; CFP 147, at 6. They further determined that this equals an annual loss in imputed rent income of \$202,671 for 2015. CFP 146, at 6; CFP 147, at 6. They further opined that this annual income decline would

continue for as long as the market deemed that residential properties had lost values. CFP 146, at 6; CFP 147, at 6.

Dr. Rockler and Mr. Kavet admitted that the exact percentage of loss that could be experienced in a region with high recreational and scenic amenity values was difficult to estimate. CFP 146, at 7; CFP 147, at 7. They asserted, however, that a few applicable studies found impacts from 15% to 34% with “view lots” experiencing even more significant losses. CFP 146, at 7; CFP 147, at 7.

Dr. Rockler and Mr. Kavet also analyzed the Project’s impact on restaurants in the area and determined that a decline in sales associated with views of the Project could be approximately 5% which would result in the loss of approximately \$500,000 per year in restaurant sales. CFP 146, at 7; CFP 147, at 7.

(4) Grafton County Commissioners

Commissioner Lauer, opined that the Project would cause a decrease in real estate values by negatively impacting views. GRAFTON 1. She further opined that the Applicant should be required to compensate property owners for loss of value and damages to their properties. GRAFTON 1.

(5) Municipalities

Ms. Hersom and Mr. Lombardi, on behalf of the Whitefield Board of Selectmen and Planning Board, stated that the Project would adversely affect the value of real estate in the Town by damaging the Town’s rural character and degrading views enjoyed by property owners. JTMUNI 95, at 11-12.

Ned Cutler, on behalf of the Town of Easton’s Board of Selectmen, testified that the Project would have a negative effect on values of the properties situated along Routes 112 and

116 where the Project would be constructed under these routes and property owners would have to notify potential buyers of this fact. JTMUNI 102, at 2-3.

Ms. Pastoriza, on behalf of Easton Conservation Commission, asserted that the Project has already impacted the value of properties located along the roads under which the Project would be constructed by making it clear that the Project and other projects of similar magnitude could be constructed at these locations. JTMUNI 111, at 9.

The Town of New Hampton argued that the Project would have an adverse effect on values of the properties located in the Town. JTMUNI 114. Neil Irving, on behalf of the Board of Selectmen of the Town of New Hampton, asserted that the Board thoroughly reviewed the reports prepared by Dr. Chalmers as well as literature cited in his reports. JTMUNI 124, at 3-4. The Board noted that, in a report authored by Dr. Chalmers entitled “HVTL and Rural, Western Real Estate Values” published in 2012, Mr. Chalmers opined that “[t]he more heavily oriented the property is towards residential use, the more vulnerable it is to transmission line impact.” JTMUNI 124, at 4. The Board also noted that the Thibeault study of appraisal literature stated that Dr. Chalmers acknowledged in his 2009 article entitled “HVTL: Proximity, Visibility and Encumbrance Effects” that “it is fair to presume that the direction of the effect would in most circumstances be negative, but the existence . . . and magnitude . . . can only be determined by analysis of actual market transactions.” JTMUNI 124, at 4. Based on this review, the Board concluded that the overhead portion of the Project that would be constructed in the Town of New Hampton would have a negative impact on values of properties it would be visible from. JTMUNI 124, at 4.

Mr. Jodoin, on behalf of the Board of Selectmen of the Town of Pembroke, acknowledged that the Town did not conduct an independent assessment of anticipated Project’s

impacts on values of real estate. JTMUNI 143, Ex. A. He asserted, however, that the Town's assessors have experience with "view cases" and studies have shown that it is common for property values to decrease when "obnoxious or unsightly items" are placed or enlarged within the views of the properties. JTMUNI 143, Ex. A. Mr. Jodoin further asserted that the Project would impact views of the properties located along the right-of-way due to an increase in structure heights and a decrease of the distance between the properties and the structures. JTMUNI 145, at 2. Mr. Jodoin asserted that the properties that are currently located along the right-of-way with the views of the powerlines have already received tax discounts because of the impact of the lines on their value. JTMUNI 145, at 4.

Kate Hartnett, on behalf of the Town of Deerfield, opined that the guarantee program offered by the Applicant is not beneficial for the residents whose residences could be impacted by the Project because it is too complex and operates under unrealistic deadlines. JTMUNI 156, at 11.

George Sansoucy, on behalf of the Towns of Northumberland, Whitefield, Littleton, Sugar Hill, Franconia, Woodstock, Plymouth, Bridgewater, Bristol, New Hampton, Concord, Pembroke, Deerfield and Ashland Water & Sewer Department, opined that electric transmission lines impact real estate values. He claims HVTL cause a diminution of town-wide values, by: (i) directly diminishing property value by encumbering the property with no previously existing encumbrances, *i.e.* easements and associated restrictions; (ii) directly affecting the value of abutting properties by impacting its use, desirability or potential development at its highest and best use; or (iii) impacting values of properties that are not directly encumbered or abutted by the right-of-way associated with the lines. SAN 1, at 19-20. He asserted that the value of property with views of the right-of-way could be affected by views of the Project. SAN 1, at 20-21. Mr.

Sancoucy opined that the underground portion of the Project would cause a diminution in value of abutting properties due to the restrictions on future construction that would be caused by virtue of the line's location. SAN 1, at 12-13. Mr. Sansoucy asserted, however, that an exact impact on real estate values by the electric transmission lines is not easy to determine due to variations in properties' characteristics. SAN 1, at 21-22.

Mr. Sansoucy criticized Dr. Chalmer's testimony and report. SAN 1, at 22. He argued that Dr. Chalmers' testimony and report should be disregarded by the Subcommittee because: (i) literature cited and relied upon by Dr. Chalmers is outdated and does not relate to the real estate market in New Hampshire; (ii) the case studies evaluated by Dr. Chalmers are not accessible for evaluation and some are outside of New Hampshire; (iii) the sub-division studies are old and do not address the impact of transmission lines that are similar to the Project; (iv) the statement that the impact of electric lines on real estate value remains the same as 30-40 years ago is unsupported; and (v) the report is misleading where it attempts to measure the effect on real estate values that have already been reduced due to the presence of existing lines. SAN 2, at 18-21. Mr. Sansoucy also asserted that Dr. Chalmers failed to consider and evaluate the Project's impact on properties that would be located beyond 100 feet of the right-of-way but would have visibility of the Project. SAN 1, at 23. Mr. Sansoucy stated that a measurement of marketing time is not reliable where it depends on subjective judgment of prospective buyers, may be impacted by a decrease in listing prices below fair market value and may be obscured by a change of listing agents. SAN 1, at 23. Mr. Sansoucy testified that evaluation of the impact of electric lines that were in existence for a long time and were embedded in property values for years are futile for a determination of impact of the line that would be built on the properties that did not have such encumbrance in the past. SAN 1, at 24.

(6) Forest Society

The Forest Society's witness, Dean Wilber, opined that construction and operation of the Project would have an adverse effect on the value of his property because it would further encumber the existing right-of-way and the Project's structures would be visible from the driveway of his residence. SPNF 139, at 3.

(7) Individual Intervenors

John Petrofsky opined that the Project would have a negative impact on real estate values of vacation homes by impacting the character and aesthetics of the region. CF 65, at 7-8.

Karen J. Johnson-Spencer, on behalf of Lagaspence Realty, LLC, asserted that her husband, Kevin Spencer and his business partner, invested numerous hours of work and over \$638,618.00 in the purchase and development of Percy Lodge and Campground. DNA 7, at 1, 5. She further testified that the Project would be located in the right-of-way that encumbers this property. DNA 7, at 2-3. Ms. Spencer argued that the Project would have a negative impact on views of Percy Lodge and Campground and, consequently, would have a negative impact on the value of this real estate. DNA 7, at 4-5.

Rodrigue J. Beland testified that he and his wife own sixty (60) acres of real estate on the north side of Route 110 in Stark. DNA 10, at 1. He asserted that they purchased this property as their retirement home. DNA 10. He testified that the Project would run for approximately 1500 feet across their property and within "a few hundred feet" of their residence. DNA 10, at 2. Mr. Beland argued that the Project, as proposed, would destroy the views he and his wife currently enjoy and would reduce the fair market value of this real estate "by over six figures to the point where its only value would be as a wood lot." DNA 10, at 5.

Joshua Olson asserted that he, his mother, Elaine Olson, and his father, Eric Olson, are trustees of a revocable trust that owns sixteen abutting parcels of real estate containing in excess of 1,000 acres in Dummer. DNA 12, at 1. Mr. Olson asserted that he and his family intended to develop this real estate into smaller lots containing approximately 50 acres and sell them to people interested in purchasing homes in remote wild areas. DNA 12, at 1. Mr. Olson further asserted that the real estate owned by them is encumbered by the right-of-way that runs east to west for more than one mile. DNA 12, at 2. He stated that, currently, the right-of-way contains a 115 kV transmission line owned by Eversource with wooden poles that are approximately 40 to 50 feet high. DNA 12, at 2. He argued that the Applicant would replace these poles with nine metal structures that would be at least twice as high as currently existing structures. DNA 12, at 2. He also argued that nine additional metal structures would be constructed within this right-of-way. DNA 12, at 2-3. He concluded that the Project would have an adverse effect on views and nature of the property and would decrease its value in excess of \$5 million. DNA 12, at 3.

Bruce Brekke and Sondra Brekke testified that they own real estate located at 99 Ramble Road in Whitefield. DWBA 7, at 1. They testified that they currently enjoy views from their house that include the views of the Mountain View Grand Hotel, Mount Waumbek, Mount Cabot, Mount Prospect, Mount Pleasant, Mount Dalton, along with the Pliny and Kilkenny Ranges and Percy Peaks. DWBA 7, at 1. They further testified that their real estate abuts the right-of-way that the Applicant seeks to use for the Project. DWBA 7, at 1. According to the Brekkes, the 40 foot wooden structures currently located within the right-of-way are visible only during the winter months. DWBA 7, at 1. The Applicant seeks, however, to construct structures that would be over one-hundred feet tall and would be visible throughout the year. DWBA 7, at

2, 5-13. The Brekkes argued that the Project would ruin the panoramic view they currently enjoy and would diminish the value of their property. DWBA 7, at 2.

David Van Houten testified that he resides and owns real estate located at 649 Cherry Valley Road in Bethlehem. DWBA 8, at 1. He asserted that the Project would cross his property. DWBA 8, at 1. He argued that the Project would have a negative impact on the value of his property because it would alter the rural character of the region, would impact views he currently enjoys, would introduce noise associated with operation of the powerlines and would make his property less attractive to potential buyers because of concerns of electro-magnetic fields and the impact on health and safety. DWBA 8, at 1-2. Mr. Van Houten further criticized Dr. Chalmers' report and argued that it did not consider unsold properties, the second-home market, commercial properties, or uniqueness of the North Country and subjective values of people who buy and reside in the region. DWBA 8, at 1-2.

Elmer Lupton and Claire Lupton testified that they own real estate at 75 Newell Lane in Whitefield. DWBA 9, at 1. They asserted that the right-of-way crosses their property. DWBA 9, at 2. They testified that the Project's structures would be constructed a quarter mile from the house located at this property and at least 30 feet of three towers would be visible from the front lawn and second floor windows of the house. DWBA 9, at 2; DWBA 13, at 8. They opined that the Project would have a negative impact on the value and enjoyment of their property by affecting the views, introducing new sound and altering the rural character of the property. DWBA 9, at 2-3.

Peter W. Powell testified on behalf of the Abutting Property Group of Intervenors Dalton-Bethlehem. DWBA 10. Mr. Powell opined that, based on his professional experience as a real estate broker, the Project would have a negative impact on property values by impacting

one of their fundamental benefits – scenic views and vistas. DWBA 10, at 5-7. Mr. Powell further opined that impact of the Project cannot be estimated based on sales in other regions of the country where these sales do not represent the unique attributes of the North Country.

DWBA 10, at 6. He detailed “real-life” examples supporting his conclusion that the Project already has and will continue to negatively impact the value of real estate in the region by 35 to 40 percent and, in some instances, 75 percent:

- Three adjoining lots totaling 22.83 acres located on Wesson Road in Lancaster – Ad valorem value determined by the town was \$134,990.00. Estimated value determined by Mr. Powell’s real estate agency was \$99,000.00. The property was listed for sale in April, 2012 for \$35,000.00. Listing price was lowered to \$29,000.00 in December, 2012. It was sold in March, 2013 for \$27,500.00. Estimated decrease in fair market value due to potential presence of the Project – 72.22%.
- 53 Wesson Road in Lancaster - Ad valorem values determined by the town was \$117,300.00. Estimated value determined by Mr. Powell’s real estate agency, without considering the Project, was between \$129,000.00 and \$135,000.00. Listing price was lowered to \$119,500.00. It was sold in January, 2015 for \$80,000.00. Estimated decrease in fair market value due to potential presence of the Project – 38%.
- 224 Portland Street in Lancaster – This property was purchased in February, 2005 for \$319,500.00. The owners invested additional \$200,000.00 in improvements. Ad valorem value determined by the town in 2009 was \$384,460.00. The property was listed for sale without considering the Project’s impact in April, 2010 for \$397,300.00. Listing price was lowered to \$379,000.00 in October, 2010. It was further lowered in June, 2011 to \$359,000.00. The property was taken off the market and relisted thereafter for \$359,000.00. The listing price was further lowered to \$329,000.00. The property was ultimately sold for \$317,500.00 in January, 2013. Estimated decrease in fair market value due to potential presence of the Project – approximately 20%.
- 260 North Road – The property was listed for sale in July, 2009 for \$159,500.00. It was relisted thereafter for \$149,500.00 in April, 2010, for \$139,500.00 in August, 2010, for \$129,500.00 in November, 2012, and for \$119,500.00 in May, 2013. It was sold for \$72,000.00 in July, 2015. Estimated decrease in fair market value due to potential presence of the Project – approximately 45%.
- 61.98 acres on US Route 2 in Lancaster – It was purchased in March, 2006 for \$170,000.00. It was listed for sale thereafter for \$184,500.00. It was not sold and was taken off the market.

DWBA 10, at 6-12.

James and Judy Ramsdell testified that they reside at 1049 Whitefield Road in Dalton. DWBA 11, at 1. They asserted that their property abuts the right-of-way where the Project would be located. DWBA 11, at 1. They also testified that their residence is located approximately 100-feet from the existing power line. DWBA 11, at 1. They asserted that they tried to sell their property from 2010 to 2012 and, although multiple showings were conducted, were unsuccessful with selling it after disclosing that the Project would be constructed within the right-of-way. DWBA 11, at 1. They opined that “just the possibility” of the Project to be constructed within the right-of-way has already affected their property’s value and their ability to sell it. DWBA 11, at 1-2.

Tim and Brigitte White testified that they reside at 72 Lancaster Road in Whitefield. DWBA 12, at 1. They asserted that the Project’s towers would be located approximately 150 feet from their house and a substation would be located across the street from their property. DWBA 12, at 1. They argued that the Project would have negative impact on the value of their property. DWBA 12, at 1-3.

The Bethlehem-Plymouth Abutting Property Owners Group of Intervenors,⁷² through Walter Palmer and Kathryn Ting, argued that the underground section of the Project in Easton and Franconia would be located in close proximity to a number of private properties. APOBP 1, at 1. They argued that location of the Project so close to these properties would have an adverse effect on views associated with tree removal and vegetative clearing and, consequently, would have an adverse effect on these properties’ values. APOBP 1, at 4-5.

⁷² Eric and Barbara Meyer from Easton, Robert Thibault from Easton, Russell and Lydia Cumbee from Franconia, Walter Palmer and Kathryn Ting from Franconia, Carl and Barbara Lakes from Easton, Bruce Ahern for Plymouth and Peter and Mary Grote from Franconia.

Bruce A. Ahern argued that the Project would have a negative impact on value of his property located at 503 Daniel Webster Highway in Plymouth because it would be located under Route 3 that crosses his real estate. APOBP 3, at 2.

Peter Grote opined that the Project would have a negative impact on the value of his property. APOBP 10. In support, he testified that the property located approximately 1,000 yards from his property was listed for \$49,000.00 and was sold for \$25,000.00 after one of the prospective buyers found out about the Applicant's plans to construct the Project nearby. APOBP 10.

Mary Lee opined that the Project would have an adverse effect on the value of her property located at 93 Fiddler's Choice Road in Northfield because its towers would be visible from her property. ASHLAND-CONCORD-ABTR 1.

Michelle Kleindienst, on behalf of McKenna's Purchase Unit Owners Association, asserted that the Project would be constructed within the right-of-way located on the east side of the Association's property. ASHLAND-CONCORD-ABTR 5, at 1. She argued that the Project's towers would be twice as high as the towers currently located within the right-of-way. ASHLAND-CONCORD-ABTR 5, at 2. She concluded that the Project would have an adverse effect on aesthetics and views of the Association and, consequently, would have a negative impact on the Association's property values. ASHLAND-CONCORD-ABTR 5, at 2. She stated that the Association contacted a number of real estate appraisers who advised it that the impact of the Project on properties' values could not be estimated prior to the construction of the Project. ASHLAND-CONCORD-ABTR 5, at 3. She estimated, however, that the Project would cause a decrease in real estate values between 30% and 50%. ASHLAND-CONCORD-ABTR 5, at 3. Ms. Kleindienst requested that the Subcommittee include a condition in the Certificate and

require the Applicant to conduct “post-construction monitoring for the association.” ASHLAND-CONCORD-ABTR 5, at 3.

Jo Anne Bradbury advised the Subcommittee that the Project would cross her property and would be visible from the property. DFLD-ABTR 1, at 1-2. Ms. Bradbury asserted that she intentionally constructed her house as an “off the grid home” that is located in a country setting. DFLD-ABTR 1, at 1-2. She argued that the presence of the Project on her property and its visibility would destroy both the property’s character and its appeal to potential buyers and, consequently, would have a negative impact on the value of her property. DFLD-ABTR 1, at 1-2.

Jeanne Menard testified as general partner of Menard Forest Family Partnership. DFLD-ABTR 8, at 1. She stated that the partnership manages 229 acres of forested land that were transferred by conservation easement deed to the Forest Society by her mother in 1994. DFLD-ABTR 8, at 1. She stated that the Project would cross this property and would reduce its value as a contiguous conservation forest parcel. DFLD-ABTR 8, at 2.

Ms. Menard also testified on behalf of Pawtuckaway View LLC. AD-N-ABTR 27. She asserted that Pawtuckaway View LLC owns real estate and a 40,000 square feet repurposed manufacturing plant used by various craftsman in a wood working cooperative, office space, residential rental and a storage facility located at 63 Nottingham Road in Deerfield. AD-N-ABTR 27. She stated that the Project would be visible upon approach to the site and from a few locations within the buildings. AD-N-ABTR 27. She opined that the Project would have an adverse effect on the views and aesthetics of these buildings and, consequently, would have an adverse effect on the value of the property. AD-N-ABTR 27.

Ms. Menard testified on behalf of Peter Menard and Anne Burnett. She argued that the Project would have a negative effect on the value of the property located at 65 Nottingham Road in Nottingham. DFLD-ABTR 5, at 1. She advised the Subcommittee that this property consisted of 11 acres of hay fields and 22 acres of woodland with a historic homestead and log cabin located on the property. DFLD-ABTR 5, at 2. She further asserted that the homestead currently has a view of North Mountain in Pawtuckaway State Park and the cabin overlooks a small pond. DFLD-ABTR 5, at 2. Ms. Menard asserted that the views of the property substantially contribute to its value. DFLD-ABTR 5, at 3. She further asserted that the Project would cross the property and would destroy its views. DFLD-ABTR 5, at 3-4. She concluded that, by destroying the property's views, the Project would negatively impact its value. DFLD-ABTR 5, at 3. Ms. Menard also opined that the Project would have a negative effect on the property's value by introducing noise that was not previously present and stigma associated with the presence of the powerlines. DFLD-ABTR 5, at 4-5, 8.

In addition to her testimony about 65 Nottingham Road, Ms. Menard further criticized Dr. Chalmers' Report in a number of ways. DFLD-ABTR 5. She testified that the case studies relied on by Dr. Chalmers are generalized and are not specific to any property, community or region. DFLD-ABTR 5, at 6. She further argued that case studies relied on by Mr. Chalmers have different structures and different rights-of-ways. DFLD-ABTR 5, at 6. She argued that "the only thing the HVTL line used in the NH Research Specific Report have in common is that they happen to be located in NH." DFLD-ABTR 5, at 6. She opined that the Subcommittee should not rely on generalized conclusions based on such studies while determining whether the Project would have an adverse effect on properties' values. DFLD-ABTR 5, at 6. Ms. Menard further argued that Dr. Chalmers' statement that the property owners were reimbursed for the loss of

value of their properties when the right-of-way was established and utility easements were granted is unsupported considering that a majority of easements were granted for \$1.00. DFLD-ABTR 5, at 3-4.

Ms. Menard testified that the only reliable approach to determining the value of the transmission lines on real estate values is by using a hedonic pricing model and through performing professional real estate appraisals. DFLD-ABTR 5, at 6-7.

Ms. Menard also argued that Dr. Chalmers' Report does not address the fact that some residential properties were purchased by utility companies and does not account for sales of condominiums, second homes, waterfront properties, residential properties that are off grid and conservation land. DFLD-ABTR 5, at 9.

Robert Cote and Bruce Adami testified that they own real estate located at 32 Mountain Road in Deerfield. DFLD-ABTR 32, at 2. They testified that their home is entirely "off-the-grid." DFLD-ABTR 32, at 2. They also testified that, according to a 1991 appraisal of the house, "the most likely user of this piece is the person who seeks privacy and protection from development." DFLD-ABTR 34, at 3, Att. A. They estimated that the current market value of the house is approximately \$550,000.00-\$650,000.00. DFLD-ABTR 324, at 3. They opined that the Project would cross their property and would alter its rural character and its appeal to potential buyers. DFLD-ABTR 34, at 2-3. They estimated that the Project would cause their property to decrease in value by approximately \$55,000.00-\$130,000.00. DFLD-ABTR 34, at 3.

Erick Berglund and Kathleen Berglund testified that they reside at 23 Nottingham Road in Deerfield. DFLD-ABTR 36, at 1, 3; DFLD-ABTR 37. They testified that the Project would have an adverse visual impact to the south of their property and, consequently, would diminish their property's value. DFLD-ABTR 36, at 4.

Philip and Joan Bilodeau testified that they reside at 140 Nottingham Road in Deerfield. BILODEAU 1, at 1. They testified that PSNH owns 65 acres behind and adjacent to their home. BILODEAU 2, at 1. A transmission substation is currently located at the property owned by PSNH. BILODEAU 2, at 2. The Applicant seeks to upgrade and enlarge the substation and an upgraded station would be located 500 feet from their property. BILODEAU 2, at 2. They opined that location of the upgraded substation in close proximity to their property would have an adverse effect on their property's value. BILODEAU 2, at 1-2.

Maureen Quinn testified that she resides and owns real estate located in the historic Deerfield Parade section of Deerfield approximately one mile northeast of the intersection of Nottingham Road and Route 107 (North Road). AD-N-ABTR 1, at 2. She testified that her house faces the right-of-way where the Project would be constructed. AD-N-ABTR 1, at 2. She testified that at least five Project towers would be between 120 and 140 feet tall and would be clearly visible from her property. AD-N-ABTR 1, at 2. She also argued that noise associated with operation of the powerline could be audible at her property. AD-N-ABTR 1, at 2-3. She believes the Project would have an adverse effect on the value of her property by destroying the views and by introducing unpleasant and annoying noise. AD-N-ABTR 1, at 2-3.

Thomas and Madelyn Foulkes testified that they reside at 26 Nottingham Road in Deerfield. AD-N-ABTR 16, at 1. They further testified that, as of now, they have incredible views of South Road and the hills of Pawtuckaway State Park from their property. AD-N-ABTR 16, at 1. They acknowledged that the view is obstructed by the right-of-way and currently existing powerlines. AD-N-ABTR 16, at 1. They claim that the Project's structures would be substantially higher than the current structures and would have substantially greater effect on the views and aesthetics of their property. AD-N-ABTR 16, at 1. They concluded, relying on a

study found in “Home Guide,” that the Project would cause an approximately 10% decrease in their property’s value. AD-N-ABTR 16, at 1.

Elisha Gray testified that he and his wife own the property that overlooks the river valley and Periwig Mountain on the west. AD-N-ABTR 41, at 1. Mr. Gray argued that the Project would affect views from their property on Blake Hill Road across the valley. AD-N-ABTR 41, at 1. He further opined that, by diminishing the view, the Project would have a negative impact on their property’s value. AD-N-ABTR 41, at 1. They further criticized Dr. Chalmers’ report and argued that it was based on generalized rather than site-specific conclusions. AD-N-ABTR 41, at 1.

(8) North Country Scenic Byways Council

Carl Martland, on behalf of the North Country Scenic Byways Council, opined that the Project would have an adverse effect on the desirability of residences and vacation homes in the region. HIST 12, at 9. He based this conclusion on his personal experience and a study he conducted after the announcement of the project. HIST 12, at 9. He testified that he studied the real estate values near the right-of-way in Sugar Hill. HIST 12, at 9. He determined that real estate values near the right-of-way were lower and that real estate development was “severely affected by the power lines.” HIST 12, at 9. He testified that he could not find a single house that was built after 1950 that has a view of the power lines. HIST 12, at 9. According to Mr. Martland, only after the trees had grown high enough to block views of the lines were the properties close to the lines were developed. HIST 12, at 9. Mr. Martland concluded that “[f]or those seeking a location for a vacation home or a retirement home, the construction of massive towers would generally make the region less attractive and would specifically destroy the scenic beauty of thousands of potential home-sites on or near the proposed route.” HIST 12, at 9. To

support his conclusion that thousands of potential home-sites would be affected by the Project,

Mr. Martland testified as follows:

There would be more than 16 thousand acres of land within 1,800 feet of the centerline of the 38 miles of the new right-of-way for overhead lines in Coos County. If a typical home site is 1 to 10 acres, then clearly there are thousands of potential home sites that could be affected just along this 38-mile section of the proposed route. The same logic could be applied to that portion of the route where new overhead lines would be added to an existing corridor in areas where there is still open space available for development. In developed areas, the unreasonably adverse impact of the project would affect the values of existing homes as well as the potential for development of new home-sites.

HIST 13, at 10.

b. Subcommittee Deliberations

The Applicant claims that it proved by a preponderance of the evidence that the Project will have no discernible effect on real estate values. Applicant's Post-Hearing Memorandum, at 100. In doing so, the Applicant relies heavily on the testimony and reports of Dr. Chalmers. App. 30; App. 104; App. 1, Appx. 46. The Applicant characterizes Dr. Chalmers' report as being thorough and multi-pronged. Applicant's Post-Hearing Memorandum, at 119. While Dr. Chalmers approach was broad, the Subcommittee finds the report and testimony to be insufficient to demonstrate that the Project will not have an unreasonably adverse impact on real estate values throughout the region. We find much of Dr. Chalmers' testimony and his report to be shallow and not supported by the data.

The Chalmers literature review did not support his ultimate conclusions. The Applicant claims that "past studies have produced a variety of results" and "provide insufficiently consistent results to allow specific conclusions to be applied in locations that have not been studied." Applicant's Post-Hearing Memorandum, at 101. The literature reviewed, some of

which was authored by Dr. Chalmers, was not consistent in demonstrating a measure of the reduction in values caused by HVTL. However, the studies reviewed by Dr. Chalmers indicated that there was an impact on residential properties. In his own studies that impact ranged anywhere from a 1% to 6% reduction in residential property value. *See App. Ex. 1 Appx. 46, at 14.* A prior study by Dr. Chalmers also demonstrated a 3% to 6% reduction in sale price attributable to HVTL. *See Chalmers, James A., High-Voltage Transmission Lines and Rural, Western Real Estate Values, CFP 379, at 31.* That study also demonstrated a negative price effect that could be as high as 20% to 25% on residential properties in rural residential subdivisions near HVTL. *See Chalmers, James A., High-Voltage Transmission Lines and Rural, Western Real Estate Values, CFP 379, at 40.* The affected properties also suffered extended times on the market. *See Chalmers, James A., High-Voltage Transmission Lines and Rural, Western Real Estate Values, CFP 379, at 40.* The literature, as reviewed by Dr. Chalmers, does not support the Applicant's position that one cannot presume an effect on property value from HVTL. In fact, the literature review as presented in this case supports the intuitive position that HVTLs negatively impact real estate values.

Dr. Chalmers' New Hampshire case study analysis did not persuade us that there would be no discernible decrease in property values attributable to the Project. The case studies were based on retrospective appraisals of properties in proximity to other existing HVTL. The case studies were roundly criticized by other parties. The properties reviewed in the case studies were not similar to properties along the Project route. There are substantial differences between the HVTL used in the case studies and the Project, especially with respect to the size of the proposed structures and the nature of the surrounding region.

The Subcommittee found many of Dr. Chalmers' conclusions from the case studies to be unreliable. For instance, he found that 10 of the 58 properties (17%) demonstrated a negative sales price effect attributable to HTVL. App. 30, at 6; Tr., Day 26, Morning Session, 08/02/2017, at 65-66. Based on that rate he determined the sales price effects to be "infrequent." App. 30, at 6; Tr., Day 26, Morning Session, 08/02/2017, at 65-66. This Subcommittee believes that one of every six properties studied is not an infrequent occurrence. The Subcommittee had difficulty with Dr. Chalmers' dismissal of additional properties in the case studies that sold for less than the appraised value. App. 30, at 6; Tr., Day 26, Morning Session, 08/02/2017, at 65-66. There were 11 such properties that Dr. Chalmers identified to be "indeterminate" because he could not link the below-appraisal sales price to the HVTL. App. 30, at 6; Tr., Day 24, Morning Session, 07/31/2017, at 84-113. Dr. Chalmers gave no weight to the indeterminate properties in reaching his conclusions. Tr., Day 24, Morning Session, 07/31/2017, at 105-107. This decision undermines the reliability of his report as it does not contemplate the possibility that some of the indeterminate properties may have suffered a negative price effect attributable to the HVTL.

In considering the testimony of Dr. Chalmers, the Subcommittee acknowledged his admission that the literature review is unhelpful in determining the effect on specific property values. The Subcommittee also found the case studies to be unpersuasive because of errors in the underlying data contained in the appraisals. Dr. Chalmers relied, in part, on non-qualified sales between family members and multiple sales to a single contractor. His report also contained errors in identifying comparable sales. Confronted on cross-examination Dr. Chalmers acknowledged errors in the studies he relied upon, but failed to adjust his ultimate opinion on the Project's effect. Tr., Day 24, Afternoon Session, 07/31/2017, at 108-166; Tr., Day 25, Morning Session, 08/01/2017, at 51-132. Dr. Chalmers' subdivision study suffered from

similar data related problems. Tr., Day 24, Afternoon Session, 07/31/2017, at 108-166; Tr., Day 25, Morning Session, 08/01/2017, at 51-132.

The Subcommittee was also concerned with significant gaps in the research performed by Dr. Chalmers and in his overall conclusions. He gave little, if any, consideration to commercial property, condominiums, multi-family housing, vacant land, second homes or to property along the underground portion of the route.

Dr. Chalmers' ultimate opinion was that there would be an infrequent property value impact that would occur primarily with respect to single family homes, within 100 feet of the right-of-way, with a change in an artificial category of view of the structures in the right-of-way. According to the Applicant, this might amount to 6 or 9 properties along the entire 192 mile route. Neither the research supplied by the Applicant or Dr. Chalmers' testimony reasonably supports that conclusion.

Dr. Chalmers presents no cogent explanation why properties beyond 100 feet from the right-of-way that experience a significant change in view would not suffer a drop in value as a result of the Project. There is no inventory or credible estimate offered by the Applicant of which properties, or how many, may experience a change in view if the Project is constructed. Dr. Chalmers did not conduct a visibility assessment and did not review the visual impact assessments and photosimulations prepared by other experts in this docket, including the Applicant's expert, to determine which properties actually would be affected. He did not rely on any scientific evidence or evaluation supported by reliable evidence and/or documentation to determine the extent to which visibility of the powerlines would increase. He never entered upon properties that might be affected by the Project. Instead, he relied on a "windshield test" where he drove by the properties and estimated the increase in visibility by looking at currently existing

lines from public roads. To constitute a change in visibility, Dr. Chalmers required a property to go from no view to partial or clear view of structures or from partial view to clear view. No account was taken to a change in the number of structures or type of structures that might be visible from a property within a partial or clear view classification. Dr. Chalmers did not consider conductor visibility to be important. This is neither a reliable nor a credible method of determining if increased visibility will impact the value of property. Dr. Chalmers' conclusion amounts to no more than a guess as he undertook no research to determine which properties or how many would have a change in view that may lead to a decrease in value. His "drive-by" or "windshield review" is not an adequate substitute for competent analysis of the actual effects on property values.

As a condition of a Certificate, the Applicant offered to establish a property value guarantee program. The Subcommittee appreciates the attempt to mitigate the impact of the Project on property values. However, the program, as offered, is limited to "eligible" property owners. Eligibility appears to be conditioned on Dr. Chalmers' criteria and is subject to the same flaws we see in Dr. Chalmers' opinions. Eligibility is limited to single family homes, encumbered by the right-of-way and within 100 feet of the right-of-way boundary where structure visibility increases from no visibility to partial or clear visibility or from partial visibility to clear visibility. App. 6, Att. L, §2. The Applicant estimated 6-9 properties of the thousands along the 192 mile route would be eligible for this guaranty program. The Applicant failed to adequately analyze and assess the effects of the Project on property values, thus, the Subcommittee has insufficient evidence upon which to structure a broader property value guarantee program. The evidence presented by the Applicant is inadequate for the

Subcommittee to determine which properties should actually be included in the program and the extent of remuneration that should be available.

The Subcommittee disagrees with Dr. Chalmers' assessment that only 6 to 9 properties would be affected. The Subcommittee believes that properties that are encumbered by the right-of-way and properties that are not encumbered by the right-of-way will be affected by the Project. The Applicant's data and analyses are insufficient for the Subcommittee to determine how far the impacts on property values will reach.

The impact on property values is one component of our orderly development consideration. The Applicant did not meet its burden in demonstrating that the Project's impact on property values will not unduly interfere with the orderly development of the region.

5. Tourism

a. Positions of the Parties

(1) Applicant

According to the Applicant, the Project would have absolutely no adverse impact on tourism in the region. App. 1, at 91. The Applicant submitted testimony (original and supplemental) and a report entitled "Northern Pass Transmission and New Hampshire's Tourism Industry" authored by Mr. Mitch Nichols of Nichols Tourism Group. App. 31; App. 105; App. 1, Appx. 45.

Mr. Nichols defined "tourist" as someone who travels more than 30 or 50 miles or stays overnight. Tr., Day 21, Afternoon Session, 07/18/2017, at 100-101. He noted that there is no quantitative research on the impacts of power lines on tourism. App. 31, at 2. In order to reach a conclusion about the Project's effect on tourism, Mr. Nichols: (i) reviewed relevant literature; (ii) reviewed data provided by Plymouth State University; (iii) conducted listening sessions in New

Hampshire; (iv) obtained and analyzed data from the Bureau of Labor Statistics; and (v) conducted an electronic survey. App. 1, Appx. 45, at 5-6.

After reviewing the data provided by Plymouth State University's Institute for New Hampshire Studies, Mr. Nichols concluded that the tourism industry supports approximately 10 percent of the jobs in the State of New Hampshire, with the Merrimack Valley being the largest attraction. App. 31, at 3. Mr. Nichols testified that Plymouth State University's data did not address the effect of transmission lines on tourism. App. 31, at 3. According to Mr. Nichols, industry representatives that participated in interviews that he conducted in December, 2013 expressed some concern about the potential impact of the Project on tourism, but failed to provide any specific foundation or empirical support for their concerns. App. 31, at 3. Mr. Nichols testified that tourism establishments and tourism employment increased during construction of the Phase II transmission line in New Hampshire and the Maine Power Reliability Program. App. 31, at 4. He claimed that prospective visitor surveys indicated that the attributes of tourism destinations influence their choice and "the presence of power lines is very low on the overall scale of importance of these variables." App. 31, at 4. As a result, Mr. Nichols opined that "[w]hile it is conceivable that the presence of power lines may be a factor in travel decisions for a very small number of New Hampshire visitors, on the overall scale of importance, the mix of destination attributes that influence visitors' choices of destination, the positive attributes of a destination far outweigh any speculative adverse effects from transmission lines." App. 31, at 5. He concluded that construction and operation of the Project would not affect regional travel demands and would not have a "measurable" effect on New Hampshire's tourism industry. App. 31, at 5.

Mr. Nichols stated that he did not recall an instance in his twenty years' of tourism planning where concern was raised about the "presence of transmission lines and the possible effect on visitor demand," either generally or specifically. Tr., Day 21, Morning Session, 07/18/2017, at 28-29; 77-78.

Mr. Nichols was not certain how many tourists visit New Hampshire or the area in the vicinity of the Project, and did not know how many of those visitors would see the towers. Tr., Day 22, Afternoon Session. 07/19/2017, at 7.

Mr. Nichols testified that he is not aware of anyone that has used the same method he utilized to analyze the impact of transmission lines. Tr., Day 21, Morning Session, 07/18/2017, at 88-90. Mr. Nichols disagreed that no element in his study directly addressed the comparison between the absence of transmission lines versus the presence of transmission lines. Tr., Day 21, Afternoon Session, 07/18/2017, at 86-90.

Mr. Nichols further acknowledged that he did not study nor analyze the impacts of construction of the Project, including traffic closures and delays, on tourism in general and on visitors to Pawtuckaway State Park, the Deerfield Fair, downtown Plymouth and the New Hampshire Marathon. Tr., Day 22, Morning Session, 07/19/2017, at 17-18; JTMUNI 223; Tr., Day 22, Afternoon Session, 07/19/2017, at 16, 146-147; Tr., Day 21, Morning Session, 07/18/2017, at 12, 90-91; Tr., Day 22, Morning Session, 07/19/2017, at 49-53. He acknowledged that a key factor to the tourism industry is the "ease of destination access" primarily through vehicular transport. Tr., Day 21, Morning Session, 07/18/2017, at 102-105. He also testified that significant impairment to access and longer travel times would "possibly" impact a decision as to whether or not to visit a particular destination. Tr., Day 21, Morning Session, 07/18/2017, at 102-105. Mr. Nichols admitted that a two-year construction process

would play into the “overall experience” and, if the lodging and restaurants along the underground route go out of business, it would affect the region. Tr., Day 22, Afternoon Session, 07/19/2017, at 30-31, 34. He admitted that traffic may act as a barrier to a decision to visit a particular tourism destination. Tr., Day 22, Morning Session, 07/19/2017, at 81-84. He opined, however, that the choice of travel destination does not depend solely on traffic. Tr., Day 21, Morning Session, 07/18/2017, at 102-105. He testified that it “has to be understood in the context of all of these other more powerful, impactful reasons to visit New Hampshire, and that traffic delays and transmission lines are today’s reality for travelers.” Tr., Day 22, Morning Session, 07/19/2017, at 81-84. Based on: (i) discussion and dialogue with “industry participants on the factors influencing visitation and demand to the State;” (ii) research conducted by Plymouth State University; (iii) visitor surveys; and (iv) his experience, he concluded that tourism would not be impacted by construction and resulting traffic delays. Tr., Day 21, Morning Session, 07/18/2017, at 95-96.

Mr. Nichols testified that his research did not reveal any study finding a “correlation that transmission lines directly influenced demand of tourism destinations.” Tr., Day 22, Afternoon Session, 07/19/2017, at 128-131. During the hearing, Mr. Nichols acknowledged that Alice DeSouza⁷³ and Mark Okrant⁷⁴ opined that there may be impacts on tourism from transmission lines. Tr., Day 22, Morning Session, 07/19/2017, at 146-149. He testified that he was not “dismissing” their opinions. Tr., Day 22, Morning Session, 07/19/2017, at 146-149. He argued, however, that he did not see a foundation to support their premise with “clear examples and demonstrated impacts.” Tr., Day 22, Morning Session, 07/19/2017, at 146-149. Mr. Nichols acknowledged that his own experience is not supported by empirical evidence. Tr., Day 22,

⁷³ Former Director of Travel and Tourism.

⁷⁴ Professor of Tourism Management at Plymouth State University.

Morning Session, 07/19/2017, at 150-151. He testified, however, that his conclusion was not based solely on his experience. Tr., Day 22, Morning Session, 07/19/2017, at 150-151.

Mr. Nichols testified that his summary of the State's tourism industry was based primarily on research from Plymouth State University.⁷⁵ Tr., Day 21, Morning Session, 07/18/2017, at 110-112. Mr. Nichols confirmed that he did not ask PSU if they considered the presence of power lines in their research. Tr., Day 21, Morning Session, 07/18/2017, at 113. Mr. Nichols also acknowledged that the New Hampshire Department of Resources and Economic Development⁷⁶ did not take any position on the Project. Tr., Day 22, Morning Session, 07/19/2017, at 122-123. He acknowledged that he did not have direct communications with anyone from the NH Division of Parks and Recreation because he already "understood the concerns from the outdoor recreation segments." Tr., Day 22, Morning Session, 07/19/2017, at 122-123. He also stated that meeting with representatives from top tourism destinations would not have made his analysis more complete because he already had a "very strong understanding of sort of the diversity of perspectives and the rationale behind them." Tr., Day 22, Afternoon Session, 07/19/2017, at 125. Mr. Nichols confirmed that he did not use as a direct resource, concerns that were raised by members from groups such as Trout Unlimited, Lakes Region Planning Commission and Friends of the Pemi, Livermore Falls Chapter. Tr., Day 22, Morning Session, 07/19/2017, at 101-106. Mr. Nichols also did not look at surveys conducted by the Lakes Region Planning Commission. Tr., Day 22, Morning Session, 07/19/2017, at 108.

⁷⁵ Mr. Nichols chose PSU because the Office of Tourism recommended it as the best group for detailed and historical visitation data. Tr., Day 22, Afternoon Session, 07/19/2017, at 13-14.

⁷⁶ The Department of Resources and Economic Development no longer exists and is now known as the Department of Business and Economic Affairs.

Mr. Nichols' Report included a single table and single graph⁷⁷ depicting traveler spending (including food and beverage). Tr., Day 21, Morning Session, 07/18/2017, at 116-118. Considering concentration of business, Mr. Nichols found the Merrimack Valley, which is located outside the Project area, is the region with the largest percentage of visitors. Tr., Day 21, Morning Session, 07/18/2017, at 116-118. The percentage of tourism related jobs in the regions was not analyzed, but instead assumed and Mr. Nichols' analysis focused on a "close correlation" between dollars spent and visitation. Tr., Day 21, Morning Session, 07/18/2017, at 120. The proportion of tourism as part of gross domestic product was not reviewed. Tr., Day 21, Morning Session, 07/18/2017, at 120. With respect to the Merrimack Valley, Mr. Nichols admitted that areas outside of the Project area are generally less likely to be impacted. Tr., Day 21, Morning Session, 07/18/2017, at 122-127.

Mr. Nichols did not analyze the secondary home market or the rental market because he assumed that buyers and renters operate in a similar fashion to that of visitors. Tr., Day 22, Morning Session, 07/19/2017, at 136-137.

Mr. Nichols acknowledged that he did not analyze the importance of clean air. Tr., Day 21, Morning Session, 07/18/2017, at 35-37. He stated, however, that in his twenty years' experience, clean air has not been an expressed factor or variable to be quantified. Tr., Day 21, Morning Session, 07/18/2017, at 35-37.

According to Mr. Nichols, the perspective of hikers and campers who wanted a more remote experience was captured in the PSU study by studying their activities and interests and by including business members in the tourism industry in his listening sessions. Tr., Day 22, Morning Session, 07/19/2017, at 68-72. Participants for his "listening tour" were selected by the

⁷⁷ Table 3-1 and Figure 3-5.

Applicant in concert with the New Hampshire Travel Council.⁷⁸ Tr., Day 21, Morning Session, 07/18/2017, at 128-129; Tr., Day 22, Morning Session, 07/19/2017, at 155-156. Four listening sessions, each approximately 90 minutes long, were held in December 2013. Tr., Day 21, Morning Session, 07/18/2017, at 130-139; CFP 356. The sessions were not well attended.⁷⁹ Tr., Day 21, Morning Session, 07/18/2017, at 130-139; CFP 356. Mr. Nichols admitted that no one from the Appalachian Mountain Club or the U.S. Forest Service was invited to participate in the listening tour. Tr., Day 21, Afternoon Session, 07/18/2017, at 94-100. Mr. Nichols admitted that he had hoped for larger attendance at the listening sessions. Tr., Day 22, Morning Session, 07/19/2017, at 157; Tr., Day 22, Afternoon Session, 07/19/2017, at 132. He testified, however, that even if turnout had been better, it would not have helped him to identify new issues or concerns. Tr., Day 22, Morning Session, 07/19/2017, at 157; Tr., Day 22, Afternoon Session, 07/19/2017, at 132. Mr. Nichols admitted that the Applicant's sponsorship of the sessions may have discouraged participation. Tr., Day 22, Morning Session, 07/19/2017, at 161. He also testified that, during listening sessions, the participants were asked four or five broad questions. Tr., Day 22, Morning Session, 07/19/2017, at 88-91. Mr. Nichols did not retain notes documenting the participants' responses. Tr., Day 21, Morning Session, 07/18/2017, at 99-100; Tr., Day 22, Morning Session, 07/19/2017, at 162-163. Mr. Nichols stated that respondents

⁷⁸ Eversource sponsors the New Hampshire Travel Council. Tr., Day 21, Morning Session, 07/18/2017, at 140. Mr. Nichols denied, however, that was the reason it was used as a resource. Tr., Day 21, Morning Session, 07/18/2017, at 140.

⁷⁹ Sessions were organized by Attorney McDermott, a representative of the Applicant at the time, and included the following attendees at the four meetings: White Mountain – two from the ski industry, one from White Mountains Attractions, one from Whale's Tale Water Park; Gorham – Chris Diego did not attend, but Mr. Nichols spoke with him later by telephone; three others attended including an individual representing lodging, one from the Coos County Historical Society, and one from Jericho Mountain Sports (retail of ATVs and snowmobiles); Margate Resort – two representatives from lodging, one from snowmobiling association, and a fourth individual; Hinckley Allen Law Firm in Concord – Peter Ramsey (representing theater and entertainment), representative from the Hotel and Lodging Association, and representative from the Manchester Convention Visitor Bureau. Other attendees included Jim Wagner (Eversource), Melissa Skarupa (NPT), and Sarah Hoodlet (Burns & McDonnell). Tr., Day 21, Morning Session, 07/18/2017, at 131-317; Tr., Day 22, Morning Session, 07/19/2017, at 158; Tr., Day 22, Afternoon Session, 07/19/2017, at 127.

presented a broad range of concerns, including concerns about “New Hampshire losing its image as a beautiful state and tourism attraction power.” Tr., Day 21, Morning Session, 07/18/2017, at 37-39, 141-142. He opined, however, that they did not have a “specific foundation or empirical support for such concerns.” Tr., Day 21, Morning Session, 07/18/2017, at 37-39, 141-142. Even though the respondents were considered to have “truly held” beliefs, Mr. Nichols stated that he was trying to understand what the basis or foundation was for these beliefs. Tr., Day 21, Morning Session, 07/18/2017, at 40. Mr. Nichols did not speak directly to any other business owners that potentially would be impacted by the Project. Tr., Day 21, Morning Session, 07/18/2017, at 141. Mr. Nichols also acknowledged that some of the representatives were under the mistaken belief that New Hampshire would benefit from 100 MW of renewable power from the Project, despite the fact that the Public Utilities Commission has said that it would not approve the power purchase agreement for that 100 MW. Tr., Day 21, Afternoon Session, 07/18/2017, at 110. He indicated, however, that it was irrelevant to his determination. Tr., Day 21, Afternoon Session, 07/18/2017, at 110-111.

Mr. Nichols also acknowledged that he did not present any information about the Project during the sessions, including the fact that the Project would not be a “reliability project.” Tr., Day 22, Morning Session, 07/19/2017, at 116-118.

The fourth study element was: (i) a review of two transmission line projects, including the Phase II line and the Maine Reliability Project; and (ii) a comparison of the number of businesses and employees before and after the Phase II line was constructed. Tr., Day 21, Morning Session, 07/18/2017, at 145. The impact of the Maine Reliability Project was not analyzed because, at the time, it had not been completed. Tr., Day 21, Morning Session, 07/18/2017, at 145. Unlike the Northern Pass Project, the Maine Reliability Project and Phase II

line were built “entirely within an existing right-of-way.” Tr., Day 21, Afternoon Session, 07/18/2017, at 9-10; Tr., Day 22, Afternoon Session, 07/19/2017, at 33. Mr. Nichols also admitted that the Phase II line structures are lower than the Project’s towers and are “shielded by the crown” of the tree line. Tr., Day 21, Afternoon Session, 07/18/2017, at 9-10; Tr., Day 22, Afternoon Session, 07/19/2017, at 33.

The Report compared tourist businesses and employment in the affected counties with six of the other seven counties (excluding Rockingham County). Tr., Day 21, Morning Session, 07/18/2017, at 146-147; Tr., Day 21, Afternoon Session, 07/18/2017, at 5-6. Mr. Nichols agreed that exclusion of Rockingham County “skewed the numbers.” Tr., Day 21, Morning Session, 07/18/2017, at 146-147; Tr., Day 21, Afternoon Session, 07/18/2017, at 5-6. He added Rockingham County in his supplemental testimony. Tr., Day 21, Morning Session, 07/18/2017, at 146-147; Tr., Day 21, Afternoon Session, 07/18/2017, at 5-6. Data was taken from U. S. Bureau of Labor Statistics, using standard “SIC” codes⁸⁰ to identify tourist-related businesses. Tr., Day 21, Morning Session, 07/18/2017, at 147-418. According to Mr. Nichols, this was the first time he or anyone else conducted this type of analysis, *i.e.* comparing employment and businesses during construction of a transmission line with post-construction operation through average annual change⁸¹. Tr., Day 21, Morning Session, 07/18/2017, at 147-148, 150.

In regard to the Maine Reliability Project, established within the existing right-of-way, the Program included removal and replacement of some lines and performance of substation work. Tr., Day 21, Afternoon Session, 07/18/2017, at 12, 108. Mr. Nichols acknowledged that none of the work can be seen from the Maine beaches, only in travel to the destinations. Tr.,

⁸⁰ SIC “Standard Industrial Classification” codes were replaced in 1997. Tr., Day 21, Morning Session, 07/18/2017, at 152. Mr. Nichols used the SIC codes because the analysis applied to data from the mid-1980s. Tr., Day 21, Morning Session, 07/18/2017, at 152.

⁸¹ This type of analysis is “pure simple average” as compared to “compound annual growth rates.” Tr., Day 21, Morning Session, 07/18/2017, at 151. Mr. Nichols admitted that the latter can possibly be a more common practice in the economic modeling profession. Tr., Day 21, Morning Session, 07/18/2017, at 151.

Day 21, Afternoon Session, 07/18/2017, at 12. He did not know whether the power lines are visible from Acadia National Park or the Town of Freeport. Tr., Day 21, Afternoon Session, 07/18/2017, at 108-109. Analysis was conducted from 2008, when the area was in deep recession, until 2015 upon completion of the Program. Tr., Day 21, Afternoon Session, 07/18/2017, at 16-18, 21-22. There were no controls for other variables including the fact that construction workers were in the area spending money. Tr., Day 21, Afternoon Session, 07/18/2017, at 16-18, 21-22. Instead the analysis was done through benchmarking similar to the New Hampshire analysis. Tr., Day 21, Afternoon Session, 07/18/2017, at 16-18, 21-22. The study did not capture the numbers after the construction was completed. Tr., Day 21, Afternoon Session, 07/18/2017, at 24-26. Mr. Nichols stated that the visitor segment data was carved from construction and local spending values obtained from the Maine Office of Tourism, Visitor Tracking. Tr., Day 21, Afternoon Session, 07/18/2017, at 24-26. He acknowledged that he did not evaluate their methodologies, did not verify that the office “knows how to accurately count and estimate visitation volumes or spending,” and did not review backup data. Tr., Day 21, Afternoon Session, 07/18/2017, at 24-26. The study also did not capture certain SIC codes that were not used. Tr., Day 21, Afternoon Session, 07/18/2017, at 18-19. There were some areas where there was no data reported because of confidential “non-disclosure cells” in the spreadsheet.⁸² Tr., Day 21, Afternoon Session, 07/18/2017, at 18-19. The report did not use a value for those areas. Tr., Day 21, Afternoon Session, 07/18/2017, at 18-19. Mr. Nichols stated that he did not do an analysis in Maine on a region-by-region basis, but spent about a day driving, reviewed reports and state publications, looked at spending estimates and studied the

⁸² Non-reports in the aggregate could add up to quite a few non-reporting areas, and the actual number is unknown nor whether the numbers would cause a significant difference. Tr., Day 21, Afternoon Session, 07/18/2017, at 20-21. However Mr. Nichols believes that his analysis “represents the bulk of the industry.” Tr., Day 21, Afternoon Session, 07/18/2017, at 20-21.

main areas. Tr., Day 21, Afternoon Session, 07/18/2017, at 15-16. Mr. Nichols concluded that, at the end of the five years of construction, Maine had “record visitation,” with the fastest-growing region visitation expanding more than 17% in 2015. Tr., Day 21, Afternoon Session, 07/18/2017, at 14-15. Recreation was the fastest growing tourist segment. Tr., Day 21, Afternoon Session, 07/18/2017, at 14-15. Mr. Nichols was not, however, specifically familiar with the more recent marketing strategies employed by the Maine tourism office to influence and drive an increase in tourism. Tr., Day 21, Afternoon Session, 07/18/2017, at 162-164. He stated that it is the “macro factors” that drive the increased visitation to Maine in the face of a large transmission line project. Tr., Day 21, Afternoon Session, 07/18/2017, at 164-168; Tr., Day 22, Morning Session, 07/19/2017, at 152-153. Mr. Nichols opined that the construction of transmission lines helped to stimulate some of the growth. Tr., Day 22, Morning Session, 07/19/2017, at 154.

Mr. Nichols used the following categories in his analysis of Phase II Project: (i) lodging, camps, *etc.*; (ii) eating and drinking places⁸³; and (iii) transportation services. Tr., Day 21, Morning Session, 07/18/2017, at 153. Mr. Nichols did not, however, use the following categories in his analysis: (i) travel agencies; (ii) fishing, hunting and trapping; (iii) theater; (iv) racing; and (v) amusement parks. Tr., Day 21, Morning Session, 07/18/2017, at 154-155. Mr. Nichols used county-wide statistics which incorporated activity from outside the viewshed of the Phase II line, including the Lebanon/Hanover area and Plymouth area. Tr., Day 21, Morning Session, 07/18/2017, at 155-157. Mr. Nichols argued that his numbers were not affected by including extra-viewshed statistics, and that it “provide[d] additional opportunity” to determine if there were significant impacts. Tr., Day 21, Morning Session, 07/18/2017, at 157-158. It did not

⁸³ Nationally, approximately 17% of economic activity in this category is related to tourists. Tr., Day 21, Morning Session, 07/18/2017, at 155.

differentiate, however, between tourists who stayed in those areas and tourists that traveled through. Tr., Day 21, Morning Session, 07/18/2017, at 157-158.

Mr. Nichols admitted that there were “other facets and factors” that could affect the data, which was why he “benchmarked the counties.”⁸⁴ Tr., Day 21, Morning Session, 07/18/2017, at 160-161.

Mr. Nichols was not familiar with the severity of the impact from the economic recession in the late 1980s and early 1990s on the different counties. Tr., Day 21, Morning Session, 07/18/2017, at 160-161. He admitted that the recession could have impacted businesses and their employees more than the Phase II line. Tr., Day 21, Morning Session, 07/18/2017, at 161-162. Mr. Nichols claimed that he accounted for the recession by comparing the counties; he stated that all areas were influenced by a broad range of factors, and construction of the Phase II line was the “main variance.” Tr., Day 21, Morning Session, 07/18/2017, at 162.

The fifth study element was a web-based survey conducted in September 2014 of 465 respondents to understand attitudes and influences of potential visitors of New Hampshire. Tr., Day 21, Afternoon Session, 07/18/2017, at 27-28, 42-45; CFP 366; JTMUNI 227. The survey did not study whether presence of the Project would influence that decision. Tr., Day 21, Afternoon Session, 07/18/2017, at 27-28, 42-45; CFP 366. Only the following two survey questions referenced power lines:

Q2.5[:] In addition to specific activity available in a destination, travelers often consider a range of other factors in making their fundamental decision regarding the destination to visit. Again, if you were to consider traveling to various destinations in New Hampshire, how important are the following attributes regarding

⁸⁴ Mr. Nichols stated that “benchmarking” was done by comparing and contrasting the increase in number of establishments that were tourism-related in counties that included the Phase II line with trends in the other counties to determine if there was a “significant variance” for the data from 1996 to 2000, without accounting for another variable. Tr., Day 21, Morning Session, 07/18/2017, at 162-63.

whether or not to visit these places. Please check one for each destination attribute.

...

The destination has visible power lines in certain areas.

Q2.6[:] Last, we are interested in the extent to which the following aspects affect your destination decision. How often have you had your decision to visit a destination based primarily on each of the following factors. Please check one for each activity.

...

The destination has visible power lines in certain areas.

JTMUNI 227; Tr., Day 21, Afternoon Session, 07/18/2017, at 27-28, 42-45; CFP 366. They did not reference transmission lines and did not mention that some of the tower structures would be as tall as 140 feet through very scenic areas. Tr., Day 21, Afternoon Session, 07/18/2017, at 27-28, 42-45; CFP 366. Mr. Nichols confirmed that, based on the language of the questions, the participant could have inferred that “power lines” referred to either 30-40 foot tall wooden poles or 80-100 foot steel lattice structures. Tr., Day 22, Morning Session, 07/19/2017, at 27; Tr., Day 22, Afternoon Session, 07/19/2017, at 91. The survey questions were written “intentionally” so that they were not “focused on power lines or a specific transmission line.” Tr., Day 21, Afternoon Session, 07/18/2017, at 118-120. They specifically did not ask about the Project. Tr., Day 21, Afternoon Session, 07/18/2017, at 118-120. The survey questions also did not indicate how long or how often the potential lines would be in view. Tr., Day 21, Afternoon Session, 07/18/2017, at 46-47. No photos or graphics were used in the survey questions. Tr., Day 22, Morning Session, 07/19/2017, at 115. Mr. Nichols did not try to differentiate perspectives on the viewing of power lines, but intended to determine generally what people thought of power lines. Tr., Day 22, Afternoon Session, 07/19/2017, at 93-95.

With regard to possible confusion in rating positive or negative attributes and having participants rate on a five-point scale (question 2.5), Mr. Nichols explained that the goal was to get a better understanding of one factor as compared to another. Tr., Day 22, Afternoon Session, 07/19/2017, at 107-112. Question 2.6 was worded to determine how often these factors are a primary reason for a decision to travel to a destination. Tr., Day 22, Afternoon Session, 07/19/2017, at 113-115. By choosing “never, sometimes, quite often or almost all of the time” the participants indicated the level this factor played in their decision. Tr., Day 22, Afternoon Session, 07/19/2017, at 113-115. Mr. Nichols admitted that Question 2.6 could have been reworded to clarify whether it was a choice to not visit an area. Tr., Day 22, Afternoon Session, 07/19/2017, at 115 (emphasis added). Mr. Nichols also admitted that a further question could have been asked, after establishing their general impression of power lines, whether the travelers had a more specific reaction to transmission lines and whether that would impact their decision to visit a destination. Tr., Day 22, Afternoon Session, 07/19/2017, at 117-118. Mr. Nichols admitted another possible approach would be to rate a list of negative attributes such as “lack of shopping, lack of dining, visibility of cell towers,” instead of mixing the negative with the positive. Tr., Day 22, Afternoon Session, 07/19/2017, at 120-121.

The survey grouped visitors according to their primary purpose of visit, which were distinguished as: (i) 40% visiting friends and relatives; (ii) 20% other pleasure experiences; and (iii) 15% outdoor recreators⁸⁵. Tr., Day 22, Morning Session, 07/19/2017, at 79-81. Mr. Nichols admitted that the survey was based on statewide composite data and would look different if broken down by region. Tr., Day 22, Afternoon Session, 07/19/2017, at 68-69.

Participants were selected by Survey Sampling International (“SSI”) from its “survey panel” pool and paid in points towards purchases of goods and services. Tr., Day 21, Afternoon

⁸⁵ Table 3-2. Data is from TNS, a national tourist survey firm. Tr., Day 22, Afternoon Session, 07/19/2017, at 68.

Session, 07/18/2017, at 28-30, 122-123; Tr., Day 22, Afternoon Session, 07/19/2017, at 46. The survey required approximately ten minutes to complete. Tr., Day 21, Afternoon Session, 07/18/2017, at 28-30, 122-123; Tr., Day 22, Afternoon Session, 07/19/2017, at 46. Respondents earned more points the more SSI surveys they completed. Tr., Day 21, Afternoon Session, 07/18/2017, at 28-30, 122-123; Tr., Day 22, Afternoon Session, 07/19/2017, at 46. SSI was chosen over other companies that conduct surveys because Mr. Nichols' partner, Dr. Fessenmaier has "worked extensively with them over the years." Tr., Day 21, Afternoon Session, 07/18/2017, at 123-127.

Mr. Nichols indicated that the sample participants "were very active travelers overall and were active in the Northeast." Tr., Day 21, Afternoon Session, 07/18/2017, at 31-32; Tr., Day 22, Afternoon Session, 07/19/2017, at 47-48. They also "knew" New Hampshire. Tr., Day 21, Afternoon Session, 07/18/2017, at 31-32; Tr., Day 22, Afternoon Session, 07/19/2017, at 47-48. Ten percent of respondents, however, did not travel at all in the past 36 months. Tr., Day 21, Afternoon Session, 07/18/2017, at 31-32; Tr., Day 22, Afternoon Session, 07/19/2017, at 47-48. There was no measure to distinguish individual generational groups. Tr., Day 22, Morning Session, 07/19/2017, at 126-129. The only demographic limitation on participants was that they be over the age of 18. Tr., Day 21, Afternoon Session, 07/18/2017, at 131-134.

The survey sampled approximately 460 individuals, which is more than the typical 350-person range. Tr., Day 21, Afternoon Session, 07/18/2017, at 138-139. Mr. Nichols explained that 350-person surveys are "used all the time." Tr., Day 21, Afternoon Session, 07/18/2017, at 138-139. He opined, however that there is no statistical analysis to support the 350-person survey floor. Tr., Day 21, Afternoon Session, 07/18/2017, at 138-139. In response to the lost opportunity of polling a sample from the 650,000 visitors that enter the State for the July 4th

weekend, Mr. Nichols stated that the sample size was appropriate and statistically significant given that the vast majority of the responses were consistent with what was anticipated as well as with the Draft EIS findings and the PSU data. Tr., Day 22, Afternoon Session, 07/19/2017, at 53-54.

Mr. Nichols acknowledged that possible traffic delays factored as the number one barrier for nineteen percent of visitors⁸⁶. Tr., Day 22, Afternoon Session, 07/19/2017, at 96. Mr. Nichols opined, however, that while traffic was found to be a barrier, in the context of all the other attributes, visitors would still come to New Hampshire. Tr., Day 22, Afternoon Session, 07/19/2017, at 97; Tr., Day 22, Afternoon Session, 07/19/2017, at 149-150. In interpreting the data as it pertained to traffic delays or other barriers selected as a “critical” or “very important” barrier by participants⁸⁷, Mr. Nichols asserted that because “value,” “broad range of things to do”, “recreational amenities”, “shopping” and “dining” were chosen more frequently than the destination barrier, he concluded that it is the “holistic mix of what is offered” that is powerful and significant enough to overcome challenges from traffic. Tr., Day 22, Afternoon Session, 07/19/2017, at 97; Tr., Day 22, Afternoon Session, 07/19/2017, at 149-150.

On cross examination, Mr. Nichols was questioned about the fact that the survey results demonstrated that 12% of the participants indicated that they would travel to New Hampshire because of visible cell phone towers. Tr., Day 21, Afternoon Session, 07/18/2017, at 37-38. Mr. Nichols disagreed with the conclusion that such responses invalidated the reliability of the survey. Tr., Day 21, Afternoon Session, 07/18/2017, at 38-42. Mr. Nichols explained that some of the participants indicated in their responses that they were looking for a “more urban experience.” Tr., Day 21, Afternoon Session, 07/18/2017, at 38-42. Mr. Nichols claimed that the

⁸⁶ Table 6-4.

⁸⁷ See Page 26 of Mr. Nichols’s report.

survey simply captured that cohort of participants. Tr., Day 21, Afternoon Session, 07/18/2017, at 36-39.

Mr. Nichols admitted that introducing new transmission lines with large infrastructure does not improve New Hampshire's "competitive advantage of being beautiful, charming and quaint." Tr., Day 21, Afternoon Session, 07/18/2017, at 49. He stated that it was a "fair characterization" that the Project is not likely to increase tourist visits to New Hampshire. Tr., Day 21, Afternoon Session, 07/18/2017, at 90-92. He opined, however, that "positive benefits" could result from construction activity as well. Tr., Day 21, Afternoon Session, 07/18/2017, at 90-92.

Mr. Nichols concluded that the, "presence or absence of transmission lines does not drive a visitors fundamental decision to choose New Hampshire." Tr., Day 21, Morning Session, 07/18/2017, at 79-80. He argued that even for those visitors who view the lines negatively, other factors are of "far greater importance," outweighing "any speculative adverse effects." Tr., Day 21, Morning Session, 07/18/2017, at 79-80. Mr. Nichols opined that the view of a New Hampshire landscape with a view of the transmission lines, including newly sited ones, is only a negative attribute for a small percentage of visitors, for it has become "part of the destination" due to "general indifference." Tr., Day 21, Morning Session, 07/18/2017, at 81-83. He admitted, however, that in his research visitor views of a new transmission line were not specifically measured. Tr., Day 21, Morning Session, 07/18/2017, at 83-84.

Mr. Nichols did not conduct an analysis of the potential impacts of the Project on particular tourist destinations, businesses or communities. Tr., Day 21, Morning Session, 07/18/2017, at 77; Tr., Day 22, Afternoon Session, 07/19/2017, at 89-90. Mr. Nichols asserted that individual businesses may face a "difficult reality" due to the substitution effect. Tr., Day

22, Morning Session, 07/19/2017, at 141-143. The substitution effect recognizes that visitors may choose different restaurants, overnight accommodations or retail outfits that are not as close in proximity or directly affected by the Project. Tr., Day 22, Morning Session, 07/19/2017, at 141-143. On a “net basis,” however, he concluded that there would be no change. Tr., Day 22, Morning Session, 07/19/2017, at 141-143.

Other than three sentences, Mr. Nichols’ report also does not contain analysis or information on a region-by-region basis. Tr., Day 22, Morning Session, 07/19/2017, at 6-9. Mr. Nichols explained that he took a broad analysis of the collective input from different regions into account when drawing his conclusions. Tr., Day 22, Morning Session, 07/19/2017, at 6-9.

Mr. Nichols also acknowledged that, while reaching his conclusions, he did not review other experts’ determinations as to the Project’s effect on aesthetics and historic sites. Tr., Day 21, Morning Session, 07/18/2017, at 47-60.

Mr. Nichols opined that transmission lines in the Rocky Mountain National Park (including Estes Park) and North Cascades National Park do not appear to have an impact on tourism and are indicative of the fact that “transmission lines are part of the fabric of travel today.” Tr., Day 21, Morning Session, 07/18/2017, at 43-45. He acknowledged that the towers and transmission lines are not located in the Park, but are part of the “arrival experience” outside the Rocky Mountain National Park (including Estes Park). Tr., Day 22, Afternoon Session, 07/19/2017, at 36-39; Tr., Day 21, Afternoon Session, 07/18/2017, at 7-9. He also had no data measuring the impact on tourism in the Park by the transmission lines. Tr., Day 21, Morning Session, 07/18/2017, at 45-47. Similarly, he admitted that the transmission lines in North Cascades National Park are located along the road through the Park and are visible for “a few seconds or a few minutes.” Tr., Day 22, Afternoon Session, 07/19/2017, at 39-42.

Mr. Nichols testified that he was previously hired by the State of New Hampshire on a “branding and image related” project and issued a report in 2002 finding the feature of greatest importance is “scenery/natural beauty,” Tr., Day 21, Morning Session, 07/18/2017, at 51-52; Tr., Day 22, Morning Session, 07/19/2017, at 120. He stated, however, that scenery is “an element in a much broader array of aspects the visitor considers.” Tr., Day 21, Afternoon Session, 07/18/2017, at 107.

Mr. Nichols did not study the 2011 Granite Reliable Wind Project (Coos County) built in 2011 or the Groton Wind Project built in 2012, to determine whether either project affected tourism in the area. Tr., Day 22, Afternoon Session, 07/19/2017, at 134-135. He also did not study whether tourist spending increased or decreased after those projects were installed. Tr., Day 22, Afternoon Session, 07/19/2017, at 134-135. He indicated that there was some discussion of the projects with North Country individuals, but that “no one cited them as a significant barrier” to travel. Tr., Day 22, Afternoon Session, 07/19/2017, at 135.

Mr. Nichols reviewed the Recreation Technical Report for the Draft EIS which found that recreation as a primary use of the land would be impacted from construction and operation (which includes visual impacts). Tr., Day 21, Afternoon Session, 07/18/2017, at 49-50. He asserted that he did not have a basis to agree or disagree with the finding. Tr., Day 21, Afternoon Session, 07/18/2017, at 49-50.

Mr. Nichols acknowledged that a report he prepared for the County of Sarasota in 2003 was criticized for lacking specifics. Tr., Day 21, Morning Session, 07/18/2017, at 61-64. He also agreed that, according to the media, some county officials were dissatisfied with it. Tr., Day 21, Morning Session, 07/18/2017, at 61-64. He asserted, however, that county officials were

satisfied with his work because they asked him to work on another project. Tr., Day 21, Morning Session, 07/18/2017, at 61-64.

Mr. Nichols objected to the following criticisms of his work: (i) that he was promoting the Project through his listening sessions; (ii) that attractive destinations would not have transmission lines developed near them, which is why there is an absence of research showing a correlation between the impact of the lines and tourism, and that Mr. Nichols relied too heavily on that absence; (iii) that use of a simple average or a compound average of the Maine/SIC code analysis would result in different conclusions; and (iv) that establishments in counties which did not contain the Phase II lines grew at a faster rate outside of the construction zone and growth was influenced by a variety of factors including economic trends. Tr., Day 22, Afternoon Session, 07/19/2017, at 136-138.

(2) Businesses and Organizations with Economic Interests

Leslie Otten, on behalf of Dixville Capital, LLC and Balsams Resort Holdings, LLC, asserted that, since 2015, there has been significant interest and commitment in redevelopment of the Balsams Resort. BUS 1, at 3. Mr. Otten also asserted that it is not unusual for various energy infrastructure to be within a view of tourist attractions without affecting their appeal to tourists. BUS 1, at 2; BUS 2, at 2. Based on his experience, Mr. Otten opined that the Project would not have an adverse effect on tourism in the region and on redevelopment and operation of the Balsams Resort. BUS 1, at 2-3.

Allen Bouthillier, on behalf of the Coos County Business and Employers Group, opined that the Project would have a positive impact on tourism where additional trails for snowmobiling and ATV activities would be created within the Project's right-of-way. BUS 3, at 8.

(3) Counsel for the Public

Counsel for the Public asserted that the Project would likely have a negative impact on tourism. *See* Counsel for the Public’s Post-Hearing Brief, at 45. Counsel for the Public’s experts, Dr. Nicolas O. Rockler and Mr. Thomas Kavet, opined that the Applicant’s assessment of the Project’s impact on tourism was not “reasonable or credible.”⁸⁸ CFP 146, at 7; CFP 147, at 7. Counsel for the Public argued that Mr. Nichols did not study the Project’s impact on individual tourism destinations and did not study any specific region through which the Project would pass. *See* Counsel for the Public Post-Hearing Brief, at 46. Counsel for the Public argued that, instead, Mr. Nichols addressed general tourism attributes of New Hampshire without reference to the Project or high-voltage transmission lines. *See* Counsel for the Public Post-Hearing Brief, at 46. Counsel for the Public also argued that Mr. Nichols did not have any experience evaluating the impact of transmission lines on specific tourism destinations. He was not familiar with many specific tourist regions of New Hampshire or details of the construction of the Project. *See* Counsel for the Public Post-Hearing Brief, at 46-47. Counsel for the Public also argued that listening tours conducted by Mr. Nichols were deficient because they were arranged by the Applicant and were attended by a limited number of people from limited industries. *See* Counsel for the Public Post-Hearing Brief, at 47. Counsel for the Public further argues that surveys conducted by Mr. Nichols were deficient because they asked questions about “power lines” as opposed to “high voltage transmission lines” and were poorly worded and confusing. *See* Counsel for the Public Post-Hearing Brief, at 48-49. Finally, Counsel for the Public argued that the case studies contained errors and did not relate to the Project. *See* Counsel for the Public Post-Hearing Brief, at 49-50.

⁸⁸ Counsel for the Public filed a pre-hearing Motion seeking to strike testimony of Mr. Nichols. The Motion was denied.

Dr. Rockler and Mr. Kavet agreed that it is difficult to quantify potential impacts on tourism. CFP 146, at 8; CFP 147, at 8. They opined, however, that “there is ample evidence that scenic beauty and a pristine wilderness experience is a primary destination attribute affecting tourist visitation to New Hampshire.” CFP 146, at 8; CFP 147, at 8. They further opined that, using a midpoint between an estimated 3% and 15% impact on tourism and a phased-in direct tourism spending reduction over time of 9% scaled to assess the tourism dollars in the area within the Project viewshed, construction and operation of the Project would result in direct spending losses of approximately \$10 million per year (in current dollars) and total economic impacts, including secondary effects, of average annual losses of more than \$13 million in gross State product (GSP) and the loss of approximately 190 jobs over the 11 year period from 2020 to 2030. CFP 146, at 8-9; CFP 147, at 8-9.

(4) Grafton County Commissioners

Commissioner Lauer testified that the Project would have a negative impact on tourism. GRAFTON 1. Specifically, she argued that construction of the Project would cause traffic delays and constraints that would impact desirability of local travel destinations. GRAFTON 1. According to Ms. Lauer, operation of the Project would have a negative impact on tourism because the Project would impact scenic qualities and the rural character of popular tourism destinations. GRAFTON 1.

(5) Municipalities

Cassandra Laleme, on behalf of the Bethlehem Board of Selectmen, asserted that construction of the Project would have an adverse effect on tourism. JTMUNI 89, Appx. A, at 1-2. Ms. Laleme asserted that the Applicant sought to construct one of the structures associated with the Project at the entrance to the Town on Route 302. JTMUNI 89, at 2. According to Ms.

Laleme, construction of the Project and associated facilities at this location would have a significant adverse effect on tourism where it would alter the perception of the Town and would cause significant traffic delays and inconvenience. JTMUNI 89, Appx. A, at 2. Ms. Laleme also argued that the Tourism Industry Report filed by the Applicant was inadequate because it did not specifically address the effect of the Project on tourism in the Town of Bethlehem and did not address such tourist activities as hiking, kayaking, walking, trailing and biking. JTMUNI 89, Appx. A, at 2-3.

Cheryl K. Jensen, on behalf of the Bethlehem Conservation Commission, opined that construction of the Project along Route 302 would cause its closure and would have an adverse effect on tourism in the Town. JTMUNI 97, at 6-8.

Edwin Mellett, on behalf of the Town of Northumberland⁸⁹, opined that the Project would “create a visual scar on the area,” would impact the natural resources and, consequently, would have an unreasonable adverse effect on tourism. JTMUNI 91, at 2.

Lise Moran, on behalf of the Town of Whitefield and the Whitefield Historic Society, testified that the Project would have an adverse effect on tourism in the Town of Whitefield because it would compromise views and the historic settings of historic properties in the Town. JTMUNI 94, at 1-3.

Ms. Hersom and Mr. Lombardi, on behalf of Whitefield Board of Selectmen and Planning Board, opined that the Project would have an adverse effect on tourism in the Town of Whitefield because it would introduce 10.4 miles of overhead lines that would be visible to tourists and would impact their opinion of the Town as a rural and naturally beautiful area. JTMUNI 95, at 11-12.

⁸⁹ It is unclear whether Mr. Mellett testified on behalf of the Town of Northumberland or Northumberland Conservation Commission.

Margaret Connors, on behalf of the Sugar Hill Board of Selectmen, asserted that construction along Route 18 in Sugar Hill would cause closures of the Road and would have an adverse effect on tourism. JTMUNI 100, at 1.

Ned Cutler, on behalf of the Town of Easton's Board of Selectmen, testified that construction of the Project on Routes 116 and 112 would deter tourists from coming in the area and using hiking trails. JTMUNI 102, at 2.

Town of New Hampton asserted that the Project would alter the rural character of the Town and would have a significant adverse effect on tourism and businesses that rely on tourists. JTMUNI 114.

Nicholas Coates, on behalf of the Town of Bristol, asserted that the Project would have an adverse effect on tourism in the area because it would be visible from the following scenic tourist destinations: (i) the Pemigewasset River; (ii) the Pemigewasset River trail; (iii) Newfound Lake; (iv) Inspiration Point; (v) Peaked Hill Road; and (vi) Cardigan Mountain. JTMUNI 116, at 1-2.

Members of the Boards of Selectmen of the Towns of Pittsburg, Clarksville and Stewartstown asserted that the Project would have an unreasonable adverse effect on aesthetics and views in the region. Pre-Filed Testimony, Pittsburg, Clarksville and Stewartstown, at 2. They concluded that this would negatively affect tourism and "the building, maintenance and repair of second homes and vacation properties" in the region. Pre-Filed Testimony, Pittsburg, Clarksville and Stewartstown, at 7.

(6) Forest Society

The Forest Society's witness, Dawn Scriber Bilodeau, opined that the Project would have an unreasonable adverse effect on tourism in the area. SPNF 143, at 3.

(7) Individual Intervenors

Bradley Thompson, on behalf of the Clarksville to Stewartstown Abutting⁹⁰ and Non-Abutting⁹¹ Property Owners Group of Intervenors argued that tourism and related local businesses would be adversely affected by the Project because the Project would destroy the character of the region by altering the views, aesthetics, quietness and beauty of the region in general and Coleman State Park, Lake Francis State Park, the Connecticut State Forest and Bear Rock sites specifically. CS 1.

John Petrofsky opined that the Project would have an adverse effect on the North Country's tourism. CS 65. Specifically, he asserted that statistics demonstrate that tourism related sectors of the economy have grown approximately 6% annually for the last few years. CS 65, at 3. He further asserted that the North Country Chamber of Commerce survey demonstrated that visitors are attracted to the North Country because of its scenic view, wilderness and remoteness. CS 65, at 4. He opined that the Project would be visible and would affect aesthetic qualities diminishing the attractiveness of tourism destinations and scenic roads and byways such as: (i) Bear Rock; (ii) Keith Haynes Snowmobile Trail (Route 18/5); (iii) drive from Route 26 to the Diamond Pond; (iv) Sugar Hill; (v) Nathan Pond; (vi) Coleman State Park; (vii) the Cohos Trail; (viii) Route 145; (ix) Route 3 and Route 145; (x) Balsams easements, the approach to Hurlbert Swamp, the Washburn Family Forest and the Vicki Bunnell Preserve; (xi) historic cemeteries, including Abandoned Cemetery and North Hill Cemetery; and (xii) Keazer Farm Bed & Breakfast. CS 65, at 4-7.

⁹⁰ Charles and Donna Jordan (Clarksville), Sally Zankowski (Stewartstown), Jon and Lori Levesque (Stewartstown), Roderick and Donna McAllaster (Stewartstown), Lynne Placey (Stewartstown), Arlene Placey (Stewartstown), Brad and Daryl Thompson (Stewartstown), David Schrier (Exeter) and Nancy Dodge (Stewartstown). CS 1.

⁹¹ Robert Martin (Clarksville), Roderick Moore, Jr., Joseph John Dunlap, Shawn Patrick Brady, Christopher Thompson, and E. Martin Kaufman, Bradley J. Thompson and John Petrofsky on behalf of 44 residents of Stewartstown and East Colebrook. CS 1.

Peter W. Powell, on behalf of the Abutting Property Group of Intervenors Dalton-Bethlehem, opined that, by impacting aesthetics and scenic qualities of popular tourists destinations, the Project would have a negative impact on tourism and businesses that depend on it. DWBA 10, at 13-14.

Bethlehem-Plymouth Abutting Property Owners Group of Intervenors⁹² argued that underground sections of the Project in Easton and Franconia would be located in close proximity to a number of private properties would have an adverse effect on aesthetics of those properties, would have an adverse effect on the character of the area and, consequently, would have an adverse effect of tourism. APOBP 1, at 4-1.

Jo Anne Bradbury asserted that the Town of Deerfield attracts tourists who enjoy its rural settings and outdoor activities. DFLD-ABTR 2, at 2-5. She opined that the Project would alter the Town's rural character and beautiful views and would destroy its appeal as a tourist destination. DFLD-ABTR 1, 2-5.

(8) North Country Scenic Byways Council

Carl Martland, on behalf of the North Country Scenic Byways Council, opined that the Project would have an adverse effect on tourism. HIST 12, at 18. Mr. Martland asserted that tourism is a major industry in the North Country because of the rural character of the region and the wilderness of its back country and scenic byways. HIST 12, at 18. Mr. Martland argued that the Project would diminish the views from popular tourist destinations and scenic and other roads making these destinations and the region less attractive to tourists. HIST 12, at 18.

⁹² Eric and Barbara Meyer from Easton, Robert Thibeault from Easton, Russell and Lydia Cumbee from Franconia, Walter Palmer and Kathryn Ting from Franconia, Carl and Barbara Lakes from Easton, Bruce Ahern for Plymouth and Peter and Mary Grote from Franconia.

b. Subcommittee Deliberations

The Subcommittee did not find the report and testimony submitted by Mr. Nichols credible. Despite his prior engagement for the State of New Hampshire, Mr. Nichols did not exhibit familiarity with the New Hampshire tourism industry and tourism destinations in the North Country. While reaching his conclusion of “no impact,” Mr. Nichols relied, in part, on the results of poorly designed listening sessions and a dubious online survey.

The listening sessions were attended by a limited number of people who could not and did not provide a variety of information and views on tourism and concerns about the Project’s impact. The Subcommittee’s own experience in conducting information sessions, public hearings and site inspections along the proposed route demonstrated that there was a lot of public interest in the Project. Listening sessions could have been designed to attract a broader spectrum of the community and a more realistic understanding of the community’s concerns with respect to tourism.

The electronic surveys do not credibly predict the Project’s impact on tourism. The surveys were poorly worded and misleading. For example, a survey question asked “[h]ow often have you made your decision to visit the destination based primarily on each of the following factors?” One available answer to the question was “the destination has visible power lines in certain areas.” No survey participants indicated that they made their decision to visit a destination because the destination had visible power lines. From these answers, Mr. Nichols concluded that powerlines have no impact on a tourist decision to visit New Hampshire despite the fact that the question only asked if the tourist would come to New Hampshire to see power lines. Mr. Nichols’ conclusion is illogical and does not readily follow from the question asked. This is but one example of the problems inherent throughout Mr. Nichols’ survey. Mr. Nichols

failed to conduct appropriate surveys, including visitor intercept surveys and failed to obtain and address the views of a substantial number of varied stakeholders, *i.e.* the AMC, the Pemi Friends, Trout Unlimited, *etc.*

Mr. Nichols' comparison of the Project to the Hydro-Québec Phase II project and the Maine Reliability Project is flawed. Those projects are substantially different from the Project subject to review in this docket – most notably because they were constructed fully within existing corridors, and the new structures remained below the tree canopy and were not plainly visible. The structures designed for this Project are considerably taller and will be seen above the tree canopy in most of the region. The Phase II and Maine projects are also located in areas that are substantially different from the Project's location.

References and comparison to the impact on tourism by the lines constructed at the Estes Park and North Cascades National Park are not persuasive. Visibility, or lack thereof, of the powerlines at Estes Park and North Cascades National Park and visibility of the Project at New Hampshire tourist destinations cannot be reasonably compared by reference to one or two photographs.

Mr. Nichols' report and pre-filed testimony failed to address and analyze the impact that construction work over an extended period of time could have on tourism.

Intervenors in this docket brought a worthwhile view and assessment of the impact that the Project may have on tourism in the region. While they did not provide any analysis or scientific evidence to substantiate their opinions, it was not their responsibility to establish that the Project would affect tourism.

The Applicant shoulders the burden of proof. With respect to tourism we cannot conclude the Applicant has met that burden. At best, we are no better off than we were before

the evidentiary hearing. The Project may have a negative impact on tourism or it may not, although there are valid reasons to believe that the Project would hurt tourism if it were built. Even Mr. Nichols agreed that the presence of transmission lines would not be a positive element of the landscape. Without credible and reliable reports and expert testimony the Subcommittee cannot make a reasoned determination and cannot consider conditions that might mitigate or abrogate negative impacts on tourism.

6. Financial Assurances for Decommissioning

Under N.H. Code Admin. Rules, Site 301.08(d)(2)b, the Applicant is required to file a decommissioning plan that should include “[t]he 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.”

a. Positions of Parties

(1) Applicant

The Applicant filed a Decommissioning Plan and Opinion of Probable Costs prepared under the direction of John C. Murphy, CCM, CHMM. Mr. Murphy determined that decommissioning of the Project, including the Franklin Terminal and associated appurtenances, would cost approximately \$99,935,719. App. 33, at 10. Mr. Murphy reported that this amount included the estimated value of salvaged materials in the amount of \$2,977,577. App. 33, at 10. Mr. Auseré addressed the financial assurances for decommissioning of the Project. App. 33, at 11. Mr. Auseré testified that Section 9.3 of the TSA addressed the financial assurances for decommissioning of the Project. App. 7, at 9. He claimed that the Applicant would collect the costs of decommissioning over the last sixty months of commercial operation of the Project.

App. 7, at 9; App. 8, at 3. Six months before the beginning of the decommissioning payment period, the Applicant would provide a decommissioning plan, including an estimate of decommissioning costs and a description of the scope and frequency of progress reports for monitoring decommissioning, to the management committee that would be set up in accordance with the TSA. App. 7, at 9; App. 8, at 3. Mr. Auseré further asserted that Hydro Renewable Energy Inc. would be obligated to pay for decommissioning costs as part of the FERC-approved formula rate. App. 7, at 9; App. 8, at 3. All decommissioning payments made from Hydro Renewable Energy, Inc. would be deposited into an external fund that would be created on terms and conditions that would be established by the management committee to ensure that such funds would be used solely for decommissioning activities. App. 8, at 3-4. According to Mr. Auseré, if the actual decommissioning cost exceeded the amount in the fund, the Applicant would collect from Hydro Renewable Energy, Inc. costs on a monthly basis until the decommissioning plan was completed. App. 8, at 4. Mr. Auseré also testified that the decommissioning costs would be collected even if there was a disagreement as to the amount that should be collected. Tr., Day 3, Morning Session, 04/17/2017, at 7-10. Mr. Auseré argued that the TSA's requirements are "superior" to a stand by letter of credit and surety bond because they are not capped at a fixed amount and do not have a term limit. App. 8, at 5-7.

Mr. Auseré admitted that the TSA applied only to the first 40 years of operation of the Project. Tr., Day 2, Afternoon Session, 04/14/2017, at 153. He opined, however, that the decommissioning funds would be funded by the end of this term. Tr., Day 2, Afternoon Session, 04/14/2017, at 153. He also testified that terms of the decommissioning fund would be negotiated with a third party if the Applicant decided not to extend the TSA. Tr., Day 2, Afternoon Session, 04/14/2017, at 153-155. Mr. Auseré admitted that, in the case of a default by

the Applicant prior to funding of the decommissioning fund, there would be no funds available for the decommissioning and no party would be legally obligated to pay for it. Tr., Day 2, Afternoon Session, 04/14/2017, at 155-159; Tr., Day 3, Morning Session, 04/17/2017, at 16-17. Mr. Auseré concluded, however, that it is highly unlikely that such circumstance would occur because it can happen only if: (i) in-service date of the Project is delayed by five years because of the Applicant's lack of following good practice; or (ii) the Project is out of service for longer than five years and that outage is due to the Applicant's failure to follow good utility practice. Tr., Day 2, Afternoon Session, 04/14/2017, at 159; Tr., Day 3, Morning Session, 04/17/2017, at 7.

Mr. Bowes testified that he was not aware of any other utility projects using the same type of guarantee of decommissioning costs as proposed by the Applicant. Tr., Day 3, Afternoon Session, 04/17/2017, at 173-174. He concluded, however, that requiring any forms of financial assurance of decommissioning in addition to the provision of the TSA "would be redundant . . . and unnecessarily increase the Project costs." App. 8, at 5-7.

The Applicant agreed to comply with the following conditions of a Certificate should one be granted:

Further Ordered that the Certificate is conditioned upon NPT's parent entity, Eversource Energy, executing a payment guarantee for Project decommissioning in the amount of \$100 million to apply in the event of a default by NPT subsequent to the commencement of construction, under the current Transmission Service Agreement or successor, evidence of which shall be delivered to the SEC Administrator prior to the commencement of construction.

Applicant's Post-Hearing Memorandum, at 401.

(2) Counsel for the Public

Counsel for the Public requested that the Subcommittee condition the

Certificate as follows:

[P]rior to construction Eversource Energy shall execute a payment guarantee in the face amount of \$100 million, in a form acceptable to Counsel for the Public and the SEC, that will unconditionally guarantee the payment of all costs of decommissioning the Project, consistent with the Decommissioning Plan prepared by GZA GeoEnvironmental, Inc. that was filed on July 22, 2016. On each tenth anniversary of said payment guarantee, NPT shall file with the SEC an updated budget for the costs of decommissioning the Project, and Eversource Energy or its successor or assigns shall provide a replacement payment guarantee in the face amount of said updated budget.

Counsel for the Public's Post-Hearing Brief, at 169-70.⁹³

b. Subcommittee Deliberations

The testimony demonstrated that Eversource has the financial ability to tender \$100 million in case of a default by the Applicant subsequent to the commencement of construction of the Project. The record also reflects that Hydro-Québec guaranteed payment of costs and damages, including decommissioning costs, in case of termination of the TSA under other circumstances. The amount of the offered guarantee is sufficient to ensure that proper decommissioning of the Project is accomplished. The Applicant provided sufficient financial assurances of decommissioning of the Project. The conditions suggested by the Applicant and Counsel for the Public are very similar. Adoption of either would properly guarantee the costs of decommissioning.

⁹³ In response to this proposed condition, the Applicant requested that the Subcommittee please see the Applicant's proposed condition 34.

7. Land Use and Views of Municipal and Regional Planning Commissions and Municipal Governing Bodies

a. Positions of the Parties

(1) Applicant

(a) Land Use

The Applicant asserted that the current land uses associated with the Project corridor “would be able to continue largely uninterrupted during the operation and maintenance of the Project.” App., at 84. The Applicant filed the pre-filed testimony and a report authored by Robert W. Varney entitled “Review of Land Use and Local, Regional and State Planning.” App. 20; App. 1, Appx. 41.

Mr. Varney opined that the Project would have no adverse effect on local land use. App. 20, at 4. Mr. Varney asserted that over 83% of the Project would be located within the existing electric transmission line and transportation corridors. App. 20, at 4; App. 1, Appx. 41, at 5. The existing right-of-way along the Project route currently contains several distribution and transmission lines. App. 20, at 4; App. 1, Appx. 41. The Project would neither change the use of the right-of-way nor affect land uses in the area. App. 20, at 4. As to the new right-of-way that would be constructed between Pittsburg and Dummer, Mr. Varney claimed that it would be located on sparsely populated land which is primarily forested and managed for timber harvesting, recreation, and energy facilities. App. 20, at 4; App. 1, Appx. 41, at 5. He also argued that the Project section located within the new right-of-way would not have an adverse impact on local land use because 32.25 of its 40 miles would be located either underground or within the working forest managed by Wagner Forest Management in proximity to the Granite Reliable Wind Project and the Pontook Hydroelectric Facility. App. 20, at 4-5; App. 1, Appx. 41, at 5. Mr. Varney testified that he ascertained the impact of the Project on the prevailing land

uses in the communities where the Project would be located and not the Project's impact on any specific location, *i.e.* impact on any specific business, farm or any other specific location. Tr., Day 35, Afternoon Session, 09/18/2017, at 8.

Mr. Varney identified land uses along the Project's corridor to include forestry, agriculture, residential, commercial/industrial, transportation, institutional/government, recreation areas, conservation, and historical and natural features such as rivers, wetlands and wildlife habitat. App. 20, at 3.

As to forestry, Mr. Varney testified that the location between the United States-Canada border and the existing transmission right-of-way in Dummer is primarily forested. App. 1, Appx. 41, at 6. Mr. Varney observed that this region of New Hampshire is sparsely developed and lightly populated. App. 1, Appx. 41, at 6. He asserted that several large parcels already include logging/haul roads and crossings of wetlands and streams with heavy equipment and logging trucks. App. 1, Appx. 41, at 6. Mr. Varney opined that the Project would have no effect on the use of Wagner Forest as a working forest. Tr., Day 35, Afternoon Session, 09/18/2017, at 55-56. He also claimed that the fact that the Project would not have an adverse effect on the forest is supported by the fact that Wagner Forest Management expressed its support of the Project and leased the right-of-way required for construction and operation of the Project. Tr., Day 35, Afternoon Session, 09/18/2017, at 56. He acknowledged that he did not study the impacts of the Project on the usage of the forest for recreational purposes. Tr., Day 35, Afternoon Session, 09/18/2017, at 56-57. He further opined that he did not see any reason why continued recreational uses, *i.e.* hunting, fishing and snowmobiling, would not continue. Tr., Day 35, Afternoon Session, 09/18/2017, at 145-146. Mr. Varney admitted that the Project could be visible from portions of the Washburn Family Forest currently used for recreational purposes.

Tr., Day 36, Morning Session, 09/19/2017, at 15-16. He opined, however, that the section of the Project which would run approximately 100-300 feet along the length of the forest would not make this area less rural or less forested. Tr., Day 36, Morning Session, 09/19/2017, at 15-16. Mr. Varney concluded that “[f]orestry uses have co-existed with the existing utility corridor for many years, and development of the new [right-of-way] corridor would not interfere with the forestry or timber management activities in the area.” App. 1, Appx. 41, at 7.

As to the impact of the Project on agricultural lands, Mr. Varney claimed that approximately 370 acres of the Project’s right-of-way are in agricultural use (pasture/hay, cultivated crops, hay fields, orchards, tree farms and pastures for livestock), including areas in Lancaster along the Israel River floodplain, in Ashland within the floodplain of the Pemigewasset River, in Deerfield, and in Clarksville. App. 1, Appx. 41, at 7. Mr. Varney concluded that the Project would not have an adverse impact on agricultural uses and would not interfere with ongoing agricultural operations because the majority of the Project would be constructed within an existing right-of-way and the Applicant agreed to continue to coordinate corridor maintenance with agricultural landowners. App. 1, Appx. 41, at 7.

On residential land use, Mr. Varney opined that there are approximately 10 homes within 500 feet of the overhead right-of-way in the northern segment of the Project (Pittsburg to Dummer) and more properties along the existing right-of-way from Dummer to Deerfield, especially in communities with higher populations. App. 1, Appx. 41, at 7. Mr. Varney acknowledged that he did not analyze the land used for second homes and vacation properties. Tr., Day 36, Morning Session, 09/19/2017, at 34. He concluded, however, that the Project “would not have an adverse impact on residential land use along the corridor because it is

primarily located within or along pre-existing utility and roadway corridors and would not interfere with established development patterns.” App. 1, Appx. 41, at 8.

Mr. Varney acknowledged that the Project would be located in close proximity to five airports, would cross numerous roads and railroads, would follow state and municipal roads and would share the right-of-way with an existing natural gas transmission line and numerous municipal utilities. App. 1, Appx. 41, at 8-9. Mr. Varney concluded that the Project would not have an adverse effect on current or future transportation or utility services and facilities because the Applicant would coordinate with the towns and appropriate agencies during construction and operation of the Project. App. 1, Appx. 41, at 9.

Mr. Varney further opined that the existing right-of-way is used for a variety of recreational activities, including, hiking, mountain biking, snowmobiling, ATV riding, and horseback riding. App. 1, Appx. 41, at 9. Mr. Varney acknowledged that the Project “theoretically” might be visible from Little Diamond Pond, Big Diamond Pond, Nathan Pond, Bragg Pond, Moose Pond, Long Pond, Little Dummer Pond and Big Dummer Pond, which are used for recreational activities. Tr., Day 36, Morning Session, 09/19/2017, at 21-25, 37-43, 48-51, 58-60. He admitted that he did not assess the impact that the view of the Project would have on recreational uses. Tr., Day 35, Afternoon Session, 09/18/2017, at 141-142; Tr., Day 40, Morning Session, 09/26/2017, at 73. He concluded, however, that the Project would have only a short-term impact associated with its construction on existing recreational activities and would have no effect on the recreational nature of resources from where it would be visible. App. 1, Appx. 41, at 9; Tr., Day 35, Afternoon Session, 09/18/2017, at 141; Tr., Day 36, Morning Session, 09/19/2017, at 55-56, 82-83.

Mr. Varney acknowledged that the Project would cross various private conservation lands and state owned conservation lands. App. 1, Appx. 41, at 10. He also acknowledged that some easements, such as the Conkling Conservation Easement were designated for the purposes of forestry and agriculture. Tr., Day 35, Afternoon Session, 09/18/2017, at 133-134. He also acknowledged that some easements, such as the Conkling Conservation Easement, were designated to protect scenic and open space values of the property that would be traversed by the Project. Tr., Day 35, Afternoon Session, 09/18/2017, at 135. He admitted that he did not study the impact of the Project on land uses, including conservation purposes, which are located a “considerable distance” away from the Project. Tr., Day 35, Afternoon Session, 09/18/2017, at 57-58. He further testified that, in many cases, the existing right-of-way was established prior to the designation of these conservation parcels. Tr., Day 35, Afternoon Session, 09/18/2017, at 132; Tr., Day 36, Morning Session, 09/19/2017, at 116-118. He concluded that the Project “would not interfere with or have an adverse impact on conservation lands and would not alter the ongoing, long term management, use or public access to these properties.” App. 1, Appx. 41, at 10.

Mr. Varney testified the underground portion of the Project would not have an adverse effect on land use, including commercial and industrial operations, because: (i) it would be located underground along an existing transportation corridor; (ii) construction would have only temporary impacts on adjacent land uses; (iii) the Applicant would work with local businesses and municipalities to minimize any temporary short-term impacts from construction; and (iv) the Project’s benefits would be significant. App. 1, Appx. 41, at 2; Tr., Day 35, Afternoon Session, 09/18/2017, at 47-48; Tr., Day 38, Morning Session, 09/22/2017, at 6. Mr. Varney acknowledged that he did not study impacts on land use from other underground projects. Tr.,

Day 35, Afternoon Session, 09/18/2017, at 48. He also acknowledged that he did not study the impact of the Project on existing underground infrastructure. Tr., Day 35, Afternoon Session, 09/18/2017, at 54.

Mr. Varney testified that he did not study the impact of the Project on aesthetics and had no opinion about the impact that views of the Project would have on tourism destinations and recreational areas. Tr., Day 35, Afternoon Session, 09/18/2017, at 53-54, 126-127. Mr. Varney confirmed that his Report did not address the Project's effect on all communities that might have been impacted, but addressed and analyzed the impact only on host communities. Tr., Day 38, Morning Session, 09/22/2017, at 32-39. Mr. Varney testified that he did not study and did not address the Project's impact on land use in municipalities between Deerfield and Londonderry. Tr., Day 36, Morning Session, 09/19/2017, at 84-85.

Mr. Varney analyzed the impact of existing transmission lines on land use and orderly development in Concord, Bedford, and Londonderry. App. 96, at 3-6. He asserted that construction of existing transmission lines in these communities did not impact their growth in population, tax base and income level, did not impact commercial and multi-family residential development activities, and did not impact conservation, recreational, and agricultural uses. App. 96, at 3-6. He opined that the impact of an existing transmission line on land use and orderly development in these communities supports his opinion that the Project would not interfere with land use. App. 96, at 3-7.

Mr. Varney concluded that there would be no change in land use of the communities along the existing right-of-way because siting the Project within an existing right-of-way: (i) would reinforce existing development patterns; and (ii) often would minimize environmental impacts. Tr., Day 35, Afternoon Session, 09/18/2017, at 42-43. Mr. Varney did not agree with

the proposition that an increase in the intensity of the use within the right-of-way or increase in heights of the towers compared to currently existing towers would reach a point where it would change the extent, scope and scale of the right-of-way making it inconsistent with current land uses. Tr., Day 35, Afternoon Session, 09/18/2017, at 43-46, 142-144; Tr., Day 40, Morning Session, 09/26/2017, at 70-71. Mr. Varney confirmed that he was aware of the fact that structures associated with the Project and existing structures that would be relocated would be higher than currently existing structures. Tr., Day 38, Morning Session, 09/22/2017, at 59. He also confirmed that he did not look into the details as to how much taller these structures would be and opined that “there would be some incremental increase in the height of the structures within the corridor.” Tr., Day 38, Morning Session, 09/22/2017, at 59; Tr., Day 40, Morning Session, 09/26/2017, at 70-71. He also testified that he did not look into details of how much of a vegetative buffer would be removed in order to construct the Project. Tr., Day 38, Morning Session, 09/22/2017, at 60-63. He proffered that, as long as the Project would be located within an existing right-of-way, regardless of how intense the use of the right-of-way would be or how tall the new structures would be (even if structures would be up to 300 feet tall), it would not have an adverse effect on local land use. Tr., Day 35, Afternoon Session, 09/18/2017, at 43-47; Tr., Day 40, Morning Session, 09/26/2017, at 133. Mr. Varney testified that he had no opinion as to whether intensifying the use of the transmission corridors may ever have an adverse impact on land use. Tr., Day 35, Afternoon Session, 09/18/2017, at 44-45. He did confirm, however, that it was his position that, in most cases, “as long as a new transmission line is sited within an existing corridor, . . . it would not have an adverse impact on land use.” Tr., Day 38, Morning Session, 09/22/2017, at 65. Mr. Varney did not find a single location along the 192 miles of the

Project where siting the Project would be inconsistent with prevailing land use. Tr., Day 35, Afternoon Session, 09/18/2017, at 124.

Mr. Varney also testified that he did not study and did not “make a judgment” on the impact of the Project’s construction on land use. Tr., Day 35, Afternoon Session, 09/18/2017, at 9-10. He testified, however, that he “consider[ed]” construction impacts on land use. Tr., Day 35, Afternoon Session, 09/18/2017, at 10.

(b) Views of Municipal and Regional Planning Commissions and Municipal Governing Bodies

The Applicant asserted that the Project would not interfere with the implementation of local, regional and state-wide plans. App. 1, at 15. In support, the Applicant submitted the pre-filed testimony of Robert Varney (original and supplemental) and a report entitled “Review of Land Use and Local, Regional and State Planning.” App. 20; App. 96; App. 1, Appx. 41.

Mr. Varney testified that he reviewed regional plans for each of the regional planning commissions in the Project area, local river corridor management plans and statewide plans that involve different aspects of land use, environment, energy and transportation infrastructure. App. 20, at 6. He explained that he reviewed local “master plans for all of the corridor communities.” App. 1, Appx. 41, at 12.

As to the views of the Regional Planning Commissions, Mr. Varney testified that he met with the North Country Council, the Lakes Region Planning Commission, the Central New Hampshire Regional Planning Commission, and the Southern New Hampshire Planning Commission. Tr., Day 35, Afternoon Session, 09/18/2017, at 32. He confirmed that the purpose of meetings with the regional planners was to receive the most updated reports and information and to listen to concerns. Tr., Day 35, Afternoon Session, 09/18/2017, at 33-36. Mr. Varney, however, did not solicit and did not consider the opinions of the regional planners about the

impact of the Project on orderly development. Tr., Day 35, Afternoon Session, 09/18/2017, at 33-37. Mr. Varney admitted that the North Country Council advised him about: (i) the concerns of municipalities in the region about the Project's visual effects on property values and tourism; and (ii) the North Country Council's own concerns about the cumulative impact of large projects on tourism and scenic resources. Tr., Day 35, Afternoon Session, 09/18/2017, at 37-39. He also noted that the North Country Council Board of Directors voted to oppose the Project. Tr., Day 36, Morning Session, 09/19/2017, at 105-106. But, neither his report nor testimony addressed this vote. Tr., Day 36, Morning Session, 09/19/2017, at 106-108. Mr. Varney explained that the Board's vote was not addressed in his report because it was about the Project prior to its modification. Tr., Day 36, Morning Session, 09/19/2017, at 108-109.

Mr. Varney testified that he reviewed the North Country Council's regional plan entitled "A Plan for New Hampshire's North Country," including the Comprehensive Economic Development Strategy incorporated in the Plan. App. 1, Appx. 41, at 13. Mr. Varney acknowledged that the Plan recommends protection of scenic and natural resources that support wildlife and tourism. App. 1, Appx. 41, at 13. It also states that economic and cumulative impacts should be considered in proposals for large transmission lines. App. 1, Appx. 41, at 13. In addition, Mr. Varney acknowledged that the Comprehensive Economic Development Strategy and Coos Economic Action Plan identify the preservation and maintenance of the working landscape and the protection of natural features as important to support the future economic success of the region. App. 1, Appx. 41, at 13. He opined, however, that construction and operation of the Project would be consistent with goals and priorities set forth in these documents because: (i) portions of the line would be sited concurrent with the existing line; and (ii) the Project would provide reliable and competitively-priced base load energy for the New

England power grid, helping with reduction of energy costs and the diversity of energy resources. App. 1, Appx. 41, at 14.

Mr. Varney testified that he reviewed the Lakes Region Regional Plan. App. 1, Appx. 41, at 14. He asserted that this Plan identifies protection of the region's environment and natural resources as a top priority. App. 1, Appx. 41, at 14. It also promotes energy efficiency and renewable energy choices at reasonable costs for all residents. App. 1, Appx. 41, at 13. He opined that construction and operation of the Project would be consistent with the goals and priorities of the plan because the Project would provide reliable and competitively-priced base load energy for the New England power grid, helping with reduction of energy costs and diversity of energy resources. App. 1, Appx. 41, at 14.

Mr. Varney also reviewed the Central New Hampshire Regional Plan. App. 1, Appx. 41, at 15. He asserted that the Plan is based on two main principals: (i) a balance between constructing increased capacity of clean, renewable energy with the need to protect existing land use patterns and open space; and (ii) maintenance of the region's unique characteristics and quality of life. App. 1, Appx. 41, at 15. Mr. Varney testified that the Plan encourages reliable and affordable sources of energy, including small hydro facility generation. App. 1, Appx. 41, at 15. He concluded that construction and operation of the Project would be consistent with goals and priorities set forth in the Plan because the Project: (i) would support a balance between constructing increased capacity of clean, renewable energy with the need to protect existing land use patterns and open space; and (ii) would use the existing right-of-way without impacting prevailing land use patterns. App. 1, Appx. 41, at 15.

Mr. Varney also reviewed "Moving Southern New Hampshire Forward FY2012-2015" a plan developed by the Southern New Hampshire Planning Commission. App. 1, Appx. 41, at 16.

Mr. Varney stated that this Plan promotes growth and development to broaden tax base and improvement and protection of the quality of life, community character and environment. App. 1, Appx. 41, at 16. The Plan identifies the Project as a key issue and states that “the Northern Pass Project is projected to bring 1,200 megawatts (MW) of clean, low-cost energy from Hydro-Québec’s hydroelectric plants in Canada to New Hampshire and New England continues to be a major issue confronting the state and the SNHPC [Southern New Hampshire Planning Commission.” App. 1, Appx. 41, at 16. Mr. Varney admitted that the Plan does not make any specific recommendations regarding the Project. App. 1, Appx. 41, at 16. He concluded that construction and operation of the Project would be consistent with the Plan because the Project: (i) would be constructed within an existing right-of-way; and (ii) would balance the need for diversifying clean energy resources with protecting existing land use development patterns. App. 1, Appx. 41, at 16.

Mr. Varney further opined that construction and operation of the Project would be consistent with goals and priorities set forth in the White Mountain National Forest Land and Resource Management Plan, Conservation Management Plan and Environmental Impact Statements for the Silvio O. Conte National Fish and Wildlife Refuge, River Corridor Management Plans and National Scenic Byways Program. App. 1, Appx. 41, at 16-24.

Mr. Varney opined that construction and operation of the Project would be “consistent” with the following state plans and would not interfere with their implementation:

- New Hampshire Climate Action Plan;
- New Hampshire State Development Plan;
- Granite State Future: A Statewide Snapshot;
- New Hampshire Airport System Plan;

- New Hampshire 10-Year State Energy Strategy;
- New Hampshire Energy Plan;
- New Hampshire Ten-Year Transportation Improvement Plan;
- New Hampshire Fish & Game Wildlife Action Plan;
- New Hampshire Division of Parks and Recreation Ten-Year Strategic Development and Capital Improvement Plan;
- New Hampshire Statewide Comprehensive Outdoor Recreation Plan;
- New Hampshire DES Wetland Program Plan;
- New Hampshire Forest Resources Plan;
- New Hampshire Rail Plan;
- New Hampshire Preservation Plan;
- New Hampshire DRED State Trails Plan;
- New Hampshire DOT Long Range Transportation Plan; and
- New Hampshire Statewide Bicycle and Pedestrian Plan.

App. 1, Appx. 41, at 24.

Mr. Varney claimed that he reviewed local “master plans for all of the corridor communities.” App. 1, Appx. 41, at 12. He noted that Clarksville, Stewartstown, and Stark do not have master plans.⁹⁴ App. 1, Appx. 41, at 30; Tr., Day 37, Morning Session, 09/21/2017, at 45-46. A working summary of the master plans of the communities that would be affected by the Project was provided as Applicant’s Exhibit 201. Mr. Varney acknowledged that some master plans discuss the importance of preserving scenic views and the rural character of towns. Tr., Day 35, Afternoon Session, 09/18/2017, at 54. He did not consider the impact of the Project

⁹⁴ Mr. Varney testified that the Town of Pittsburg developed a master plan in 1992. Tr., Day 37, Morning Session, 09/21/2017, at 46. The Planning Board was, however, abolished two years thereafter. Tr., Day 37, Morning Session, 09/21/2017, at 46.

on any scenic areas or scenic resources and did not conduct any analysis that would determine whether the visual impacts of the Project would undermine the goals in the master plans. Tr., Day 35, Afternoon Session, 09/18/2017, at 54-55; Day 37, Morning Session, 09/21/2017, at 105-108.

Based on the review of existing master plans, Mr. Varney concluded:

Generally, municipal master plans contain broad goals about development topics such as land use, economic development and the environment. The Project is consistent with these broad goals and helps to implement economic development efforts by helping to reduce energy costs, improve air quality and address potential local and regional consequences associated with climate change. The Project also supports goals to preserve open space by locating within or along already developed utility and roadway corridors, and going underground in key locations.

App. 1, Appx. 41, at 30.

Mr. Varney acknowledged that Pittsburg, Clarksville, Stewartstown, Stark, Dalton, Woodstock and Dummer do not have Zoning Ordinances. App. 1, Appx. 41, at 30; Tr., Day 37, Morning Session, 09/21/2017, at 46. As to the Project's consistency with the Zoning Ordinances,⁹⁵ Mr. Varney asserted that the Project: (i) would be consistent with Zoning Ordinances; and (ii) would not be subject to local zoning regulations. App. 1, Appx. 41, at 30; Tr., Day 40, Morning Session, 09/26/2017, at 121-125.

Mr. Varney acknowledged that "many" towns have passed warrant articles addressing the Project or taken other action demonstrating opposition to the construction of the Project. App. 20, at 6. Mr. Varney opined, however, that these actions are not "definitive actions inconsistent with the town's plans or regional development plans." App. 20, at 6. He further explained that he found the warrant articles "not definitive" because they were passed before the Project was

⁹⁵ An Overview of Zoning Ordinances was provided pursuant to the Subcommittee's request as Applicant's Exhibit 219.

changed to include additional underground installation and did not address outreach efforts, mitigation measures and expert reports and testimony provided by the Applicant. Tr., Day 37, Morning Session, 09/21/2017, at 69-73.

Mr. Varney acknowledged that, while rendering his opinion about the Project's consistency with local plans, he did not meet with municipal governing bodies, selectmen, planning boards, zoning boards, Economic Development Directors⁹⁶, or Economic Development Committees. Tr., Day 35, Afternoon Session, 09/18/2017, at 26-29. He testified that, although he met with town planners, the purpose of these meetings was to obtain the most up to date information pertaining to the plan in place and listen to the planners' concerns. Tr., Day 35, Afternoon Session, 09/18/2017, at 33-36. Mr. Varney acknowledged that various planners expressed concerns about the impact of the Project on aesthetics, the rural character of the communities, and tourism. Tr., Day 35, Afternoon Session, 09/18/2017, at 40-41. Nevertheless, opinions from local planners concerning interference with the orderly development of the region were not solicited and were not considered by Mr. Varney in his analysis. Tr., Day 35, Afternoon Session, 09/18/2017, at 33-36.

With regard to the views of municipal governing bodies, Mr. Varney testified that, while conducting his analysis, he considered only: (i) information contained in the Application; (ii) views that were expressed during public hearings conducted by the Applicant prior to the filing of the Application; and (iii) comments submitted as a part of the Draft Environmental Impact Statement process. Tr., Day 35, Afternoon Session, 09/18/2017, at 26-29.

Mr. Varney concluded that the Project would be consistent with local, regional, and statewide long-range plans because, in most instances these plans do not directly address

⁹⁶ Mr. Varney met and spoke with Concord's Economic Development Director in the hallway before a public meeting. Tr., Day 35, Afternoon Session, 09/18/2017, at 29.

construction and operation of the Project. App. 20, at 8; App. 1, Appx. 41, at 12, 30. He went on to state that the Project “is consistent with the general goals and objectives of those plans and would not interfere with their implementation.” App. 20, at 8; App. 1, Appx. 41, at 12, 30.

Mr. Varney, ultimately, opined that the Project would not unduly interfere with the orderly development of the region. App. 20, at 3, 5-8; Tr., Day 35, Afternoon Session, 09/18/2017, at 15. Mr. Varney acknowledged that, although he rendered his opinion of the Project’s interference with the orderly development, he did not have an independent expert opinion about the Project’s impact on economy, real estate taxes, property values and tourism. Tr., Day 35, Afternoon Session, 09/18/2017, at 17-21, 24-25.

(2) Counsel for the Public

Counsel for the Public asserted that the Applicant failed to address impacts from the Project’s construction in general and the impacts of traffic specifically, on land use. *See* Counsel for the Public’s Post-Hearing Brief, at 14-18. Counsel for the Public also asserted that the Applicant failed to consider and address the impact of laydown areas and vegetative clearing on land use. *See* Counsel for the Public’s Post-Hearing Brief, at 16-17. In addition, Counsel for the Public opined that the Applicant failed to consider the impact of the Project on the locally designated scenic resources and businesses. *See* Counsel for the Public’s Post-Hearing Brief, at 15-17, 78-79. Counsel for the Public argued that Mr. Varney failed to evaluate or consider the impact on land use associated with the impact of the Project on aesthetics and the natural environment. *See* Counsel for the Public’s Post-Hearing Brief, at 17. Counsel for the Public also criticized Mr. Varney for not considering impacts to second homeowners and vacation properties. *See* Counsel for the Public’s Post-Hearing Brief, at 16. Finally, Counsel for the

Public noted Mr. Varney's failure to consider the impact of the Project on areas and the regions that would not directly abut the Project, but would be impacted due to the Project's visibility.

Counsel for the Public argued that Mr. Varney's evaluation of local governing documents was deficient. *See* Counsel for the Public's Post-Hearing Brief, at 68. He argued that Mr. Varney merely summarized local municipal master plans, zoning ordinances and other planning studies without describing how they would be impacted by the Project. *See* Post-Hearing Brief, at 68. Counsel for the Public asserted that such summaries are inadequate because Mr. Varney failed to explain whether the Project would be consistent or inconsistent with specific terms, statements, goals and directives expressed by these documents. *See* Counsel for the Public's Post-Hearing Brief, at 68.

Counsel for the Public requested that, if a Certificate were to be granted, the following conditions be attached:

The Applicants shall obtain all construction permits from any municipality through which the Project will pass, such as driveway permits, in order to comply with existing municipal construction rules and regulations.

See Counsel for the Public's Post-Hearing Brief, at 167.⁹⁷

(3) City of Berlin and City of Franklin

Ms. Elizabeth A. Dragon, on behalf of the City of Franklin, stated that the City of Franklin supports construction and operation of the Project. FRANKLIN-BERLIN 2, at 3.

Mayor Paul Grenier, on behalf of the City of Berlin, stated that the City supports the Project subject to the Applicant's compliance with its commitment to upgrade the Coos Loop and establish and administer the Forward New Hampshire Fund and the North Country Jobs Creation Fund. FRANKLIN-BERLIN 1, at 9. Mayor Grenier asserted that, without the

⁹⁷ The Applicant indicated that it cannot agree to such condition. Applicant's Post-Hearing Memorandum, at 408.

Applicant's compliance with these requirements, the City takes no position in support or against the Project. FRANKLIN-BERLIN 1, at 9.

(4) Grafton County Commissioners

Grafton County Commissioners argued that the Project would be inconsistent with local plans and ordinances and would have a negative impact on orderly development by permanently impacting the character of the region. GRAFTON 1.

(5) Municipalities

The municipalities⁹⁸ argued that Mr. Varney's conclusion that the Project would not interfere with existing land uses simply because it would be located within an existing right-of-way is flawed. *See* Municipalities' Post-Hearing Memorandum, at 28-29. They argue that the Subcommittee is required to review the Project's impact on land use regardless of whether it would be located within existing right-of-way. *See* Municipalities' Post-Hearing Memorandum, at 28-29. They concluded that, by their terms, the rules recognize that some projects may interfere with land use even if they are located within existing rights-of-way. *See* Municipalities' Post-Hearing Memorandum, at 29.

The municipalities argued that Mr. Varney's assessment of the Project's impact on land use was flawed because Mr. Varney failed to analyze the Project's effect on land uses in all communities that would be impacted by the Project. *See* Municipalities' Post-Hearing Memorandum, at 25, 65-67.

The municipalities also argued that the Applicant failed to provide all information in its Application as required by the Committee's rules. *See* Municipalities' Post-Hearing Memorandum, at 7-23.

⁹⁸ City of Concord, Towns of New Hampton, Littleton, Deerfield, Pembroke, Bristol, Easton, Franconia, Northumberland, Plymouth, Sugar Hill, Whitefield and Ashland Water and Sewer Department.

Cassandra Laleme, on behalf of the Bethlehem Board of Selectmen, asserted that the Project is inconsistent with Bethlehem's Zoning Ordinance, current and proposed Master Plans, and Site Plan Review Regulations. JTMUNI 89, at 1-2.

Ms. Laleme testified that Bethlehem's Zoning Ordinance identifies its purpose as "preserving and promoting the health, safety and welfare of the community." JTMUNI 89, Appx. D, at 4. Bethlehem's Site Plan Review Regulations, in relevant part, further state as follows:

The purpose of these Site Plan Review Regulations is to protect the public health, safety and welfare; to ensure the adequacy of traffic access, circulation and parking; to prevent premature and uncoordinated development of land without the adequate provision of public services and facilities; to ensure the provision of adequate buffers, landscaping and screening to protect adjoining properties against detrimental or offensive uses on the site, including but not limited to unsightly or obnoxious appearance, glare, smoke and noise; to protect against adverse environmental impacts from a proposed development including inadequate disposal or storage of sewage, refuse and other wastes and/or inadequate surface drainage and to guide general character of development.

JTMUNI 89, at 1-2; Appx. E, §II. Ms. Laleme asserted that construction and operation of the Project would be inconsistent with Bethlehem's Zoning Ordinance and Site Plan Review Regulations because it would cause an adverse effect on health, would obstruct traffic, would cause noise that would be intrusive for residents, would destroy wetlands and would require years for regrowth of meaningful buffers and screening between the Project and private properties. JTMUNI 89 Appx. A, at 1.

Ms. Laleme asserted that construction and operation of the Project is inconsistent with the Town's current Master Plan and the Master Plan that is currently under development. Ex. JTMUNI 89, at 1. The Town's 2004 Master Plan identifies the following Vision Principals: (i) maintain the rural landscape; (ii) foster a vibrant, livable village district; (iii) direct new growth into areas that can develop as compact neighborhoods which allow for a mix of uses; (iv)

encourage economic vitality; and (v) protect environmental quality, JTMUNI 89, Appx. B, §1.0.

The new master plan under consideration by the Town contains the following vision statement:

Bethlehem takes pride in its past and has worked to maintain a balance between development and preservation of its small town character. The town works to meet the challenges of sustaining its character while providing its residents with a safe and friendly environment in which to live, work, shop, and play. Residential and commercial development are planned and guided in a manner that retains open space for forestry, agriculture, wildlife and plant habitat, and recreation. Town infrastructure and facilities are planned and constructed to keep pace with development while prudent fiscal management keeps tax rates on an even keel. With nearby Littleton serving as a regional hub for commercial and industrial development, and with many residents working in that and other towns, Bethlehem is a proactive player with regional initiatives or developments affecting the town. Citizens of Bethlehem take an active role in governance of the community and the region, and in determining the future growth of the town.

JTMUNI 89, Appx. A, at 2. The master plan under consideration identifies the same Vision Principals as the 2004 Master Plan. JTMUNI 89, Appx. A, at 2. Ms. Laleme concluded that construction and operation of the Project would be contrary to the Town's Master Plan because it would affect the wetlands, natural environment, its rural character and tourism. JTMUNI 89, Appx. A, at 1-2.

Ms. Laleme also argued that construction and operation of the Project would violate the Town's Aquifer Protection Ordinance, a Personal Wireless Service Facilities Ordinance (restrictions of certain heights of towers and promotion of aesthetics), and a Dark Skies Ordinance (restriction of light from projecting upwards). JTMUNI 89, 1-2; JTMUNI 90, at 1-2.

According to Ms. Laleme, the 2011 Town Meeting passed Warrant Article 24 which specifically identified the Town's opposition to construction and operation of the Project, as proposed. JTMUNI 89, at 3; JTMUNI 89, Appx. G. Ms. Laleme concluded that the Certificate,

if issued, would violate local governance and infringe upon the Town's ability to regulate its own matters. JTMUNI 89, Appx. A.

Edwin Mellett, on behalf of the Town of Northumberland, asserted that, in 2011, Warrant Article 27 to oppose the Project "as presently proposed" was passed. JTMUNI 91, at 4; Appx. D. Mr. Mellett further asserted that it is the Town's position that the Project should be buried along its entire length. JTMUNI 92, at 1.

Lise Moran, on behalf of the Town of Whitefield and the Whitefield Historic Society, testified that the Project would unduly interfere with the orderly development of the Town of Whitefield by impacting its historic sites and tourism. JTMUNI 94, at 1.

Wendy Hersom and Frank Lombardi, on behalf of the Whitefield Board of Selectmen and Planning Board, testified that the Project would be inconsistent with Whitefield's Master Plan. JTMUNI 95, at 7. Ms. Hersom and Mr. Lombardi identified the following inconsistencies between the Project and the Master Plan:

- Economic base - Ms. Hersom and Mr. Lombardi argued that the Project would have a negative effect on the attractiveness of the Town to new business and would cause a substantial burden to existing businesses causing them to leave (JTMUNI 95, Appx. D, at 3-5);
- Population - Ms. Hersom and Mr. Lombardi claimed that the Project would preclude the Town from attracting a younger population by affecting the Town's attractiveness (JTMUNI 95, Appx. D, at 5-7);
- Tax base - Ms. Hersom and Mr. Lombardi claimed that the Project would have a negative impact on tax revenues because: (i) it is likely that the Applicant would seek tax abatements; and (ii) it is likely that property owners would seek tax abatements to account for a negative impact of the Project on their properties' values (JTMUNI 95, Appx. D, at 10);
- Natural Recourses - Ms. Hersom and Mr. Lombardi argued that the Project would cause an unnecessary and unwarranted disturbance of wetlands and associated wildlife and habitat (JTMUNI 95, Appx. D, at 11-14);

- Scenic Resources - Ms. Hersom and Mr. Lombardi claimed that the Project would have a negative effect on the Town's scenic roadways and views because it would be constructed aboveground and would be visible from most scenic vistas in Whitefield (JTMUNI 95, Appx. D, at 14-16);
- Cultural and historic resources - Ms. Hersom and Mr. Lombardi asserted that the Project would be visible from the Town's cultural and historic resources and would adversely affect their character and aesthetics (JTMUNI 95, Appx. D, at 16-17);
- Special land uses - Ms. Hersom and Mr. Lombardi claimed that the Project would have a negative effect on special land uses by affecting the views from Mountain View Grand Resort (JTMUNI 95, Appx. D, at 39);
- Development limitations – Ms. Hersom and Mr. Lombardi expressed concerns about construction of the Project on steep slopes, wetlands and poor soils of the Town. They also asserted that the Town is concerned about possible flooding associated with water displacement that could be caused by construction of the Project (JTMUNI 95, Appx. D, at 41); and
- Future land use – The 2007 Master Plan Survey demonstrated that residents of Whitefield support land use patterns that are promoted by the Comprehensive Development Guide. Ms. Hersom and Mr. Lombardi claimed that construction and operation of the Project is contrary to the Plan and its goals (JTMUNI 95, Appx. D, at 41-43).

JTMUNI 95, at 8-10, Appx. D.

Ms. Hersom and Mr. Lombardi also claimed that construction and operation of the Project would be inconsistent with the Town's Comprehensive Development Guide that functions as the Town's Zoning Ordinance. JTMUNI 95, at 3. They claimed that, were the Project required to come before it, the Town's Planning Board would likely deny the Project for the following reasons:

- Master Plan – The Project would be inconsistent with the Town's Master Plan (JTMUNI 95, Appx. C, at 17);
- Land use – The Project would be inconsistent with the Town's land use (JTMUNI 95, Appx. C, at 17);
- Scenic roads – The Project would impact views from the Town's scenic roads and the Applicant failed to address and mitigate said impact (JTMUNI 95, Appx. C, at 17);

- Utilities – The Planning Board would be concerned about the impacts of construction and operation of the Project on water supply, drainage, fire protection, electricity and street/pedestrians of the Town (JTMUNI 95, Appx. C, at 18);
- Emergency access – The Board would most likely deny the Project due to the lack of information addressing the accessibility of emergency services during construction of the Project (JTMUNI 95, Appx. C, at 18);
- On-Site water – The Planning Board expressed concerns about the Project’s effects on wetlands and additional impervious surfaces (JTMUNI 95, Appx. C, at 18);
- Geological – The Planning Board would request the Applicant to provide soil studies to address its concerns (JTMUNI 95, Appx. C, at 18);
- Topography – The Board claimed that vegetation would not be able to mitigate the impact of the Project on aesthetics (JTMUNI 95, Appx. C, at 18-19);
- Flora and fauna – The Planning Board would request the Applicant to provide a letter from New Hampshire Fish & Game stating that no flora or fauna would be in jeopardy along the right-of-way in the Town (JTMUNI 95, Appx. C, at 19);
- Historic Preservation – The Project would have a negative impact on the historic village and Town Commons because it would be located in close proximity to these historic sites. The Project also would have a negative impact on Mountain View Grand Resort because it would impact its views (JTMUNI 95, Appx. C, at 19);
- Fragile areas – The Project would be constructed close to sensitive areas of Whitefield, including lakes, animal habitat, Forest Lake State Park, and Pondicherry Wildlife Refuge (JTMUNI 95, Appx. C, at 19);
- Air quality – The Planning Board asserted that it has “great concerns” regarding a potential impact of the Project’s construction on air quality (JTMUNI 95, Appx. C, at 19);
- Water – The Board asserted that the Project would affect many streams and wetlands (JTMUNI 95, Appx. C, at 19-20);
- Noise – The Planning Board expressed concerns about construction noise that would be caused by the Project. The Board would require the Applicant to confirm that noises associated with construction of the Project would be within the national standards. The Board also would require the Applicant to comply with the Ordinances’ work hours requirements (JTMUNI 95, Appx. C, at 20);
- Glare and Heat – The Planning Board claimed that it would request the Applicant to file studies that would address: (i) effect of ice and snow on cables and towers; (ii)

heating up of the lines; and (iii) glare that would be caused by the towers (JTMUNI 95, Appx. C, at 20);

- Lighting – The Planning Board also claimed that it would request the Applicant to identify the lighting that would be used along the lines and at the substation and its effect on drivers and residents of the Town (JTMUNI 95, Appx. C, at 20);
- Natural compatibility – The Planning Board claimed that the Project’s design, arrangement, and size would not be “in favorable relationship” to existing natural topography, natural water bodies and courses, existing trees, and views (JTMUNI 95, Appx. C, at 21);
- Setbacks – The Project would be in violation of the Town’s 25-foot setback requirements (JTMUNI 95, Appx. C, at 21);
- Traffic – The Board would request the Applicant to submit plans that would demonstrate how the Applicant would manage traffic during construction of the Project. The Board also would request the Applicant to provide plans for entrance and exit points (JTMUNI 95, Appx. C, at 21);
- Buffers and building height – The Planning Board asserted that the Project would be in direct violation with the Town’s Ordinances where its structures would be higher than currently permitted 35 feet structures and it does not provide for fall zone buffer areas, visual and sound buffers and a fire barrier (JTMUNI 95, Appx. C, at 21-22).

JTMUNI 95, at 3-7, Appx. C, at 17-22.

Ms. Hersom and Mr. Lombardi opined that the Project would unduly interfere with the orderly development of the Town and region by adversely affecting its rural character and attractiveness, tourism, and businesses that depend on tourism and the Town’s tax base. JTMUNI 95, at 10-11. They also asserted and provided minutes that indicate that, at the March 2016 Annual Meeting, the Whitefield Town Meeting approved Warrant Article 14 expressing the Town’s opposition to the construction of the Project, as proposed. JTMUNI 95, at 13-14, Appx. E, at 7. Finally, they asserted that 535 residents, including 350 registered voters, of the Town of Whitefield expressed their opposition to construction and operation of the Project by signing a Petition opposing the Project and filing numerous public comments and Petitions to Intervene with the Subcommittee. JTMUNI 95, at 14, Appx. F, G.

Margaret Connors, on behalf of the Sugar Hill Board of Selectmen, opined that the Project would unduly interfere with the orderly development of the region. JTMUNI 99, at 1. She also opined that the Project would be inconsistent with the Town's Master Plan. JTMUNI 99, at 2. Ms. Connors claimed that the Town's Master Plan specifically acknowledges the presence of a stratified drift aquifer in the area of Coffin Pond and the Gale River. JTMUNI 99, at 2; JTMUNI 99, Appx. A, at 19. It further states that this aquifer may be used in the future for public water supply or to supply businesses. JTMUNI 99, at 2; JTMUNI 99, Appx. A, at 19. It concludes that "[l]and use must continue to be managed carefully to ensure that activities do not occur which could pose a threat to water quality." JTMUNI 99, at 2; JTMUNI 99, Appx. A, at 19. The Master Plan further identifies Coffin Pond as one of three ponds of note in Sugar Hill. JTMUNI 99, at 3; JTMUNI 99, Appx. A, at 23. It states that "to maintain the high quality of Sugar Hill's surface waters and its healthy aquatic ecosystem, it is necessary to both keep development activities separated from the Town's rivers, brooks and wetlands and to maintain a vegetated buffer around these surface waters." JTMUNI 99, at 3; JTMUNI 99, Appx. A, at 24. According to Ms. Connors, construction of the Project would be in direct violation of these provisions of the Master Plan where the Applicant would bury 1.7 miles of high-voltage transmission line close to Coffin Pond and the Gale River. JTMUNI 99, at 2-3. Ms. Connors further opined that the Project would not promote goals of the Town's Energy Policy that states as follows:

it is intended to reduce the reliance on imported power, reduce harmful environmental impacts, reduce energy costs, promote sustainability, and support state and local economies.

JTMUNI 99, at 3; JTMUNI 99, Appx. A, at 69.

Ms. Connors further asserted that the 2011 Sugar Hill Town Meeting voted to approve Article 14 stating the Town's objection to construction and operation of the Project, as proposed. JTMUNI 99, at 4; JTMUNI 99, Appx. B. She testified that the vote remains valid to date. JTMUNI 99, at 4.

Jim Collier, on behalf of the Planning Board of the Town of Easton, testified that the Project would be inconsistent with the Town's Master Plan, Zoning Ordinance and subdivision regulations. JTMUNI 101, at 1-2. As to the Master Plan, Mr. Collier opined that the Town of Easton documented highly ranked habitat, recognized and documented National Wetland Inventories, documented slopes greater than 26%, and documented prime farmland and/or farmland of Statewide importance. JTMUNI 101, at 1. According to Mr. Collier, the Project would be constructed in close proximity to the Ham Branch, Slide Brook, and Reel Brook. JTMUNI 101, at 1-2. Mr. Collier concluded that construction of the Project would have a negative impact on these water resources and the natural environment identified by the Town. JTMUNI 101, at 2.

Mr. Collier also argued that construction of the Project would be in violation of the Town's Zoning Ordinance and subdivision regulations because it could cause a negative impact on the Town's water sources and wells and would cause major destruction on Route 116 and Route 112. JTMUNI 101, at 2; JTMUNI 101, Appx. B, C.

Ned Cutler, on behalf of Town of Easton's Board of Selectmen, testified that at the 2011 Annual Meeting, the voters approved Warrant Article 13, establishing and funding an expendable trust fund to support the Town's official opposition to the Project. JTMUNI 102, at 3; JTMUNI 110. The Town Meeting also approved additional warrant articles authorizing distribution of additional funds into the fund in 2012 and 2013. JTMUNI 102, at 3. According to

Mr. Cutler, to date, the Town continues to oppose construction and operation of the underground portion of the Project in the Town. JTMUNI 102, at 3; JTMUNI 110.

Kris Pastoriza, on behalf of Easton Conservation Commission, advised the Subcommittee that the Easton Board of Selectmen passed the following articles addressing the Project:

- Article 23 – Blasting Ordinance – “To see if the town would adopt a blasting ordinance that would require a 3 million dollar bond before blasting and forbids blasting within 500 feet of groundwater protection district and 100 feet of wetlands.”
- Article 24 – Borehole Sealing Standard – “To see if the town would adopt the National Cooperative Highway Research Program standards for sealing of geotechnical boreholes, with the requirement of a bond equal to that required by the DOT in the case of DOT approved boring, and the requirement that applicants are required and would be responsible for the expenses of the Town hiring an[] independent expert to oversee the filling/sealing of boreholes.”
- Article 25 – Horizontal Directional Drilling – “To see if the Town would adopt an ordinance prohibiting Horizontal Directional Drilling within 500 feet of the Groundwater Protection district, prohibit use of drilling additives other than bentonite, and prohibit discharges of Horizontal Directional Drilling fluid to surface or ground water.”
- Article 26 – Thermal Backfill – “To see if the Town would adopt an ordinance prohibiting thermal backfill or thermal concrete containing coal ash within the groundwater protection district. All fluidizing agents must be approved by the town before thermal backfill may be used.”

JTMUNI 112, at 2; JTMUNI 112, Appx. A.

Eric Meth, on behalf of the Board of Selectmen of the Town of Franconia, asserted that the 2012 Franconia Town Meeting approved Warrant Article 11 stating the Town’s opposition to the Project. JTMUNI 103, at 1; JTMUNI 103, Appx. A. Mr. Meth acknowledged that the design of the Project changed since 2011 and, as currently proposed, it would be constructed underground in the Town of Franconia. JTMUNI 103, at 2. He asserted, however, that the Town’s position remains the same and that was demonstrated at the 2016 Annual Meeting when

the voters approved Warrant Articles 17 and 18 that authorized additional distributions to the fund used for the opposition to the Project. JTMUNI 103, at 2; JTMUNI 103, Appx. B.

Brian Murphy, on behalf of the Town of Plymouth, testified that construction and operation of the Project would be inconsistent with the Town's Master Plan and Zoning Ordinance. JTMUNI 105, at 3; JTMUNI 105, Appx. A, B. Ms. Penney asserted that the Town's Zoning Ordinance, in relevant part, states as follows:

. . . the purposes of this Ordinance are declared to be the protection and promotion of the health, safety, and general welfare of the community . . . to guide development . . . to strive to mitigate environmental impacts associated with development and growth . . . to promote good civic design and arrangements, to protect the value of homes and land . . . and to ensure adequate provision of transportation, water, sewerage, schools, parks and other public requirements

JTMUNI 105, at 4; JTMUNI 105, Appx. A, §101.

Although Mr. Murphy acknowledged that she cannot identify specific Plymouth site plans or building regulations that would apply to the Project, she opined that the Project would be inconsistent with the Ordinance and regulations because it would be constructed under Main Street and would cause disruption to community health and safety. JTMUNI 105, at 4. It also would cause a negative economic impact by causing loss of revenue to businesses located along Main Street. JTMUNI 105, at 4.

Mr. Murphy further asserted that the Town is concerned that the Project, as currently proposed, could be constructed in a floodplain. JTMUNI 105, at 3.

Finally, Mr. Murphy asserted that the Plymouth Board of Selectmen announced its opposition to the Project during a public hearing that was held on May 9, 2016. JTMUNI 105, at 7.

Barbara Lucas, on behalf of the Board of Selectmen of the Town of New Hampton, testified that residents of the Town of New Hampton adopted a resolution objecting to the Project in April, 2011. JTMUNI 122, Appx. A. She also testified that the Board of Selectmen, expressed its opposition to construction of the Project, as proposed. JTMUNI 122. The Board of Selectmen of the Town of New Hampton advocated for the burial of the Project. JTMUNI 114, 122.

Selectmen of the Town of New Hampton asserted that the Town's Master Plan's goal is to "preserve the rural working landscape and protect prime agricultural lands . . . ensure that the town retains the unique and historic rural character" and to preserve "important wildlife habitat, scenic views, ridgelines, wetlands and water resources." JTMUNI 114. The Selectmen asserted that construction of the Project within the Town would violate three of these principals. JTMUNI 114.

Kenneth N. Kettenring, on behalf of the Planning Board of the Town of New Hampton, asserted that the Project would be inconsistent with the Town's Master Plan, Zoning Ordinance and Site Plan Review Regulations. JTMUNI 119, Appx. A, at 1-2; JTMUNI 120, at 12-14. Mr. Kettenring testified that construction of the Project would contradict the following sections of the Town's Master Plan:

- Introduction:

The Master Plan is a tool to be used by the Planning Board and the Board of Selectmen to guide growth at a rate that is consistent with the town's ability to absorb it, while preserving the existing rural and small town character. The Master Plan furthers this goal through natural resource protection, historic and agricultural preservation and protection of the town's aesthetics values, which would assure a pleasant, attractive, and desirable community to live and play.

- Section 1.6 (results of a Community Opinion Survey):

We're not only concerned with preservation of our man-made structures. In a question about town involvement in preservation of other resources, there was overwhelming support for conservation of areas of a scenic or natural beauty (85%). The Pemigewasset River (84%), important wildlife habitats (83%), shorelines (80%), followed by historic buildings, wetlands, and working farms and farmlands (all above 65%).

- Goal 3.1 – “Preserve the rural working landscape to protect prime agricultural lands.”
- Goal 3.2 – “Ensure that the town retains the unique rural character. This is mainly a visual goal that demands a complicated process of determination of unique character and a process to provide protective scenarios.”
- Goal 3.3 – “Preserve important wildlife habitat, scenic view areas, ridgelines, wetlands, and water resources” and to protect scenic views and vistas from “development that would have a negative impact, such as cell towers, water towers, or high rise buildings.”

JTMUNI 119, Appx. A, at 2; JTMUNI 119, Appx. B, at v-vi, 44; JTMUNI 120, at 10-12; JTMUNI 121, at 4.

Mr. Kettenring also stated that the following sections of the Site Plan Review Regulations would preclude construction of the Project in the Town of New Hampton:

- Section X, P – “Where appropriate, installation of any new utilities and/or transmission lines should be buried underground.”
- Section IV, D (Expansion of Use) – Construction of the towers within an existing right-of-way would cause expansion of use by reducing screening from residential areas and expanding the scope and size of currently existing transmission infrastructure.
- Section X, E, 1 – Requiring the buffer strips between nonresidential and residential uses to contain vegetation that would screen nonresidential uses from the sight of the residential uses during winter months.

JTMUNI 119, Appx. A, at 2; JTMUNI 120, at 13-14.

Mr. Kettenring further opined that construction of the Project would be inconsistent with the Town of New Hampton Zoning Ordinance because it would involve: (i) construction in the

District where such use of the property is not permitted; (ii) construction of structures taller than 35 feet; (iii) construction of a structure (Tower DC-1121) within 35 feet of private roads; (iv) construction of seven towers in the Pemigewasset Overlay District; and (v) construction of four towers within 200 feet from the normal high water mark of the Pemigewasset River (DC-1120 – 100 feet; DC1144 – 75 feet; DC-1175 – 150 feet and E115-122 – 125 feet). JTMUNI 120, at 13-15; JTMUNI 120, Appx. 8.

Mr. Kettenring concluded that “[a]s currently proposed, the project would have an undue interference with the orderly development of the Town of New Hampton, and any public benefits are outweighed by the negative impacts that the project would have on the Town of New Hampton.” JTMUNI 119, at 2. Mr. Kettenring also asserted that the Planning Board of the Town of New Hampton “would look favorably” on the Project if it buried the lines within the existing right-of-way or along the right-of-way of public highways in the Town of New Hampton. JTMUNI 110, Appx. A, at 2.

Daniel P. Moore, on behalf of the Town of New Hampton Conservation Commission, testified that it is the Commission’s position that the Project would unduly interfere with the orderly development of the Town of New Hampton by impacting the scenic views of the Pemigewasset River, the Town’s rural character and residential and commercial properties. JTMUNI 123, at 2; JTMUNI 123, Appx. A.

Nicholas Coates, on behalf of the Town of Bristol, asserted that construction and operation of the Project would be inconsistent with the Town’s Master Plan and Zoning Ordinance. JTMUNI 115, at 1. Mr. Coates asserted that the Project would be inconsistent with the following provisions of the Town’s Master Plan:

- Vision Statement – identifying safeguarding of the rural quality of the Town, building to create enduring value and beauty, conserving and showcasing the Town’s natural

assets, maintaining the economic viability of the Town's agricultural land and forests and maintaining the health of the natural systems that support life in Town as goals (JTMUNI 115, Appx. A, §I).

- Land Use – considering that “citizens of the town of Bristol continue to hold in high regard the protection of Bristol's scenic beauty and natural resources” while addressing future developments (JTMUNI 115, Appx. A, §II, ¶I).
- Conservation – mentioning protection of the Town's wetlands from pollution, including the Pemigewasset River and compliance with the recommendations of the Pemigewasset River Corridor Management Plan (JTMUNI 115, Appx. A, §V, ¶III).

JTMUNI 115, at 2. Mr. Coates concluded that the Project would be inconsistent with the Town's Master Plan because it would adversely affect the rural nature of the Town. JTMUNI 115, at 2.

As to the Zoning Ordinance, Mr. Coates identified the following provisions of the Ordinance that would prohibit construction of the Project, as proposed, in the Town of Bristol:

- Article 3(H) (Pemigewasset Overlay District) – The Applicant would violate this article by constructing towers within 500 feet of the River's ordinary high water mark on the slopes that exceed 15 percent.
- Article 4 – The Applicant would violate this article by constructing structures that would be taller than 35 feet.
- Article 9 (Wetlands Conservation Overlay District) – The Applicant would violate this Article by constructing towers in wetlands.
- Article 10 (Regulation of Cell Towers) – The Applicant would violate the spirit of this article where its structures would be as tall or taller as cell towers in the Town.

JTMUNI 115, at 2-3; JTMUNI 115, Appx. B. Mr. Coates concluded that the Project would unduly interfere with orderly development of the region where it would be constructed in direct violation of the Town's Master Plan and Zoning Ordinance and “[would] cause adverse impacts to the Town's wetlands, [would] result in the widening of the current utility corridor/powerline clear cut, and [would] have a negative impact on the viewsheds and rural nature of the Town.”

JTMUNI 115, at 2-3; JTMUNI 116, at 2.

Gail Matson and Candace Bouchard, on behalf of the Concord City Council, testified that the City established a Northern Pass Committee to review and evaluate the Project and provide recommendations to the City Council. JTMUNI 128, at 2-3. As a result of its review, the Committee recommended that the City Council request burial of the Project in Concord. JTMUNI 128, at 10. The City Council approved this recommendation at its meeting on October 13, 2015. JTMUNI 128, at 10. Ms. Matson and Ms. Bouchard asserted that the Project would unduly interfere with the orderly development of the City by constructing the structures within congested areas (commercial and residential) and by impacting commercial development and the residential quality of life. JTMUNI 128, at 11.

Heather Shank, Acting City Planner for the City of Concord, testified that construction and operation of the Project would be inconsistent with the following Land Use Sections of the City's Master Plan 2013:

- Protect and conserve important open space, environmentally sensitive areas and natural resources outside the Urban Growth Boundary.
- Promote orderly transition among land uses and separate or buffer incompatible uses to the greatest extent possible in order to limit or minimize undesirable impacts to adjacent land uses;
- Provide for the reservation of land areas of adequate size and in appropriate location for public facilities and utilities that would serve the future land uses.
- Improve and enhance the overall appearance and aesthetics of the community inclusive of architectural features, streetscapes, landscapes and signage.

JTMUNI 133, at 3. Ms. Shank asserted that the Project would be inconsistent with these purposes of the Master Plan because it would traverse through protected important open space.

JTMUNI 133, at 3. She also argued that the Project would fail to promote the orderly transition among land uses and would fail to separate or buffer incompatible uses to the greatest extent possible because, in part, it would be constructed in close proximity to residential and

commercial properties, *i.e.* McKenna's Purchase Association, Alton Woods, the Cobblestone Point Senior Village, and the Gateway Performance District. JTMUNI 133, at 4. Ms. Shank also argued that the Project's location would not be "appropriate" because: (i) the Project would be constructed within the right-of-way which accommodates significantly lower structures; and (ii) construction would entail a removal of vegetative buffers. JTMUNI 133, 4-6. Also, Ms. Shank claimed that the Project would have a negative effect on the City's aesthetics and would fail to improve and enhance the overall appearance and aesthetics of the community. JTMUNI 133, at 6.

Ms. Shank also argued that the Project would be contrary to the following goal set forth in the Housing Section of the Master Plan 2013: "[p]romote the maintenance and enhancement of existing and developing residential neighborhoods, and protect existing and developing residential areas from blighting influence and negative impacts that detract from their livability, quality, and aesthetics." JTMUNI 133, at 6. She asserted that the Project would not follow the following Housing Section policy recommendation: "[p]revent the intrusion of inappropriate non-residential uses into residential neighborhoods and protect neighborhoods from negative influences of adjacent non-residential uses, such as noise, light, traffic, and visual blight through regulation as well as the retention or installment of buffers between non-residential and residential uses." JTMUNI 133, at 7. Finally, Ms. Shank claimed that the Project would not comply with the vision of the Master Plan because Master Plan 2013 encourages a higher concentration of development within the Urban Growth Boundary and preservation of rural landscapes and scenic views outside the Urban Growth Boundary. JTMUNI 133, at 7. Ms. Shank identified the following Districts within the Urban Growth Boundary growth and development of which would be impacted by the Project: (i) Medium Density Residential

District; (ii) Gateway Performance District; and (iii) Office Performance District. JTMUNI 133, at 8-9. Ms. Shank asserted that the City of Concord is concerned that the Project would unduly interfere with the orderly development of the City of Concord. JTMUNI 133, at 9.

Ms. Matson and Ms. Bouchard also asserted that Concord's Gateway Performance District was established to provide for well designed, large scale commercial developments that "are expected to adhere to high standards for appearance in order to ensure that the gateways to the City are attractive and functional. Buffering and screening for adjacent neighborhoods are of concern for development at the edge of this District." JTMUNI 129, at 7. They opined that construction and operation of the Project would cause its aesthetics/visual impact to increase from "moderate" to "severe" and such impact would be inconsistent with the City's Zoning Ordinance.

The City of Concord's engineer, Edward L. Roberge, P.E., testified that the Project's permanent access roads would be contrary to the City's driveway and access requirements in the City's Zoning Ordinance. JTMUNI 131, at 5. He identified several provisions that would be violated by the Project: (i) width of driveways and roads would exceed 28 feet; (ii) the Project would be constructed with insufficient distance between driveways and/or intersections; and (iii) the Project would be constructed with insufficient frontage of the parcels being accessed by access roads. JTMUNI 131, at 5. He also stated that he is concerned that, if temporary access roads were not properly restored, they would be used by the public for unauthorized and unanticipated use. JTMUNI 131, at 7. In his supplemental testimony, Mr. Roberge identified a number of locations where the Project is inconsistent with the City's regulations:

- 41 Hoit Road – New access driveway would be too close to the intersection of Hoit Road and Mountain Road. Drive consolidation should be considered. Large area of clearing along Mountain Road for construction pad is not depicted as clearing. This

would remove the vegetative buffer between the house and mountain Road and could create unintended access.

- 56 Sanborn Road – New access driveway off of public road.
- 61 Sanborn Road – New house and residential driveway not shown on plans. House and residential driveway should be shown to properly evaluate location of new access driveway off of public road.
- Snow Pond Road – New access driveway off of public road.
- 183 Shaker Road and unaddressed parcel across the street – Three new access driveways off west side and two off east side of public road. Drive consolidation should be considered.
- 87 Oak Hill Road and unaddressed parcel across the street – Two new access driveways off west side and one off east side of public road. One of the access drives on the west side is shared with private residential driveway. Drive consolidation should be considered.
- 53 Appleton Street – New access driveway off of public road.
- 74 Appleton Street and 80 Appleton Street – Two new access driveways off of public road. Drive consolidation should be considered.
- Curtisville Road – Two new access driveways off of public road.
- 259 Portsmouth Street and 263 Portsmouth Street – Two new access driveways off north side and one off south side of public road. Drive consolidation should be considered. One of the driveways on north side is proposed on the existing City water tank access road.
- 241 Old Loudon Road – New access driveway off of public road.
- 146 Pembroke Road and 149 Pembroke Road – Two new access driveways off south side and one off north side of public road. Drive consolidation should be considered.
- 77 Regional Drive and 24 Industrial Park Drive – Two new access driveways off of public road adjacent to large commercial sites. The existing access to the 77 Regional Drive site from Industrial Park Drive could eliminate the need for the proposed Regional Drive access. Other access points through the 24 Industrial Park Drive site could also eliminate the need for the proposed Regional Drive access.
- 28 Industrial Park Drive and Chenell Drive – Two new access driveways off of public road.

- 25 Henniker Street and 51 Antrim Avenue – Two new access driveways off of end of public road.

JTMUNI 132, at 4-6.

Jan McClure and Kristine Tardiff, on behalf of the Concord Conservation Commission, testified about the City’s Conservation and Open Space Section of the Master Plan. JTMUNI

135. They stated that the Open Space Section of the Master Plan identifies the following conservation and open space goals:

- Develop a coherent interconnected system of permanently protected open spaces designed to provide areas for recreation, public service and safety, resource production, and the protection of sensitive environmental features.
- Foster the wise and proper development and management of the City’s land and water resources so as to ensure sustainable productive use of the same, while avoiding environmental degradation, personal injury, and property damage.
- Maximize the multiple use of open space to the extent that such use does not adversely affect the primary function of the open space.
- Maximize the opportunities for the citizens of Concord to have access to the public open space through linkage between the City’s villages and neighborhoods and the open space system.
- Protect and enhance surface and ground water quality, and maximize the potential for the use of these water resources as potable water supplies.
- Protect and enhance the air quality of the region.
- Preserve prime and significant agricultural soil for agricultural uses, and to encourage the retention and diversification of agricultural uses within the city.
- Encourage the use of best management practices of forest resources on both public and private land within the City in order to maintain a continuing, sustainable timber harvest from the same and to encourage multiple uses of forest resources.
- Retain habitat for the City’s indigenous species of wildlife, including migratory species and those species that have been identified as endangered, to provide an adequate area that would foster the perpetuation of these species, and allow for their movement through and within the City.

- Protect and maintain exemplary natural communities and rare plant species that have been identified within the City.
- Maintain and enhance scenic views and natural vistas from the City's roads and public properties where possible.
- Preserve open space within the Urban Growth Boundary to protect environmentally sensitive natural features, to provide non-structured recreational opportunities, and to serve as amenity features within neighborhoods.

JTMUNI 135, at 7-9. Ms. McClure and Ms. Tardiff claimed that the Project would be contrary to the Conservation and Open Space Section of the Master Plan because it would pass through lands that were conserved as open space or through lands that were considered priority areas for targeted conservation, *i.e.* the Soucook River Corridor, Broken Ground, Oak Hill – Snow Pond – Hot Hole Pond, and Northern East Concord. JTMUNI 135, at 9; JTMUNI 137, at 8. They also claimed that the Project would pass through, or otherwise impact, areas that have been identified as proposed linkage and connections for public access in the Broken Ground area. JTMUNI 135, at 10-11. Ms. McClure and Ms. Tardiff also asserted that the City of Concord Conservation Commission has significant concerns about the Project's potential impact on existing and proposed trail networks from Portsmouth Street where one of the construction pads would be located at the area designated for parking for the public to access the trail network. JTMUNI 135, at 11. They also asserted that construction of the Project would be contrary to the Open Space Plan because the Project would be partially located within the Residential Open Space District and it would exceed the height limitation causing an adverse impact on views in this district. JTMUNI 135, at 14-15. Construction of the Project would also require clearing of vegetative buffers which would be inconsistent with regulations applicable to this district. JTMUNI 135, at 15.

Ms. McClure and Ms. Tardiff also argued that the Project would be inconsistent with the goals of the City's Master Plan because it would adversely impact scenic views and natural vistas from the City's roads and public properties, including views from Oak Hill Conservation Area and Turtle Pond. JTMUNI 136, at 2.

Ultimately, Ms. McClure and Ms. Tardiff testified that Conservation Commission is concerned that construction and operation of the Project would unduly interfere with the orderly development of the City of Concord. JTMUNI 135, at 14.

David Jodoin⁹⁹, on behalf of the Board of Selectmen of Town of Pembroke, testified that the Project would cause "undue interference" with the orderly development of the Town because it would impact the rural character of the Town and properties adjacent to the right-of-way. JTMUNI 143, at 2. Mr. Jodoin also asserted that, at the 2014 Town Meeting, the residents of the Town of Pembroke voted against new overhead high voltage transmission lines and expressed their support for burial of the line within the Town. JTMUNI 143, Ex. A, B.

Stephanie N. Verdile, on behalf of the Planning and Building Department of the Town of Pembroke (original testimony) and on behalf of Town of Pembroke (supplemental testimony), argued that the Project would be inconsistent with orderly development of the Town of Pembroke. JTMUNI 146, at 2; JTMUNI 147, at 6. Ms. Verdile asserted that the Project would be contrary to the objectives and goals established by Pembroke's Master Plan, Site Specific Regulations and Zoning Ordinance. JTMUNI 146, Ex. A, at 5; JTMUNI 147, at 6. According to Ms. Verdile, construction and operation of the Project would be inconsistent with their objectives and goals. JTMUNI 47, at 6-9.

Ms. Verdile further claimed that the Project would be inconsistent with the purpose and intent of the Town's Site Plan Regulations that states as follows:

⁹⁹ Originally filed as pre-filed testimony of Justine M. Courtemanche. JTMUNI 143, 144.

§ 203-3. Intent.

The site plan review process recognizes that certain types of development and uses, even though generally suitable for a particular zoning district, may adversely affect the town's vested interests and the health, safety and general welfare of the public unless careful consideration is given to certain critical design elements. It is the intent of this chapter to provide a vehicle for review of the nature, size and impacts of proposed developments and changes of use.

§ 203-4. Purpose.

The purpose of these regulations is to protect the public health, convenience, safety and welfare; to provide for the safe and attractive development of the site; to provide for responsible and desirable growth; to prevent premature and uncoordinated development of land without the adequate provision of public services and facilities; to provide for the harmonious and aesthetically pleasing development of the municipality and its environs; to prevent development which may result in adverse environmental impacts; and to provide for the proper arrangement and coordination of streets within the site in relation to other existing or planned streets.

JTMUNI 146, Ex. A, at 1-2; JTMUNI 147, at 11-12. Ms. Verdile opined that the Project would violate the intent and purpose of the regulations because it would mostly be constructed within the R3 Zone. JTMUNI 147, at 12. Ms. Verdile further identified specific Site Plan Regulations that, according to her, the Project would not comply with: (i) preservation of natural features and amenities (§ 203-30); (ii) erosion and sediment control (§ 203-31); (iii) flood plain areas (§ 203-33); and (iv) areas of poor drainage (§ 203-35). JTMUNI 146, Ex. A, at 2-4; JTMUNI 147, at 13-14.

Ms. Verdile further argued that the Town of Pembroke's Master Plan specifically states that the "electric system in Pembroke is largely adequate and able to accommodate future growth along the major thoroughfares" and designates limited remote residential areas where upgrades

are needed. JTMUNI 146, Ex. A, at 4; JTMUNI 147, at 14-15. She asserted that the Project would not entail upgrades in the areas identified by the Master Plan. JTMUNI 146, Ex. A, at 2-4.

Ms. Verdile asserted that the Project would have a significant adverse visual impact on the Town's rural character and existing stone walls and the Range Roads by increasing the heights of existing structures from 41-97 feet to 50-130 feet and constructing new structures from 60 to 145 feet tall. JTMUNI 146, Ex. A, at 4-5; JTMUNI 147, at 9, 15-16.

Ammy Heiser, on behalf of the Conservation Commission for the Town of Pembroke, testified that the Commission has concerns about the Project's potential impact on the rural character of the Town and properties adjacent to the right-of-way. JTMUNI 149, at 1-2. Ms. Heiser opined that the Project would have an adverse impact on the Town's rural character, natural resources and wetlands. JTMUNI 149, Ex. A. She concluded that the Project would be inconsistent with the Town Master Plan goals of protection of water resources, mitigation of pollution sources and other threats to these resources, protection of wildlife habitat, wetlands and riparian areas and ensuring long-term protection to the Town's core rural areas and scenic resources. JTMUNI 149, Ex. A, at 3.

R. Andrew Robertson, on behalf of the Board of Selectmen for the Town of Deerfield, and Kate Hartnett, on behalf of the Deerfield Planning Board and Conservation Commission asserted concerns about the Project's potential impact on the rural character of the Town and properties located along the right-of-way. JTMUNI 152, at 2; JTMUNI 153, at 2. Mr. Robertson asserted that, during the 2013 Town Meeting, the residents of the Town voiced their opposition to the Project, as proposed, and voted in support of burial of the Project within the Town. JTMUNI 152, at 2-3. Ms. Hartnett further asserted that residents of the Town, once again, indicated their opposition to the Project during the 2017 Town Meeting. Ex. 155, at 6; Ex. 156.

Mr. Robertson further argued that construction and operation of the Project would be inconsistent with Deerfield land uses, as expressed in its Master Plan and Zoning Ordinance. JTMUNI 152, Ex. 1, at 1. Considering the Project's impact on the Town's aesthetics and rural character, Mr. Hartnett opined that construction and operation of the Project would be inconsistent with the following Master Plan's vision and guiding principles:

MASTER PLAN VISION: The Town of Deerfield, New Hampshire desires to maintain its character as a small, rural, but vibrant place with open space, natural beauty, and a strong sense of community. People live and move to Deerfield because of its rural and small town character, its quietness and privacy, its scenic qualities, and where a balanced mix of residents including age, economic abilities, education, professions and beliefs are valued and appreciated. These community qualities and values make our town a desirable and special place.

MASTER PLAN GUIDING PRINCIPLES:

- A well-managed town that controls its growth and development, keeping it in line with the existing character, appearance and beauty of the town as well as the town's tax base and ability to provide necessary services and facilities, while protecting and enhancing its existing community, cultural, educational and natural resources
- An attractive town that values its history, environment, scenic beauty, open space, clean water, clean air, and wildlife and seeks to protect these and other community resources through managed growth and careful planning.

JTMUNI 153, Ex. 1, at 2.

Ms. Hartnett opined that construction and operation of the Project would be inconsistent with the following specific Deerfield planning statements:

- Maintaining the existing rural character where the natural landscape predominates over the built environment;
- The intent to minimize oil and other energy imports;

- Keeping more money in the local and regional economy by using more local sources of energy;
- Diversifying energy supplies to include more local supply such as wood and renewables for energy security;
- A desire for a quiet town with minimal noise; and
- The recognition that the best strategy to meet energy need is with energy efficiency, as the cleanest, cheapest, most reliable available resources.

JTMUNI 153, Ex. 1, at 3. Ms. Hartnett also opined that construction of the Project in the Agricultural-Residential Zone of Deerfield would be contrary to the Town's Zoning Ordinance.

JTMUNI 153, Ex. 1, at 3. She opined that it is unlikely that the Project would qualify for variance of its use in this zone. JTMUNI 153, Ex. 1, at 3.

Members of the Boards of Selectmen of the Towns of Pittsburg, Clarksville and Stewartstown reported that these municipalities and their residents do not support construction and operation of the Project. *See CS Group 1 North's Post Hearing Memorandum, at 3.* They contend that instead of bringing the Project above ground in Pittsburg from an underground siting across the border in Canada, the Project should remain underground in Pittsburg, Clarksville and Stewartstown. *See CS Group 1 North's Post Hearing Memorandum, at 37.*

Members of the Boards of Selectmen of Towns of Pittsburg, Clarksville and Stewartstown claimed that their municipalities have exclusive jurisdiction over licensing of municipal roads for any use by utilities under RSA 231:161. *See CS Group 1 North's Post Hearing Memorandum, at 16; see also CS Group 1 North's Post Hearing Memorandum, at 32-36.*

George Sansoucy, on behalf of the Towns of Northumberland, Whitefield, Littleton, Sugar Hill, Franconia, Woodstock, Plymouth, Bridgewater, Bristol, New Hampton, Concord, Pembroke and Deerfield and Ashland Water & Sewer Division expressed his disagreement with

the testimony of Mr. Varney. SAN 1, at 31. Mr. Sansoucy opined that the magnitude of the Project's line is much greater than the magnitude of currently existing lines. SAN 1, at 31.

(6) Forest Society

The Forest Society argued that, contrary to Site 301.09(a)(2), the Applicant failed to identify land uses with which the Project would be inconsistent. *See* Forest Society's Post-Hearing Memorandum, at 60. The Forest Society argued that the Applicant considered the Project's impact on land use in host communities only and failed to analyze the impact on land use in all communities that would be affected. *See* Forest Society's Post-Hearing Memorandum, at 63. The Forest Society argues that Mr. Varney's belief that the Project is consistent with land use because it would be constructed within a currently existing right-of-way is contrary to New Hampshire law stating that a great increase in the size or scope of a use can affect the analysis of whether the use is still continuing use. The Forest Society argued that Mr. Varney failed to analyze the Project's impact on second homes and failed to differentiate and analyze the impact on different recreational activities, *i.e.* snowmobiling, fishing, hiking, *etc.* *See* Forest Society's Post-Hearing Memorandum, at 75, 78. The Forest Society further asserted that Mr. Varney failed to adequately ascertain the Project's impact on conservation lands and simplified it by stating that the lands would continue to be used for conservation purposes after construction. *See* Forest Society's Post-Hearing Memorandum, at 92-93. Finally, the Forest Society criticized the accuracy of land use maps attached to Mr. Varney's report. *See* Forest Society's Post-Hearing Memorandum, at 96.

(7) Individual Intervenors

David Van Houten testified that the Project would alter the rural residential character of his property and surrounding properties by constructing additional roads and attracting recreational motor vehicles drivers. DWBA 8, at 3.

Bethlehem-Plymouth Abutting Property Owners Group of Intervenors¹⁰⁰ asserted that underground section of the Project in Easton and Franconia would be located in close proximity to a number of private properties. APOBP 1, at 1. They argued that the Project and associated vegetation clearing would alter the character of this area and its land use. APOBP 1, at 5.

Bruce A. Ahern argued that section of the Project that would be constructed under Route 3 in Plymouth and that would cross his property in Plymouth would alter land use of his property. APOBP 3, at 1.

Jo Anne Bradbury, Robert Cote, Bruce Adami, Erick Berglund and Kathleen Berglund asserted that the Project would have a negative impact on the Town of Deerfield's rural eclectic character, would alter its rural landscape and would have a negative impact on Deerfield and the region. DFLD-ABTR 2, at 8; DFLD-ABTR 32, at 5-7; DFLD-ABTR 36, at 4.

Ms. Menard, on behalf of Menard Forest Family Partnership, testified that the Project would cross 229 acres of forested land that were transferred by conservation easement deed to the Forest Society by her mother. DFLD-ABTR 8, at 1. She opined that construction of the Project is inconsistent with the conservation and preservation usage of this real estate. DFLD-ABTR 8, at 1-2.

Philip and Joan Bilodeau testified that they reside at 140 Nottingham Road in Deerfield. BILODEAU 1. They asserted that their residence is located in a rural section of Deerfield.

¹⁰⁰ Eric and Barbara Meyer from Easton, Robert Thibault from Easton, Russell and Lydia Cumbee from Franconia, Walter Palmer and Kathryn Ting from Franconia, Carl and Barbara Lakes from Easton, Bruce Ahern for Plymouth and Peter and Mary Grote from Franconia.

BILODEAU 2, at 1-2. They opined that construction of the transition station would have a negative effect on residential rural usage and enjoyment of their property. BILODEAU 2, at 2-3.

Maureen Quinn testified that she resides and owns real estate located in the historic Deerfield Parade section of Deerfield approximately one mile northeast of the intersection of Nottingham Road and Route 107 (North Road). AD-N-ABTR 1, at 2. She asserted that the Project's towers would be visible from her property and that the Project would change the character and use and enjoyment of her real estate. AD-N-ABTR 1, at 2-3.

Thomas and Madelyn Foulkes argued that, if approved and constructed, the Project would alter Deerfield's land use and character and would make it easier for other transmission projects to be introduced in the region. AD-N-ABTR 16, at 3-4.

Heather Townsend, Maggie Mumford and Charlotte Crane, on behalf of the Webster Family Group of Intervenors, asserted that members of their family own more than 200 acres on the western bank of the Pemigewasset River in Bridgewater, New Hampshire. AD-N-ABTR 28, at 1. They asserted that, for the last few decades, this property was primarily committed to forest, was in current use and, with the exception of properties occupied by residences, was used by the general public for recreational activities. AD-N-ABTR 28, at 2-3. The Webster Family Group of Intervenors argued that the Project would alter their property's current recreational use by introducing unappealing industrial towers. AD-N-ABTR 28, at 1-3.

b. Subcommittee Deliberations

In considering whether the Project will unduly interfere with the orderly development of the region, the Subcommittee is required to give "due consideration" to the views of municipal and regional planning commissions and municipal governing bodies. *See* RSA 162-H:16, IV (b). The Subcommittee is not bound by the views of municipal and regional planning bodies. The

statutory site evaluation process pre-empts local decision-making in the siting of jurisdictional energy facilities. The pre-emptive authority of the Site Evaluation Committee does not diminish the importance of considering the views of municipal and regional planning agencies and municipal governing bodies. Rather, the Subcommittee must listen to and consider the views expressed by municipalities. The predominant view of local governing agencies in this docket is quite clear. Thirty (30) of the thirty-two (32) municipalities along the route have, in one way or another, expressed an opinion that the Project will interfere with the orderly development of the region. Twenty-two of those communities have intervened in the process and presented evidence and cogent arguments that the construction and installation of the Project will unduly interfere with the orderly development of the region. The Applicant's argument that the Project is consistent with local, regional, and statewide long-range plans because, in most instances, those plans do not directly address construction and operation of the Project, is directly contradicted by the testimony of municipal officials. The Subcommittee finds the views expressed by those municipalities to be generally persuasive.

We note that, in addition to the large number of municipalities that expressed concerns about the orderly development of the region, regional planning agencies also weighed in on the issue. The North Country Council submitted public comments expressing its concern about the Project's impact on aesthetics and criticized the Applicant's assessment of the visual impacts. They opined that the Project should be buried. While Mr. Varney acknowledged that he received information about the North Country Council's concerns, neither his report nor his testimony addressed them. *See* App. 1, Appx. 41, at 13-14; App. 20; App. 96. It was not until cross-examination that he shared the concerns expressed to him by the North Country Council. Tr., Day 35, Afternoon Session, 09/18/2017, at 37-39.

The Subcommittee is concerned that the Applicant's representatives would take the time to meet with local planning agencies and not solicit their views on the Project. If done early in the process, understanding local views could have resulted in a less adversarial process and perhaps an alternative route or design that was responsive to the concerns expressed by planning agencies.

In addition to considering the views of municipal and regional planning agencies and municipal governing bodies, the Subcommittee must consider the "extent to which the siting, construction and operation of the proposed facility will affect land use." N.H. Code Admin. Rules, Site 301.15(a). The Applicant's primary claim about land use, as expressed by Mr. Varney, is that the majority of the Project will be constructed in an existing transmission right-of-way corridor.¹⁰¹ Mr. Varney testified that construction of transmission lines in existing corridors is a sound planning principle. Tr., Day 37, Morning Session, 09/21/2017, at 18. Mr. Varney is correct, but he fails to note that it is not the only principle of sound planning nor is it a principle to be applied in every case.

Mr. Varney testified that increased vegetation and buffer removal, increases in structure heights, usage of different types of structures, the addition and relocation of existing structures and the reconfiguration of existing conductors required for the construction of the Project, would not interfere with the prevailing land uses because it all would be done within the existing right-of-way. When tested on cross-examination by the Subcommittee on this point, Mr. Varney opined that even the installation of 300 foot towers would not adversely affect or change the land use. Tr., Day 35, Afternoon Session, 09/18/2017, at 43-47; Tr., Day 40, Morning Session, 09/26/2017, at 131-135. In essence, Mr. Varney suggests that as long as a corridor is used for

¹⁰¹ This claim is technically correct, but it should be noted that the Project includes 32 miles of new aboveground right-of-way and 60 miles of underground installation in roads where there are no pre-existing transmission lines and certainly no existing corridor for transmission lines.

transmission lines, there can never be a “tipping point” where the effect of transmission infrastructure on the land use becomes too intense. We disagree. Over-development of an existing transmission corridor can impact land uses in the area of the corridor and unduly interfere with the orderly development of the region. Increases in the use of a transmission corridor require increased maintenance requirements, increased access requirements, and increased readiness of emergency response personnel. Access to transmission corridors is ultimately obtained from publicly maintained roads and thoroughfares. Unsightly transmission corridors or infrastructure within corridors can impact real estate development in the surrounding area. Increased maintenance, repair and emergency operations require the use of heavy machinery and trucks placing the continued use of lands for agricultural purposes at risk. A highly developed corridor may discourage use of the corridor and surrounding lands for recreational purposes.

Mr. Varney’s testimony made no accommodation for differences between communities along the proposed route. The Project would cross different communities with different land uses. The Project would have different configurations and different structures in these communities. Its level of consistency or inconsistency with existing land uses in these communities would be different. Mr. Varney made no effort to identify where the impacts of the Project may be small or large. The only criterion he appears to have applied is whether the Project is to be located in an existing transmission corridor.

New Hampshire law recognizes that land uses can change in nature and intensity. This issue arises most frequently with regard to the expansion of non-conforming uses under local zoning ordinances. A land use that pre-exists the adoption of a zoning ordinance or was otherwise allowed by law cannot be substantially enlarged or expanded unless “the expansion is

a natural activity, closely related to the manner in which a piece of property is used at the time of the enactment of the ordinance creating the nonconforming use." *New London Land Use Assoc. v. New London Zoning Bd. of Adjustment*, 130 N.H. 510, 516 (1988). In determining whether an expansion of non-conforming use is allowable, courts consider: (1) the extent to which the use in question reflects the nature and purpose of the preexisting nonconforming use; (2) whether the use at issue is merely a different manner of using the original nonconforming use or whether it constitutes a use that is different in character, nature, and kind; and (3) whether the use will have a substantially different effect upon the neighborhood. *See Dovaro 12 Atlantic, LLC v. Town Of Hampton*, 158 N.H. 222, 228 (2009).

While not legally required to apply the three prong analysis, we find it to be informative in the context of this case. There are areas along the route where the introduction of the Project with its increased tower heights and reconfiguration of existing facilities would create a use that is different in character, nature and kind from the existing use. There are places along the route where the Project would have a substantially different effect on the neighborhood than does the existing transmission facilities. By way of example, the Towns of Whitefield and Deerfield each would bear a substantial expansion of the use of the corridor. In many of the smaller rural communities along the route, transmission towers that currently sit below the tree canopy would be augmented by towers that range from 80 to 140 feet tall. Areas such as Turtle Pond in Concord, where forty-foot wooden poles carry an existing line, would be subject to the installation of large industrial metal structures towering above the pond. McKenna's Purchase Association, a condominium community in Concord, would lose a substantial vegetative and earthen buffer that would expose the existing transmission line, the Project and the commercial/industrial zone on the opposite side of the right-of-way to the condominiums. In

New Hampton, the proposed structures would be taller than the currently permitted 35 feet structures and would entail construction of one of the structures within 35 feet of private roads. In Pembroke, the Project would entail construction of 60-145 feet tall structures as opposed to the existing 41-97 feet tall structures. The overdevelopment of the right-of-way is also apparent from the plans requiring significant reconfiguration and reconstruction of existing infrastructure in order to accommodate the infrastructure required by the Project. This includes a significant increase in the height and relocation of the structures for the already existing 115 kV line within much of the existing right-of-way. The Applicant failed to demonstrate by a preponderance of evidence that proposed expansion of the right-of-way use would not interfere with the orderly development of the region.

The Applicant argues that Mr. Varney's research, consisting of a review of local land uses, master plans and some zoning ordinances supports a conclusion that the Project will not adversely affect land uses in the region. *See Applicant's Post-Hearing Memorandum*, at 51-52. While Mr. Varney did review relevant master plans and some local ordinances, he did little in the way of applying the details of the Project to the plans and ordinances. For the most part Mr. Varney determined that there would be no effect on land uses because in most master plans the existing right-of-way and/or the presence of the existing transmission line are not mentioned. App. 1, Appx. 41, at 30; Tr., Day 37, Morning Session, 09/21/2017, at 51-52. When cross-examined about the portions of specific master plans that are relevant to the Project, Mr. Varney diminished the importance of master plans because they contain "broad" visions and goals with respect to community aesthetics and efforts to preserve the rural landscape. *See e.g.* Tr., Day 37, Morning Session, 09/21/2017, at 51-52. The Applicant cannot have it both ways. Master plans cannot be both too specific and too general. We recognize that master plans represent the

considered views of the communities and should not be disregarded or minimized in importance. We agree with the municipalities in this case that, given the magnitude of this Project, more consideration of the provisions of master plans and ordinances was required. We agree with the argument set out on pages 36 through 58 of the Post-Hearing Memorandum Filed by Municipal Groups 1 South, 2, 3 South and 3 North. Given the nature of the master plans and local ordinances along the Project's route, the Project would have a large and negative impact on land uses in many communities that make up the region affected by the Project.

Mr. Varney and the Applicant did not sufficiently address the impact on land use in the underground portions of the proposed route. We recognize that the public roads under which the Project would run would remain public roads. However, the Applicant directed little, if any, attention to the effects that the underground portion of the Project may have on the surrounding land uses. It is possible that there would be no negative effect, but the record contains little to assist us in making that determination.

Land use concerns in the far northern part of the proposed route fall into two categories: (i) the Wagner Forest; and (ii) the new right-of-way outside of the Wagner Forest. The Subcommittee understands that the Wagner Forest is a working forest that is currently traversed by logging roads, skidder paths and clear cuts. The owners of the Wagner Forest have leased the right-of-way property to the Applicant and appeared as a party in these proceedings urging the Subcommittee to issue a Certificate. Given the nature of the Wagner Forest, we believe that the proposed right-of-way site would be consistent with the land uses in that region.

The remaining lands in Pittsburg, Clarksville, and Stewartstown would see a combination of overhead and underground transmission line installation. The Applicant has failed to establish that the Project would be consistent with the land use in this area. The underground construction

is problematic because it involves construction under town roads that are extremely narrow and presently not paved. Closure of the roads in this area for any reason during construction or operation of the Project would damage recreational, agricultural, and commercial pursuits in the area.

The Applicant argued that the Project would be consistent with land uses in this area because this area is sparsely populated. We disagree with the Applicant's reasoning. The Project does not become consistent with residential, agricultural, and recreational land uses simply because less people enjoy such uses. The effect of the Project on these people and use of their lands cannot be disregarded. The Applicant did not provide any testimony indicating that the Project would be consistent with residential, agricultural, and commercial uses in these areas. On the other hand, we received testimony and public comments indicating that the Project would be inconsistent with residential, agricultural, and recreational land uses in this section of the North Country.

In the context of this Project, the Applicant has not provided a satisfactory means and method to regulate the construction, maintenance and operation of the parts of the Project proposed to be constructed underneath municipal roadways. The Applicant argues that the Committee preempts local regulation. It first argued that we should delegate such authority to the Department of Transportation. The DOT advised us that it does not want and cannot accept that authority. The Applicant agreed that simply allowing the construction in the local right-of-way without some regulation is "unworkable." *See Applicant's Post-Hearing Memorandum*, at 23. The Applicant also argued that a Certificate with conditions requiring town approval and regulation is "unworkable." *See Applicant's Post-Hearing Memorandum*, at 23. That appears to leave two options: (i) the Site Evaluation Committee with its single staff person oversees and

regulates the construction, operation, and maintenance of the line within the municipal rights-of-way; or (ii) the Site Evaluation Committee employs a contractor to do so. Both options are within the authority of the Committee, but the Applicant provided no compelling reason why we should adopt either. In this case, each option would unduly interfere with the orderly development of the region.

8. Orderly Development – Conclusion

We find that the Applicant failed to establish that the Project would not unduly interfere with the orderly development of the region.

The orderly development issue is identified in RSA 162-H:16 as one of the essential elements of the process. To receive a Certificate, an Applicant is required to establish that, “[t]he 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.” RSA 162-H:16, IV(b).

As set forth in detail in the discussion above, the orderly development prong of the Site Evaluation Committee’s review has a number of elements. Those elements are set out in the Committee’s rules, which require consideration of a proposed project’s effects on land use, employment, and the economy of the region; the proposed project’s decommissioning plan; and the views of municipal governments and planning commissions. *See* N.H. Code Admin. Rules Site 301.15.

We do not doubt that the Applicant has sufficient resources to assure that eventual decommissioning of the Project would be successfully undertaken subject to certain conditions. Accordingly, we focused on the other elements in Site 301.15.

More specific guidance for reviewing those elements is set forth in Site 301.09. Relevant considerations concerning a project's effects on the economy include:

- (1) The economic effect of the facility on the affected communities;
- (2) The economic effect of the proposed facility on in-state economic activity during construction and operation periods;
- (3) The effect of the proposed facility on State tax revenues and the tax revenues of the host and regional communities;
- (4) The effect of the proposed facility on real estate values in the affected communities;
- (5) The effect of the proposed facility on tourism and recreation; and
- (6) The effect of the proposed facility on community services and infrastructure

N.H. Code Admin. Rules Site 301.09(b).

We acknowledge that the Project would have a somewhat positive effect on the regional economy, employment, and real estate taxes. The impact on the economy and employment during operations of the Project is largely dependent on savings from the wholesale electricity market. The Applicant has not demonstrated that savings from the Capacity Market will occur; or if they do occur, that they will be as large as the Applicant's expert said they would be. While benefits to the economy and employment would be positive, we cannot find they would be as large as the Applicant predicts. The uncertainty regarding Capacity Market savings affects other parts of the economic analysis, because those savings are the basis for the Applicant's projections about employment and other economic activity along the route of the Project and elsewhere in the State and the rest of New England.

The situation with the Applicant's showing on other parts of the economic analysis had more profound problems than that. Regarding tourism, we did not find the Applicant's witness regarding the effects of the Project to be credible. His report and his testimony provided us with no way to evaluate the Project's tourism effects and no way to fashion conditions that might

mitigate those effects. Regarding property values, we similarly did not find credible the Applicant's expert's opinion that there would be no discernable effect on property value. The Applicant's proposed compensation plan was, quite plainly, inadequate, but because the Applicant's analysis of the effects was also inadequate, it was impossible for us to even begin to consider what an appropriate compensation plan might require. Regarding land use, the Applicant failed to demonstrate by a preponderance of the evidence that the Project would not overburden existing land uses within and surrounding the right-of-way and would not substantially change the impact of the right-of-way on surrounding properties and land use.

In determining that the Applicant has not met its burden, we considered the views of municipal and regional planning commissions and municipal governing bodies as we are required to do by the statute. In considering municipal views, we are not required to give deference. Here, the views expressed by the intervening municipalities, and the comments expressed by local and regional planning agencies, the town meeting warrant articles, and other municipal comments were relevant to the issues, thoughtful, and consistent. The overwhelming majority of those views and comments were vehemently opposed to the Project.

Based on the testimony and evidence presented, and after due consideration has been given to views of municipal and regional planning commissions and municipal bodies, we find that the Applicant failed to carry its burden of proof and failed to demonstrate by a preponderance of the evidence that the Project would not unduly interfere with the orderly development of the region.

VI. DENIAL OF APPLICATION

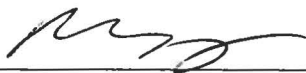
After seventy days of evidentiary hearings where we heard from 154 witnesses and reviewed more than 2000 exhibits, we cannot find that the Applicant has met its burden of proof.

The Applicant has failed to prove by a preponderance of the evidence that the site and facility, as proposed, will not unduly interfere with the orderly development of the region. In coming to this conclusion, we considered all relevant information regarding the proposed Project, including potential significant impacts and benefits.

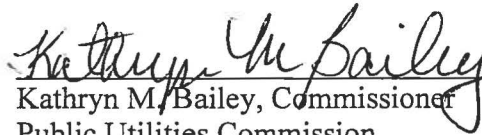
In order to issue a certificate, this Committee would have to find four things: (i) the Applicant has adequate financial, technical, and managerial capability to assure construction and operation of the Project in continuing compliance with the terms and conditions of the Certificate; (ii) the site and Project 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; (iii) the site and Project will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety; and (iv) issuance of a certificate will serve the public interest. *See* NH RSA 162-H:16, IV. As we concluded that the Applicant did not meet its burden in demonstrating that the Project would not unduly interfere with the orderly development of the region, we could not grant a Certificate even if the Subcommittee were to find in favor of the Applicant on the remaining three prongs. There is, therefore, no need to go further.

The Application for a Certificate of Site and facility is **DENIED**.

SO ORDERED this thirtieth day of March, 2018.



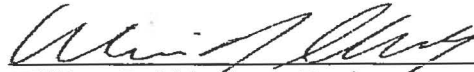
Martin P. Honigberg, Presiding Officer
Site Evaluation Committee
Commissioner and Chair
Public Utilities Commission



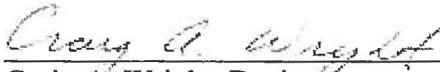
Kathryn M. Bailey, Commissioner
Public Utilities Commission



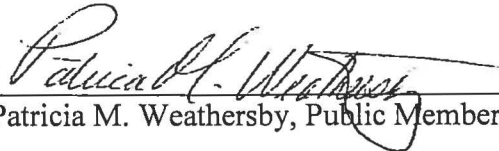
Christopher S. Way, Designee
Deputy Director
Division of Economic Development
Department of Business and Economic Affairs



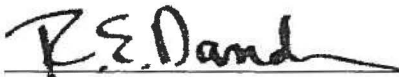
William J. Oldenburg, Designee
Assistant Director of Project Development
Department of Transportation



Craig A. Wright, Designee
Director
Air Resources Division
Department of Environmental Services



Patricia M. Weathersby, Public Member



Rachel E. Dandeneau, Alternate Public
Member