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October 26, 2017

Via Hand Delivery and Electronic Mail
Rene Pelletier, PG
Assistant Director
NH Department of Environmental Services – Water Division
29 Hazen Drive, PO Box 95
Concord, NH 03302-0095

Re: NH SEC Docket No. 2015-04 – Seacoast Reliability Project

Dear Mr. Pelletier:

I represent the Town of Newington in the above-captioned docket which is presently pending before the New Hampshire Site Evaluation Committee ("NH SEC"). Newington understands that as part of the NH SEC process, the Water Division is currently reviewing Eversource's environmental permit applications and additional information provided by the Town of Durham and Eversource. In connection with this review, the Town of Newington respectfully requests that the Water Division consider the enclosed documents, *i.e.,* Prefiled Direct Testimony of Denis J. Hebert, Chairman of the Newington Planning Board, and Attachment DJH-7 entitled "NH/VT Transmission System Solutions Study Update." Both of these documents were previously filed with the NH SEC and provided to the parties in the above-captioned docket.

In particular, Newington respectfully asks that the Water Division take note of the discussion of the "Gosling Road Autotransformer Alternative" contained in pages 15 through 20 of Mr. Hebert's Prefiled Direct Testimony. As that testimony indicates, the Gosling Road Autotransformer Alternative was ranked higher by ISO-New England than the currently configured Seacoast Reliability Project, but was rejected due to cost. As the testimony also states, the Gosling Road Autotransformer Alternative would completely avoid the construction of new high voltage transmission lines in Little Bay.

Please feel free to contact me if you have any questions about the enclosed documents. Thank you for your consideration of them.

Very truly yours,

Susan S. Geiger

Enclosures
cc: Service List (electronic mail only)

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THE STATE OF NEW HAMPSHIRE

BEFORE THE

SITE EVALUATION COMMITTEE

DOCKET NO. 2015-04

Application of Public Service Company of New Hampshire

d/b/a Eversource Energy

For a Certificate of Site and Facility

PREFILED DIRECT TESTIMONY OF DENIS J. HEBERT

ON BEHALF OF THE TOWN OF NEWINGTON

INTRODUCTION/OVERVIEW

Q. Please state your name and your address.

A. Denis J. Hebert, 20 Gundalow Landing, Newington, New Hampshire.

Q. Please describe your educational background and employment experience.

A. I hold a Bachelor of Science Degree in Electrical Engineering from the University of New Hampshire. I spent 34 years in the United States Air Force and Air National Guard. I rose to the rank of Lieutenant Colonel and held positions of The Base Engineering Commander and The Base Fire Marshal at Pease Air Force Base. During my career, I was responsible for the design, construction and final acceptance for several large projects including the Base Jet Fuel Bulk Storage Tanks, Jet Fuel Truck off loading and on loading stations, Jet Fuels pump house and two mile underground fueling system (which included 12 aircraft fueling stations, diesel and gasoline fuel truck off loading station), vehicle fuel stations, an 80 million BTU central heat plant (natural gas or #6 fuel) and base wide heating distribution system, Base 34.5kV electrical substation and underground electrical distribution system, several office type buildings, fire station, energy projects and many other civil engineering projects too numerous to mention here.

I retired from the Air Force in December of 2008 and thereafter was employed by the United States Navy as a Planner for the overhaul of electrical systems on submarines until May 2015. I am presently working as a volunteer for the Town of Newington to assist the Town in evaluating the impacts of the Seacoast Reliability Project.

Q. Do you hold any positions in the Town of Newington?

A. I am currently the Chairman of the Newington Planning Board and have held that position since 2002. I have been a member of the Newington Planning Board for approximately 21 years.

Q. Please provide a brief description of the occupational and experiential background of some of the other members of the Newington Planning Board.

A. -Christopher Cross is an electrical engineer with a Master's of Science in Electrical Engineering, pilot and retired member of the United States Air Force. He has been a member of the Newington Planning Board for over 25 years. He recently retired from the Air Force as an Electrical Engineer.

-Jack Pare holds a Master's Degree in Business with an undergraduate focus on hydrology and geology. He has been on the Newington Planning Board for approximately 15 years.

-Peter Welch is a retired professional engineer who holds a Bachelor of Science degree in civil engineering and is a Member of the American Society of Civil Engineers. He has 40 years of experience in civil design and construction, including oversight of Northeast Regional Waste to Energy and three hydroelectric projects, two river remediation projects and other projects with costs totaling more than one billion dollars.

-Bernie Christopher is a real estate developer in the Commonwealth of Massachusetts. He has been on the Newington Planning Board for approximately 6 years.

Q. Are you familiar with the Application filed by Eversource regarding the Seacoast Reliability Project that is the subject of this docket before the New Hampshire Site Evaluation Committee?

A. Yes. On behalf of the Town of Newington, I have been involved with the Seacoast Reliability Project ("SRP" or "the Project") since November of 2013 when the Town received a letter from Eversource informing us about the Project. Since that time, I have been following the progress of the Project's development and have met several times in person and by phone with representatives of Eversource to discuss the Town's questions and concerns. I have reviewed the Application and Amended Application and have attended some of the technical sessions with the Applicant's witnesses.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide the views of Newington's governing body (*i.e.* its Board of Selectmen) and its planning body (the Newington Planning Board) on the Project, along with the reasons underlying those views.

Q. Please provide a brief summary of your testimony.

A. My testimony explains why the Seacoast Reliability Project ("SCRP" or "the Project") will unduly interfere with the orderly development of the region and is not in the public interest. My testimony also describes how the Project will have unreasonable adverse effects on aesthetics and historic sites in some portions of the Town of Newington, and also expresses the Town's concerns about the Project's impacts on the natural environment and water quality. In

addition, my testimony discusses Newington's concerns about the impacts of the Project's construction and construction schedule insofar as they will have unreasonable adverse effects on public safety. Lastly, my testimony includes suggested Certificate conditions, chief among them being that if the New Hampshire Site Evaluation Committee ("Committee" or "SEC") decides to issue a certificate for the Project, the Committee should require that Eversource bury the transmission line in the current distribution line easement in all of the portions of the Residential and Historic Districts in Newington in which the transmission line will be located.

ORDERLY DEVELOPMENT OF THE REGION

Q. Please describe the Town of Newington's physical character, including how the Town has been developed over the years.

A. Newington is located in southeastern New Hampshire with a population of approximately 755. Its municipal boundaries encompass approximately 5,675 acres or 8.9 square miles. Newington is bounded to the west by the Great Bay, northwest by Little Bay and northeast by the Piscataqua River which comprises a substantial portion of New Hampshire's only deep water port.

Newington's Zoning Ordinance, originally adopted in 1951, regulates the location and use of buildings, structures, land and water areas for trade, industry, residence and other purposes. The Zoning Ordinance identifies the following Districts: Residential; Office; Commercial; Marina; Industrial; Waterfront Industry and Commerce; Historic; Shattuck Way; Pease Tradeport; and Natural Resource Protection. There is also a Wetlands Overlay District. These Districts are shown on the attached map labeled **Attachment DJH-1**.

Newington has several historic landmarks and architecture, and archeological sites and has taken great care to protect them. The 110-acre Old Town Center Historic District is listed on the National Register of Historic Places and features the oldest Town Forest (1640) in the United States, an eighteenth century parsonage, a nineteenth century Town Hall, the 1892 Langdon Library, the oldest New Hampshire meetinghouse (1712) in continuous use, and a row of horse sheds behind the meetinghouse that were once commonplace, but are now quite rare.

Despite the town's comparatively small land area, Newington has more publicly owned conservation land than any other municipality in southeast New Hampshire. *See* **Attachment DJH-2**. Approximately 26% of Newington's land area is protected open space. Protected tracts include the 120 acre Fox Point which juts far into Little Bay, and the spectacular 1,100 acre Great Bay National Wildlife Refuge which accounts for six miles of shoreline along the Great Bay Estuary.

Newington is a host community to a great deal of energy and other infrastructure that provides regional benefits. Newington's Industrial Districts host two electric generating facilities, a liquefied petroleum gas facility (SEA -3), three major tank farms (63 tanks with a combined capacity of 3.1 million barrels), and several other industrial operations. In addition, for several years, Pease Air Force Base controlled approximately half of Newington's land area strictly for federal military purposes. That land was taken by the federal government by eminent domain. When that taking occurred, the electric distribution line formerly located on that property was moved to its existing location within the distribution line easement held by Eversource (*i.e.* the proposed location for the Project in Newington). My understanding is that one of the conditions attached to the taking of private Newington land for the Pease Air Force

Base was that if Pease ever ceased operating as an Air Force Base, the land would revert to its original owners. However, that did not occur. With the decommissioning of Pease as an Air Force Base in 1991, the Air Force Base property in Newington came under the control of the State of New Hampshire rather than reverting to the prior private landowners.

The New Hampshire Department of Transportation ("NHDOT") has increased the amount of land it owns in Newington with the expansion of the Spaulding Turnpike (151 acres) and recently acquired another 18 acre parcel of prime Office District property to build a new NHDOT maintenance facility. All of these properties are exempt from Town property taxes but they still require Town services such as water, sewer, police and fire department.

Because of extensive infrastructure and other industrial, commercial and state development, as well as open space preservation, there is very little residential land remaining in Newington. Excluding Pease and the Great Bay National Wildlife Refuge, Newington's land area consists only of 4.7 square miles, and a large portion of that area is zoned for nonresidential districts. Approximately 1.5 square miles is for residential use, and much of this is wetlands and conservation land. Newington has taken great care to protect what's left of its residential and historic areas. Newington believes that it is critical that the Committee consider these factors and examine the Project in this geographical context when assessing the Project's impacts on the orderly development of the region.

Q. Has Newington adopted a Master Plan?

A. Yes. Newington has adopted a Master Plan for 2010-2020. The "Development Policies" section of the Master Plan states that with respect to specific land development proposals, the

development policies represent the official position of the Town of Newington. A copy of the Master Plan Development Policies is attached to my testimony as **Attachment DJH-3**.

Q. Do any of the Master Plan's Development Policies apply to the Seacoast Reliability Project?

A. Yes. The very first Development Policy stated in the Master Plan is that "Newington's rural residential character should be preserved" and that this Policy "is central to the Master Plan." The stated purpose of this policy is "simply to ensure that the quality of life in Newington's residential areas is protected from incompatible uses."

Q. Does the Newington Master Plan express the Town's views on whether a high voltage electric transmission line such as that proposed by the Seacoast Reliability Project is a property use that is compatible with residential use?

A. Yes. The Master Plan states that an electric transmission line is generally viewed as incompatible with residential property use. The Public Utilities Section of the Master Plan contains a subsection entitled "Utility Easements." That subsection draws a distinction between electric distribution and transmission lines. It states that "[w]hile electric distribution lines are needed to power today's residences, electric transmission lines are generally viewed as uses incompatible with residential uses." A copy of the Utility Easements Section of the Master Plan is attached to my testimony as **Attachment DJH-4**.

Q. Are there any other Newington Master Plan Development Policies that are relevant to the Project?

A. Yes. Because the Project will be physically located within and on the shores of Little Bay, Policy Eleven applies. That Development Policy states that the shorelines of Great Bay and Little Bay should be protected. In addition, because the Project will be located in the Newington Historic District which is listed in the National Register of Historic Places, Development Policy Twelve applies. That Policy states that Newington seeks to ensure the preservation of the Town's historic resources. In addition, Development Policy Nine encourages the establishment of conservation areas to protect wetlands, forest, agricultural land and open space because of the residents' "strong interest in protecting natural resources."

Q. Are there any other Master Plan or Newington Zoning Ordinance Provisions that are relevant to the Project?

A. Yes. All of the roads in Newington located west of the Spaulding Turnpike and north of the Newington/Greenland town line have been officially designated by the Town as "scenic roads." *See* Town of Newington Zoning Ordinance, Article IV, General Provisions, Section 9, "Scenic Roads," p. Z-17 (copy attached to this testimony as **Attachment DJH-5**). Newington's Master Plan, Section 4, "Historic Resources," p. 20 (copy attached to this testimony as **Attachment DJH-6**) provides that the "historic character of Newington's rural roads should be respected" and that work near these roads "should be carefully monitored" and that the above-referenced Scenic Road Ordinance "should be strictly enforced." The Scenic Road Ordinance states that when tree cutting or removing portions of a stone wall along a designated scenic road occurs, the Planning Board shall follow the procedures described in RSA 231:158. That statute provides that when a utility company acts to erect, install or maintain poles and wires, it shall not cut, damage or remove trees or tear down/destroy stone walls along a designated scenic road

except with the prior written consent of the planning board or other official municipal body designated to implement the statute, after notice and hearing.

Newington is very concerned that stone walls near designated scenic roads will be impacted by the Project. Newington is also concerned that Eversource's historic experts, Cherilyn Widell and Victoria Bunker, indicated at the technical sessions that no stone walls are being affected, when in fact some are.

My understanding in speaking with Mr. Jim Jiotis, formerly of Eversource, is that the Project will be constructed through a stone wall between the Abbott property and the Sabine Property (in the vicinity of Hannah Lane and Nimble Hill Road). *See* Amendment Volume 2, Appendix 2a, Environmental Maps, page 22 of 28. This pristine, well preserved stone wall is well within view of Nimble Hill Road and the Historic District. Also, I understand that there is another stone wall just off Hannah Lane between the Abbott and Lee properties (on Hannah Lane) that may be affected by the Project.

In keeping with the Town's Master Plan, the Town of Newington insists that Eversource avoid touching these walls and any other stone walls they may cross over or under. At the very least, if they remove a portion of a stone wall they must employ a professional stone wall builder to reestablish the stone wall to its prior appearance.

Another provision of the Newington Master Plan that relates to the Project is the Historic Resources Recommendation regarding the Knights Brook Corridor region, a region that will be directly impacted by the Project. *See* **Attachment DJH-6**. The Town's Master Plan Recommendation states that the Knights Brook Corridor is "[o]ne of the region's most scenic and historically significant landscapes of open fields and farmland." *Id.* This is a 250 acre tract

comprised of the Frink, Pickering, Hislop and former Rowe properties and that "[e]very effort should be made to preserve this open space." *Id.* The Town has been actively conserving property in the Knights Brook area in the past and has recently issued a 2017 town meeting warrant article to raise a sum of money to permanently place land (owned by the Ripley Family) into conservation. Development of this area for a high voltage transmission line is inconsistent with the Town's Recommendation for the Knights Brook Corridor, as well as the Town's conservation efforts. Therefore, the installation of a high voltage transmission line in the Knights Brook Corridor is inconsistent with the orderly development of the region as indicated in the Town's Master Plan.

Q. Does the Master Plan contain any provisions specifically addressing the Seacoast Reliability Project?

A. Yes. The following two paragraphs are found at page 25 of in the Utility Easements subsection of the Public Utilities Section of Newington's Master Plan:

> The proposed installation of an electric transmission line between the Gundalow Landing neighborhood, through the Frink Farm heritage site, the Hannah Lane neighborhood, and continuing through the Fox Point Road neighborhood towards the Spaulding Turnpike would interject a significant visual blight upon Newington's small residential district. Such a transmission line development with utility towers at height from 65' to 90' or higher, would have considerable negative view impacts from many homes and upon the view shed of the Town's Historic District.
>
> It has been the town's policy to require land developers to place their electric utility service improvements in the Residential District underground. This policy should extend also to electric transmission line improvements. It is strongly recommended that electric transmission line improvements, if they must pass through Newington from East to West, that the transmission line follow the approximate route used by the PNGTS gas transmission lines that skirts the northwestern boundary of the Pease Development Authority.

> Such utility infrastructure improvements should be kept at the very periphery of the Residential District should be placed underground, **and under no circumstances should such improvements be permitted to be constructed above ground within existing easements that bisect the heart of the Residential District.**

(Emphasis added.) *See* **Attachment DJH-4**.

Q. Does Newington believe that Eversource's amended application which provides for burying the transmission line in portions of Newington adequately addresses the Town's position as expressed in the above-quoted section of its Master Plan?

A. Newington's Master Plan clearly expresses an intent that construction of new electric transmission lines through Newington be placed along the approximate route of the PNGTS gas transmission lines. In addition, the Master Plan expresses the Town's clear intent that if the Project is to use the Eversource's existing distribution line easement, the Project's transmission line must be buried in that easement in all Residential and Historic District locations in Newington. Because the route and configuration of this Project does not comply with these provisions, the Project does not conform to the Town's position as expressed in its Master Plan. While Newington appreciates that Eversource has amended its original application to include burying the transmission line in certain sections of Newington, the Town's official position as indicated in its Master Plan, is that if the Project is authorized by the SEC to be constructed in Newington's Residential and Historic Districts, the line must be buried within the existing distribution line easement in those Districts.

Q. Does Newington concur with Eversource's position that the Project will not unduly interfere with the orderly development of the region?

A. No. As Newington's Master Plan indicates, a high voltage transmission line is incompatible with residential use and is inconsistent with the Recommendation of preserving the open fields and farmland of the Knights Brook Corridor. In addition, the overhead line will be inconsistent with the character of the proximate historic sites such as Pickering and Frink Farms. This type of development is precisely what Newington's Master Plan seeks to guard against. An overhead high voltage transmission line running through Newington's Residential and Historic Districts – small geographic areas that Newington's Master Plan affirmatively seeks to protect from such use – will most certainly unduly interfere with the orderly development of the region.

As I indicated above, the Project as currently configured is clearly contrary to several of the Town's Master Plan provisions which are designed to insure that development in the Town of Newington occurs in a thoughtful and orderly fashion. Despite the fact that the Project does not conform to the Newington's Master Plan, Eversource's consultant nonetheless states that "[t]he Project is consistent with the goals and strategies of local and regional plans..." Application Appendix 43, "Review of Land Use and Local Regional Planning" (April 2016), p. 15. In addition to that false premise, Eversource's position that the Project will not unduly interfere with the orderly development of the region relies heavily on another faulty premise, *i.e,* that constructing a high voltage overhead transmission line in an easement/corridor currently occupied by a 34.5 kV distribution line automatically means that the new facility will be consistent with the orderly development of the region. For example, Eversource's consultant states that "[t]he Project follows existing corridors so as to have the least amount of impact on local land use patterns and to help insure it is consistent with the orderly development of the region." *Id.* Newington respectfully disagrees that using an existing distribution line easement

for a high voltage overhead transmission line will be consistent with the orderly development of the region.

Eversource's slide presentation made at the July 21, 2016 Public Information Session in Newington analogized high voltage transmission lines to interstate highways. Using Eversource's own analogy, a 34.5 kV distribution line is similar to a town road. Given the differences between the two road types it cannot be assumed that an easement presently used as a town road would be suitable for an interstate highway. Similarly, the existence of a distribution line within a utility easement located in a town's residential and historic districts does not necessarily mean that construction of high voltage transmission lines in those locations is appropriate or consistent with the orderly development of the region. The mere fact that both lines are used to carry electricity does not make them equivalent for purposes of determining whether the new high voltage transmission line will unduly interfere with the orderly development of the region. A graphic illustration of this point is made by comparing the photograph of the existing distribution line as seen from Nimble Hill Road (a designated scenic road) in Newington with a visual simulation of the Project at the same location. *See* Application, Volume 2, Appendix 32, Exhibit 17.

Another illustration is the Project's impacts on the open fields in the vicinity of the Frizzells' property which will be bisected by the proposed overhead transmission line. The line will be starkly visible from this portion of Nimble Hill Road – a scenic roadway that provides the primary entrance to Newington's residential and historic districts. This area of open fields is not only one of the most prominently visible viewsheds in town, but is also one of the last, large

undeveloped field landscapes in Newington. In addition, the transmission line will also be visible from multiple historic properties in the neighborhood.

For all of the reasons discussed above, Newington believes that the Project as currently proposed will unduly interfere with the orderly development of the region.

PUBLIC INTEREST

Q. What is Newington's position on whether the issuance of a Certificate of Site and Facility for the Project will serve the public interest?

A. It is Newington's understanding that in determining whether a project will serve the public interest, the Committee's rules (Site 301.16) require that the Committee consider the following: the welfare of the population; private property; location and growth of industry; the overall economic growth of the state; the environment of the state; historic sites; aesthetics; air and water quality; the use of natural resources; and public health and safety. The Legislature has expressly determined that "it is in the public interest to maintain a balance among those potential significant impacts and benefits in decisions about the siting, construction, and operation of energy facilities in New Hampshire." RSA 162-H:1. Accordingly, Newington urges the Committee to carefully consider the Project's impacts on all the above-referenced issues and to maintain a proper balance among them in determining whether this particular project should be certificated.

While Newington understands that this Project was developed to address the issues of load growth and grid reliability in the Seacoast portion of New England's power grid[1],

[1] Newington was not notified of and therefore did not participate in the ISO-NE planning process which led to the selection of the Project in 2012 as the ISO-NE's preferred solution to the Seacoast Reliability issue.

Newington does not believe that the proposed Project (*i.e.,* a high voltage transmission line running from Madbury, through Durham, Little Bay, Newington and Portsmouth) is the best solution to those issues. Newington's position is supported by ISO-New England's own evaluation of this Project as compared with another proposal (Gosling Road Autotransformer Solution) which was also put forth as a potential solution to address grid reliability issues in the Seacoast region.

In response to Newington's Data Request 1-3, Eversource provided a document from ISO-New England (NH/VT Transmission System Solutions Study Update dated January 18, 2012) containing a matrix comparing the Project with the Gosling Road Autotransformer Solution. That document is submitted with my prefiled testimony as **Attachment DJH – 7**. As shown on page 6 of **Attachment DJH-7**, the Gosling Road Autotransformer Project received a ranking of "A" while the proposed Tr**a**nsmission Line Project received a ranking of "A/B". Although the Gosling Road Autotransformer Project ranked higher than the proposed Transmission Line Project during the ISO-NE evaluation process, it was rejected by ISO-NE on the basis of cost. *See* Application, p. E-3. For several reasons, Newington believes that proceeding with the proposed Transmission Line Project instead of the Gosling Road Autotransformer Solution is not in the public interest when one examines all of the factors listed in Rule Site 301.16.

Q. Please explain why Newington believes that the Project is not in the public interest?

A. Newington believes that when compared to the Gosling Road Autotransformer Option ("Gosling Road"), the proposed Transmission Line Project is not in the public interest for several reasons outlined below.

1) The information contained in **Attachment DJH-7** which was used by ISO-NE in the process that led to the selection of the proposed Transmission Line Project over Gosling Road reveals that Gosling Road would provide an additional 400 MW of power to address load growth versus 190 MW of power that the proposed Transmission Line Project would provide. The 2012 cost estimates for both options indicated that Gosling Road would cost 22.5% or $25 million more than the proposed Transmission Line Project. However, Gosling Road would provide much more flexibility and would accommodate 210 MW more in future load growth than the proposed Transmission Line Project. My understanding is that the Seacoast Region accounts for 25% of the entire State of New Hampshire's electric load and that power consumption for the Seacoast Region is not falling off and will continue to grow. Comparing the 2012 cost estimates[2] for Gosling Road against the proposed Transmission Line Project we find that for 22% more cost, Gosling Road could provide the region with over twice the amount of power than the proposed Transmission Line Project would provide.

2) According to Eversource's response to Newington's Data Request 1-32, for every $10 million of project costs, the rate paid by New Hampshire ratepayers would be 0.0014 cents/kWh. *See* **Attachment DJH-9**. That means that for $25 million of additional costs (as estimated in

[2] Eversource's response to Newington's Data Request 1-3 indicates that the estimated costs for both Gosling Road and the Project have increased since 2012. However, it is not clear why the cost for the Gosling Road solution increased from $136 million to $210.5 million, an increase of nearly 55%, while the cost for the proposed SRP transmission line from Madbury to Portsmouth increased from $110.7 to $121.4 million, an increase only of approximately 10%. In addition, the 2017 cost estimates show a contingency amount of 18% or $39.4 million for Gosling Road, while the proposed SRP transmission lines from Madbury to Portsmouth had a lower contingency of 15% or $18.2 million. *See* **Attachment DJH-8.**

2012), New Hampshire ratepayers would pay just 0.0035 cents[3] per kWh more for Gosling Road than for the proposed Transmission Line Project.

3) During the Technical Sessions in June 2017, Mr. Andrew of Eversource indicated that the next round of Transmission System Solutions Study is underway. If it is discovered that the demand for electricity in the Seacoast region is still growing as it has been for a number of years, then another solution will soon be needed. Based on the fact that the two best solutions identified by ISO-NE to address the existing reliability problems in the Seacoast were Gosling Road and the proposed Transmission Line Project, and given that the proposed Transmission Line Project has already been selected to address current reliability issues, one could reasonably conclude that the next action or choice to increase power and reliability to the Seacoast Region would be the 400 MW autotransformer solution on Gosling Road. It ranked higher than the Project during the current round of solutions for the Seacoast Region, and was rejected because of cost. Gosling Road appears to be a better long term solution to the Seacoast reliability issues than the SRP Project and is a sensible solution given that the demand for electricity in the Seacoast Region continues to grow.

4) It appears that even before the ISO-NE selection process began, building new transmission lines to connect Deerfield (a substation location for the Northern Pass project) to Portsmouth was highly preferred. At a technical session in this docket I asked Mr. Andrew of Eversource if Madbury is connected to Deerfield and he responded "yes." Mr. Andrew also

[3] This figure is derived by multiplying 0.0014 by 2.5.

indicated that there was plenty of power available in Madbury to support the proposed transmission line from Madbury to Portsmouth.

The Transmission line Project submitted to ISO-NE indicates that Eversource sized the project to carry 190 MW of power (which is the amount of power that ISO-NE stated was needed by 2020). However, the Gosling Road Autotransformer Option was sized for 400 MW and included the added cost of a second transformer. Eversource's witness, Mr. Andrew, indicated at the technical session in this docket that 400 MW, 135kV/115kV is a standard size transformer that Eversource uses in New Hampshire, and that Eversource likes to have a redundant or back-up transformer in case the first transformer goes down for some reason. However, it is unclear that a second transformer is necessary. A second transformer was not installed at the Larrabee Road substation in Lewiston, Maine, which was recently brought on line using a single 400 MW, 135KV/115KV transformer. Larrabee Road is the first of four bulk energy electrical substations that are planned to beef up system reliability in the State of Maine, each using a *single* 400MW, 345/115V transformer with no back-up transformer. *See* https://www.cmpco.com/OurCompany/News/2012/news121220.html and https://www.youtube.com/watch?v=z3ITl4T82Z4 .

During the technical session Mr. Andrew was asked about the redundant or back-up power source for the proposed Project (i.e. the transmission line from Madbury to Portsmouth) if it failed. He responded that the power lines north and south of Great Bay to the region would be the back-up power source. Based on that response, it is reasonable to conclude that if the power lines north and south of Great Bay to Portsmouth are expected to back up the Project's proposed 190 MW transmission line, then those same lines can be used to back up the Gosling Road

autotransformer if it were to fail. Eliminating a second back-up transformer from the Gosling Road proposal would have reduced the cost estimate for that option by approximately $20 million (based on 50% of the 2012 estimated cost of $39.5 million for the 2-transformer Gosling Road option) thereby making it more cost competitive. Therefore, ISO-NE could have viewed Gosling Road as the best solution for addressing the Seacoast Reliability Project and for New Hampshire ratepayers.

5) The Gosling Road Autotransformer Proposal would physically impact less geography and resources than the proposed Transmission Line Project and therefore would either avoid or greatly mitigate the Project's impacts. The Gosling Road solution would not unduly interfere with the orderly development of the region as it would completely avoid the construction of new high voltage transmission lines through the University of New Hampshire, Durham, Little Bay, Newington and Portsmouth. It would also avoid the impacts to aesthetics, historic sites, water and the natural environment in those areas.

As indicated in **Attachment DJH-7**, pages 4-6, Gosling Road would require just 3 miles of new transmission lines as compared with 19 miles of new high voltage transmission lines required by the proposed Transmission Line Project. Although Gosling Road would require the upgrade of 18 miles of *existing* transmission lines, those upgrades would have little to no additional impacts on the surrounding environment and communities. While I believe that the three new miles of transmission lines may cross the Piscataqua River in Dover into Maine and may have an impact on the environment there, it seems that it would not be nearly as great as crossing Little Bay, given that the river is much narrower (i.e. approximately less than 1000 feet) than the Bay. The 19 mile proposed Transmission Line solution will use an easement that

presently hosts a small 34.5 kV distribution line with small wooden poles and will cross under Little Bay with a great deal of impact on the environment, the UNH Campus, Durham and Newington Residential areas, National Historic Resources, and the economic interests of businesses dependent on the Great Bay Estuary.

In evaluating the public interest, the Committee must consider the Project's use of natural resources such as the Great Bay Estuary, *see* Site 301.16(i), impacts on Newington's historic resources (e.g. Frink Farm and Historic District) as well as those in Durham/UNH campus, *see* Site 301.16(f), and impacts on aesthetics, including impacts on Newington's designated scenic roads. *See* Site 301.16 (g). Newington respectfully urges the Committee to carefully consider that these impacts are either greatly reduced or eliminated with the Gosling Road alternative.

6) We believe that the overall economic growth of the state would be served better by the Gosling Road solution than the proposed Transmission Line Project. The economic value of having a robustly available power source like that which the 400MW autotransformer would have brought to the New Hampshire Seacoast region for the foreseeable future would be of great economic benefit to the state. Large companies looking for places to establish their businesses need electricity. The 400MW autotransformer would put into place additional power which would be available to energy intensive industries seeking to establish businesses along New Hampshire's only deep water port and could develop support to further the Waterfront Industrial Zone in Newington as well as in Portsmouth. I believe that this would have a huge ripple effect to the entire region in terms of jobs and economic prosperity.

Under its rules regarding the public interest standard, the SEC must consider: welfare of the population (Site 301.16(a)); the location and growth of industry (301.16(c)); and the overall

economic growth of the state (301.16(d)). When compared to the Gosling Road solution, the proposed Transmission Line Project falls short of meeting these criteria.

For all of the reasons noted above, the Town of Newington believes that granting a certificate to the Project would not serve the public interest.

AESTHETICS

Q. What is the Town of Newington's position on whether the Project will have an unreasonable adverse effect on aesthetics?

A. As I have stated above, Newington's Master Plan expressly states that the installation of an overhead transmission line "would interject a significant visual blight upon Newington's small residential district. Such a transmission line development with utility towers at a height from 65' to 90' or higher, would have considerable negative view impacts from many homes and upon the view shed of the Town's Historic District." Therefore, Newington's position is that the portions of the Project consisting of an overhead high voltage transmission line in Newington's residential and historic districts would have an unreasonable adverse effect on aesthetics. This position is supported by some of the Applicant's visual simulations. *See* Application, Volume 2, Appendix 32, Exhibit 17 (Sheet 3 of 3) and Amendment Volume 2, Appendix 32a, Exhibit 20A (Sheet 3 of 3).

Newington believes that the Project's visibility from its designated scenic roads will have an unreasonable adverse effect on aesthetics in those areas. Committee Rule Site 301.14(a)(2) requires that in deciding whether the Project will have an unreasonable adverse effect on aesthetics the Committee must consider the significance of the affected scenic resources and

their distance from the proposed facility. "Scenic resources" within the meaning of this rule include "resources to which the public has a legal right of access that are…[d]esignated pursuant to applicable statutory authority by …municipal authorities for their scenic quality." Site 102.45. Pursuant to its authority under RSA 231:157, Newington has designated as "scenic" all of its roads west of the Spaulding Turnpike and north of the Newington/Greenland town line. This includes Nimble Hill Road, Little Bay Road, Fox Point Road and Old Post Road (among others). Thus the Project's impacts on these scenic roads must be carefully examined when determining whether the Project will have an unreasonable adverse effect on aesthetics.

Newington is concerned that Eversource has not presented a full and complete assessment of the Project's aesthetic impacts in Newington. For example, the Application, Amendment Volume 1 at page 14 states that "a full list of the scenic resources in the 10-mile area" is contained in Table 2 of Appendix 32, Visual Assessment (April 2016). Nimble Hill Road (a designated scenic road) is not included in this list. Yet, the Project will cross and be clearly visible from Nimble Hill Road as indicated in the Visual Simulations contained in Volume 2, Appendix 32, Exhibit 17. This visual simulation indicates that the Project's new overhead high voltage transmission lines will present persons walking and driving along Nimble Hill Road with a much more industrial looking setting than what currently exists with a single distribution line.

Newington Master Plan (Policy Eleven) states the Little Bay shoreline should be protected. The installation of concrete mattresses on the shore of Little Bay is inconsistent with this policy. Eversource's Addendum to the Visual Assessment dated July 2017 indicates that the configuration of concrete mattresses on the Newington shoreline will be approximately 214 feet

long and between 16 and 34 feet wide. Newington is concerned that a concrete installation of this size and type along the shores of Little Bay will have an unreasonable adverse effect on aesthetics in that area.

Newington is concerned about the aesthetic and other impacts of the relocated 34.5 kV distribution line that is proposed as part of this Project. Eversource's initial Application indicates that certain segments of the existing distribution infrastructure in the Town of Newington will be upgraded and/or relocated.[4] The initial Application also states that the distribution line in Newington between Little Bay Road and Fox Point Road will be removed and rebuilt along public streets, and that such relocation in Newington responds to feedback from Town officials and residents.[5] However, the Application does not identify the precise areas where the rebuilt lines will be installed, and instead asserts that the relocation of the distribution lines does not fall under SEC jurisdiction.[6] Relocating the 34.5 kV distribution lines to Newington's scenic roads will directly impact those roads. However, Eversource has not provided information or analysis about the precise location or appearance of the new distribution poles and wires it intends to construct to replace the existing 34.5kV distribution poles and wires that will be removed as part the Project, nor has Eversource indicated what additional impacts the relocated line will have.

Eversource's Amended Application also indicates that as part of the Project, Eversource will remove the 34.5kV distribution line that currently exists in the Project corridor in certain locations in Newington: Flynn Pit to Frink Farm and the Newington Center Historic District;

[4] Application, Volume 1, page 27.
[5] Application, Volume 1, p. E-2.
[6] *Id.*

Newington Historic District to East Side of Nimble Hill Road; and East Side of Nimble Hill Road to Fox Point Road.[7] However, the amended Application does not indicate whether all of the removed lines will be relocated and, if so, to which locations. In addition, the Applicant has not provided information or analysis about the appearance of the relocated lines, how much clearing (if any) will be needed for the installations and whether the new 34.5kV line (poles and wires) will have any other impacts on the relocation areas.

Despite Eversource's claim that the relocation of the distribution line in Newington is not subject to the SEC's jurisdiction because it is not a transmission line, the removal and relocation of the distribution line is directly related to the Project and therefore the Committee and intervenors should be provided with information about it so that they can assess that portion of the Project's impacts. While the distribution line may not need to be certificated by the Committee, Eversource's failure to provide information about that line's location and appearance leaves the parties and the Committee with insufficient information to make a determination about the entirety of the Project's impacts.

Eversource has provided Newington officials with a draft copy of the layout of the poles to be relocated on Nimble Hill Road, Fox Point Road and Little Bay Road, but has repeatedly put off holding public meetings with the Planning Board, explaining that they (Eversource) are not ready to present the complete information at this time. Part of the issue is that a third party (FairPoint) owns the distribution poles in this section of Newington, and therefore Eversource claims that FairPoint must make the application and pole relocation presentation to the Planning Board. Although Eversource has indicated that they will attend FairPoint's presentation,

[7] Amendment Volume 1, pages 9-10.

Newington believes that Eversource should also apply to the Town to relocate its distribution line in the town's right of way. Therefore, Newington respectfully requests that if the SEC issues a certificate for this Project that it require Eversource to be a co-applicant with FairPoint for the relocation of the existing 34.5 kV poles and wires associated with this Project.

HISTORIC SITES

Q. Has Newington examined the issue of whether the Project will have an unreasonable adverse effect on historic sites?

A. Yes. Over the years, Newington has taken affirmative steps to protect its historic resources. For example, Newington has been designated a Certified Local Government ("CLG") under the federal National Historic Preservation Act. This designation entitles Newington to receive ongoing technical assistance from the New Hampshire Division of Historical Resources ("NHDHR") to help the community conduct historic preservation projects and resolve concerns relating to federally-assisted activities that may affect historic properties. The CLG designation also means that Newington has demonstrated its commitment to local preservation by, among other things, appointing a Historic District and Historic District Commission ("HDC") under RSAs 674:46 and 674:46-a, respectively. The HDC serves as an advisory body to municipal government and land use boards and it has expressed concerns about the Project's impacts on Newington's historic resources.

The Town's position is that as currently proposed, the project will have an unreasonable adverse effect on historic resources in Newington.

Q. On what information does the Town base its position that the Project will have an unreasonable adverse effect on historic resources?

A. Among other things, a significant portion of the high voltage transmission line in Newington is proposed to be installed in properties that are listed in the National Register of Historic Places. These include the Frink Farm identified as LL# 410 on Maps 21 and 22 of 28 in Application Appendix 2, and also include resources eligible for listing, for example, the Pickering Farm, identified as LL# 408 and LL#409 on Map 21 of 28 in Application Appendix 2, or properties having a clear view of the visual impact on such sites, for example, properties depicted in the Application Appendix 2, on Map 22 of 28, and Map 23 of 28. The Town's position is that absent appropriate mitigation discussed below, the cumulative direct and indirect impacts on our historic sites and Historic District will have an unreasonable adverse effect.

Q. Does the Town have concerns about whether the historic sites as depicted on the Applicant's maps are accurate?

A. Yes, we are concerned that the maps Eversource submitted with its Application are not correct and do not accurately reflect the location of some of Newington's historic sites. For example, the maps contained in Volume 2, Appendix 2 and Amendment Volume 2, Appendix Maps 21 of 28 do not include a section of the Frink Farm that is in fact part of the historic site. This is concerning because an above-ground transition structure is proposed to be located directly on this historic site and immediately adjacent to an eligible site. Additionally, the Maps do not include any way to identify properties that are *eligible* for listing in the National Register. Properties that are eligible for listing are "historic sites" as defined in Rule Site 102.23, and Eversource is required to identify all historic sites within the area of potential effect ("APE"). *See* Site 301.06 (b). For example, the Pickering Farm property is eligible for listing in the National Register but is not designated as such on the Application maps. By failing to

adequately identify Newington's historic resources that appear on the maps submitted with the Application, Eversource has not provided the Committee with accurate information upon which to determine the Project's impacts on historic resources.

Q. Are you aware of NHDHR's position on the Project's effects on historic resources?

A. Yes. I am aware of a letter dated June 20, 217 from Deputy State Historic Preservation Office Richard A. Boisvert to the U.S. Army Corps of Engineers indicating that DHR's analysis results in a finding of "Adverse Effect" for the Seacoast Reliability Project as well as specific findings regarding individual historic properties.

Q. Does Newington agree with DHR's position on the Project's effect on historic resources?

A. Newington is concerned that the above-referenced letter does not contain a complete list of impacted historical properties. As I stated above, because Eversource failed to accurately depict historic sites that are eligible for inclusion on the National Register, and also failed to include a portion of a historic site that *is* included in the APE (*i.e.* the section of the Frink Farm that will be directly impacted by a transition structure is not designated as part of the historic site), DHR based its assessment on incomplete information and therefore failed to determine the Project's impacts on the Frink Farm. In addition, DHR did not consider the Project's effects on the Town's scenic by-ways. Based on my knowledge and understanding of Newington's historic sites, I believe that DHR's letter should be viewed as an incomplete assessment of the Project's impacts on Newington's historic sites.

Q. Does the Town have an opinion as to how the unreasonable adverse effect on historic sites could be mitigated?

A. Yes. Please see my comments below under the heading "Certificate Conditions."

NATURAL RESOURCES and WATER QUALITY IMPACTS

Q. What is the Town of Newington's position on whether the Project will have an unreasonable adverse effect the natural environment and water quality?

A. Policy Eleven of Newington's Master Plan is to protect the shorelines of Great Bay and Little Bay. *See* **Attachment DJH- 3**. Little Bay is part of the Great Bay Estuary which the Master Plan indicates is "one of the richest estuaries in North America" and has been designated as a National Estuarine Research Reserve by the federal government. *Id.* The Town of Newington understands that the Town of Durham has filed expert testimony regarding concerns about the Project's potential impacts on Little Bay but defers to Durham's experts regarding this issue. In accordance with its Master Plan, the Town respectfully urges the Committee to take great care to protect and preserve this important natural resource. Because the Gosling Road autotransformer solution would completely avoid impacting Little Bay, Newington would urge the Committee to consult with ISO-New England to examine whether the Gosling Road autotransformer option could be pursued to address the Seacoast Reliability problem and at the same time avoid impacting the significant Great Bay Estuary.

Newington is also concerned about the Project's impact on wetlands, a vernal pool and a Prime Wetland in Newington. Because the New Hampshire Department of Environmental Services' (NHDES) final position on the Project's permit applications submit to NHDES

jurisdiction will not be provided until the day after this testimony is filed, Newington reserves its rights to supplement this testimony on these particular issues.

With respect to water quality, Newington is concerned that the Project will be constructed in areas where the groundwater is currently contaminated (from the former Pease Air Force Base) with perfluorooctane sulfonate ("PFOS") and perfluorooctanoic acid, ("PFOA"). It is my understanding that PFOS and PFOA are present in the Frink Farm property and perhaps other locations in Newington where the Project is proposed to be located. Accordingly, the Town believes all Project excavations in areas where contaminants are present should be undertaken with substantial care and under the direct supervision of NHDES to avoid further contamination of ground water and soils.

The Town is also concerned that the Applicant has not identified the precise locations for the marshalling yards and laydown areas it intends to use during the construction phase of the Project, or the impacts that Project activity will have on those locations. *See* Application, pages 22-23. Instead, the Application requests that the Committee delegate authority to the New Hampshire Department of Environmental Services ("NHDES") to issue approvals for such areas. *Id.* Newington disagrees with this approach and believes that the Committee should require Eversource to identify the laydown areas and marshalling yards and their impacts for the Committee and the parties as part of the SEC process. In addition, Newington does not believe that the Committee has the authority to delegate approval of these locations to another state agency. My understanding is that RSA 162-H:4, III-b says that the Committee may not delegate its authority except as provided in RSA 162-H. The only delegations specified in RSA 162-H are those relating to monitoring (RSA 162-H:4, III) and the authority to specify the use of a

technique, methodology, practice or procedure, or to specify changes in route alignment (RSA 162-H:III-a).

PUBLIC HEALTH AND SAFETY

Q. Does the Town of Newington have concerns that the Project will have an unreasonable adverse effect on public health and safety?

A. The Town of Newington is concerned about the Project's impacts on the Town and the Town's residents during construction. Some of our concerns include public safety, damage to private and public property, road damage and restoration, traffic, noise, dust and erosion control.

Q. Have you had experience supervising road construction and road restoration work in New Hampshire?

A. Yes. As I previously indicated, I spent 34 years in the United States Air Force and Air National Guard and held positions of Base Civil Engineering Commander and Base Fire Marshal at Pease Air Force Base. During my career, I was responsible for the design, construction and final acceptance for several large projects including repair and replacement of several base roads as well as the construction of new roads. I was also responsible for the replacement of the 16 inch concrete apron which is approximately 40 acres in size. I also completed projects such as the Base Jet Fuel Bulk Storage Tanks, Jet Fuel Truck off loading and on loading stations, Jet Fuels pump house and two miles of underground fueling system (which included 12 aircraft fueling stations, diesel and gasoline fuel truck off loading station), base gas station, an 80 million BTU central heat plant (natural gas or #6 fuel) and base wide heating distribution system, the

Base 34.5kV electrical substation and underground electrical distribution system, several office type buildings, fire station, aircraft hangar, energy projects and many other civil projects.

Excavation

Q. Has the Town of Newington through its Selectmen adopted any standards to regulate excavation within the Town's roads?

A. Yes. The Town's "Regulations for Excavations in Town Streets and Rights-of-Way" are attached to my testimony as **Attachment DJH-10**.

Q. What is the purpose of having such roadway excavation and restoration standards?

A. Safety first. Second, to insure that roads are properly restored to a standard that will hold up to traffic over time. Proper restoration is very important to assuring that roads that are excavated or disturbed in some manner are properly restored to a standard that will pass the test of time of traffic over the years.

Q. Do Newington's roadway excavation and restoration standards include the requirement of onsite inspection by the Town's engineer at the applicant's expense?

A. Yes.

Q. Can you please explain why onsite inspection is necessary?

A. It is critical that proper inspection is accomplished with town inspectors and oversight for safety purposes and to protect the town tax payers who have paid for the road. As an example, improper compaction or using incorrect materials for the road bed, may result in problems that show up years later which the taxpayers would end up paying to repair. I am aware of a utility contractor that was doing work on a road, and was not using proper methods to backfill the trench, and failed to notify the Town three days in advance as required by the construction

permits. The three day notice was required so that the Town could arrange for inspectors to be on site. As a result, the work was halted until an inspector could get to the site. The inspector then directed that the proper procedures be observed, which resulted in having to re-excavate and refill part of the trench with proper material, using proper compaction methods.

Safety issues also warrant on-site inspection. Improperly compacted materials can create frost heaves or potholes on roads due to poor restoration practices which can cause road hazards that can make the roads dangerous to vehicle operators and pedestrians alike.

Q. Do the Town of Newington's roadway excavation and restoration standards require the person performing excavation and restoration work to post a performance guarantee acceptable to the Board of Selectmen?

A. Yes. The regulations require that an applicant provide the Board of Selectmen with an irrevocable letter of credit written on a New Hampshire bank or a cash deposit for a period of 24 months from the date of project completion.

Q. Why is a financial guarantee for excavations in Newington's roads and rights of way required?

A. It is required to guarantee that the road is built and restored properly. As the attached regulations indicate, the financial security requirement "is intended to guarantee that the roadway will be restored to its condition prior to excavation. Determination of whether a restoration meets this standard shall be at the sole discretion of the Board of Selectmen."

Q. In your experience with the Newington Planning Board, have you had occasion to work with contractors for the purpose of seeking to draw upon or actually drawing upon such performance guarantees to pay for Town road repair or restoration work?

A. Yes. A bond/financial guarantee is a very useful tool to entice contractors to properly restore the roads.

Q. Are you familiar with the Project's excavation work that will be required within the Town of Newington's roads and on adjacent private property?

A. Yes.

Q. Are you aware of any issues presented by the Project's proposed excavation within the Gundalow Landing right-of-way?

A. Yes. Gundalow Landing was recently rebuilt by the Town a few years ago at great expense. This occurred because improper material was used in constructing the road base, especially near the lower part of the road nearest the Little Bay. Much of the relatively new material had to be removed and replaced with proper fill, and stabilization fabric had to be placed under the road. Based on my knowledge of that area, it is my belief that this road will not be able to sustain heavy truck loads as proposed by Eversource. Thus, I am concerned about road damage and the costs to repair the same.

Q. Are you aware whether property owners in Newington have expressed concerns about restoration of their lawns that will be disturbed during Project construction?

A. Yes. Some of the residential properties in Newington that will be affected by the Project are located within the Town's right-of-way and some are within the easement areas granted to Eversource by the property owner.

Q. Please describe those concerns.

A. The Town and affected residents are concerned about the following issues: 1) Soil erosion. Gundalow Landing is wet. During construction and when it rains, especially during the

spring thaw, much erosion of soil that is not protected gets washed into Little Bay leaving large areas to be repaired. 2) Delay in completing construction. Work should be completed in a timely manner because of the potential erosion, and because during dry times dust is of concern. 3) Timely restoration to original condition. Everyone wants their property to be restored to its original conditions or better as soon as possible.

Q. Does the Town of Newington have any requirements regarding removal of loam from the Town's right-of-way and from the adjacent property owner's property?

A. Yes. The attached regulations **(Attachment DJH -10)** require that original/excavated loam not be taken offsite, be stockpiled on site and used for restoration. Newington has deep, rich farm soil. We want that farm soil to stay in Newington and placed back into the places it came from verses having soil imported from an outside source. Typically soil that is brought in does not have the same rich make-up that you find in Newington. It is typically cut with sand, has disease and insects not native to Newington and is put down to an unacceptable depth of only 4 inches or less. There is no way to grow grass in such imported soil that matches the existing lawns in Newington. This is also true for hay fields and other farm land. We have found that, unless prevented by the enforcement of the regulations, contractors will take 8 to 12 inches of rich farm loam off site, cut it with sand, bring back 4 inches of loam cut with sand, and sell the rest at great profit. Loam is a valuable asset for any town, and as a farming community, Newington does what it can to protect that natural resource.

Q. Do you believe that the above-described excavation and restoration challenges and concerns underscore the requirement for onsite inspection?

A. Yes.

Blasting

Q. Are you familiar with the use of blasting as a technique that is used in roadway construction and excavation?

A. Yes.

Q. Can you please explain some of the challenges to public safety and property property damage risks that such blasting can present?

A. Whenever explosives are being used, safety is of great concern to both the user and to the general public. Blasting in or near a road can temporarily disrupt traffic flow and damage underground utilities. Blasting can also cause damage to structures like water supply wells, house foundations, plaster walls etc. Blasting should be the last resort to removing rock or ledge.

Q. Has the Town of Newington adopted regulations with respect to blasting?

A. Yes. These regulations are attached to my testimony as **Attachment DJH-11**. These regulations require that before blasting occurs in the Town of Newington, application must be made to and approved by the Town Fire Chief.

Road Damage/Heavy Loads

Q. Are you familiar with the damage that can be caused to public roads arising from heavy loads traveling across such roads?

A. Yes. Damage to asphalt roads from heavy loads can be visible and can also occur at the soil particle level where the damage is not visible and won't show up for months or even years later. Roads are designed to take many years of traffic. All traffic has an impact on the life of a paved road. However the heavier loads reduce the life of the paved roads. Extremely heavy

loads which exceed designed weight limitations can and will reduce the life of the paved road significantly.

Q. Have you actually seen roads that have been substantially damaged as a result of heavy loads? If so, please explain.

A. Yes. I have seen damage to a road caused by a contractor delivering concrete over a portion of a road that was repaved two years earlier. The contractor ignored weight limitations that required him to reduce the amount of concrete he could place in the truck. Instead, the contractor delivered full load capacity to the site using only a portion of a road. Stress cracks occurred, which really weren't that visible at the time. However, the following winter and spring the road damage was clearly visible. The portion of the road that was not traveled on by the overloaded concrete trucks was just fine.

Q. Has the Town of Newington taken steps to protect its roads from damage caused by overweight loads?

A. Yes. Pursuant to its authority under RSA 231:191, the Board of Selectmen has adopted town-wide road weight limits to protect local roads from damage. *See* **Attachment DJH-12**. Vehicles that exceed these weight limits may travel on town roads but only if they have secured permits from the Selectmen. *Id.* Such permits may include conditions including posting of an appropriate performance guarantee and pre-and post-inspection of the roadways to be traveled by the permit holder. *Id.*

Q. Do you believe that a requirement that Eversource observe Newington's Regulations of Excavations in Town Streets and Right-of-Way, Newington's Blasting Ordinance and Newington's maximum road weight limits will advance the orderly development of the region and protect public health and safety?

A. Yes. The protections afforded by the provisions contained in **Attachments DJH-10, DJH-11 and DJH-12** are reasonable conditions that will ensure that the Project will not unduly interfere with the orderly development of the region and will not have an unreasonable adverse effect on public health and safety. Without rules there is chaos. Contractors are typically focused on their work and will not always look out for the Town's best interest. In many cases contractors simply make mistakes or their hired help does. Without these rules and proper enforcement of the rules through oversight and inspection by the Town, affected property owners (including the Town) will not be protected, and the taxpayer ends up paying in many ways, not just financially. Safety is paramount. Eversource has claimed it will follow NHDOT rules and guidance. However, NHDOT has no authority over town owned roads, nor do they have an interest in town roads. The town, through the authority given to it by the state, has the responsibility to protect the public health and safety of its citizens, roads and other infrastructure through the adoption and enforcement of rules and regulations designed to protect its residents' health and safety.

OTHER ISSUES

Q. Are there any other issues that Newington wishes to present to the Committee regarding the Project?

A. Newington wishes to express its concerns about various aspects of the ISO-NE planning process that led to the selection of the Project as the solution to the Seacoast Reliability Project. In addition, given the significant environmental issues posed by the Project's crossing of Little Bay and Newington's Historic and Residential Districts, as well as numerous other issues raised in my testimony and by the other intervenors in this docket, Newington believes that the Committee should exercise its authority under RSA 162-H:16, III to consult with ISO-NE to

confirm that the Project is still the best overall solution to address grid reliability in the Seacoast Region.

Q. Please explain Newington's concerns about the ISO-NE process that resulted in the selection of the Project to address grid reliability issues in the Seacoast Region.

A. The process has failed in three critical areas:

First, there was no notice of the process provided to affected Towns. Mr. Quinlan's pre-filed testimony in Application Volume 1, page 4 of 14 talks about public involvement in the ISO-NE process. He states "Participants consist of various stakeholders such as governmental representatives, local communities, state agencies" etc. and that "the meetings are open to the public." However, I do not believe that the New Hampshire Seacoast communities were invited or informed of the process. Newington was informed by letter in November, 2013 of a decision by ISO-NE to construct a power line through Newington. The decision to construct this particular Project had already been made by ISO-NE at that time, however the details were not finalized. Newington respectfully asks the SEC to request that ISO-NE change its process for selecting reliability projects to notify communities and solicit their involvement and input *before* ISO-NE makes a final decision on a reliability project. In short, affected ratepayers and Towns should be provided with actual notice of the ISO-NE process for addressing reliability problems so that they can have the opportunity to weigh in on preferred options.

Second, we believe that the ten year planning horizon used by ISO-NE is short sighted and may lead to cost-ineffective decisions in the long run. We understand that ISO-NE does not want to over build the system and that transmission companies may not be able to recover their costs associated with overbuilding. However, the option for the greatest flexibility and most

economical cost in the long run, is often the more expensive option. Rejecting a preferred solution (like the Gosling Road Autotransformer) simply on the basis of cost and without considering other factors (like environmental and other impacts on host communities) is poor planning and not in the best interest of the rate payers or the orderly development of the region. Small fixes in short periods of time further negatively impact the region by creating patchwork transmission line or other solutions that cumulatively will create negative impacts to communities and regions. Illustrative of this is the fact that the next round of regional transmission studies has already started before this Project has even been reviewed or approved by the SEC.

Third, nine other projects associated with the proposed Madbury to Portsmouth 115KV line, *see* Attachment DJH-7, page 5, all of which did not require the SEC's approval, were completed or almost completed well before the SEC's final hearing on this Application. This is according to Mr. Andrew's statements during the June technical session and confirmed to me by other Eversource representatives. Newington does not understand why a public utility could be able to complete tens of millions of dollars of upgrades at the ratepayers' expense before they receive the SEC's approval for the one critical project that ties all those projects together. Eversource has stated that if the Project line from Madbury to Portsmouth is not approved by the SEC, the costs related to the suite of projects supporting this 115 kV line would be stranded/unrecoverable costs and cannot be used for other solutions like the Gosling Road autotransformer solution. It seems that Eversource's election to proceed with those other projects before securing SEC approval for the Project puts pressure on this Committee to approve the Project in order to avoid creating stranded costs. However, the Committee must not let the issue of stranded costs sway its decision in this docket. Eversource put the cart before the

horse and unilaterally decided to move ahead with spending millions of dollars on nine other projects that support the Madbury to Portsmouth transmission line before obtaining SEC approval of that line. Eversource elected to take the risk that the costs of the other nine projects could be stranded if this Project is not certificated. Eversource should bear the consequences of its decision (financial and otherwise) if the SEC cannot make the findings under RSA 162-H:16 needed to issue a certificate for this Project.

CERTIFICATE CONDITIONS

Q. If the Committee were to issue a Certificate of Site and Facility to Eversource for this Project, what conditions, if any, does the Town of Newington recommend that the Committee include with the Certificate?

A. To avoid or mitigate its unreasonable adverse effects on aesthetics and historic resources, Eversource should be required to bury the transmission line along the entire length of Eversource's distribution line easement which is located in Newington's residential and historic districts. By my calculations this is approximately an additional 5,250 feet or approximately one mile, at a cost of approximately $8.75 million[8]. That equates to 0.0012 cents/kWh for ratepayers. In addition, the buried lines should be at depths in existing roadways and known future roadways that will allow the burial of future infrastructure to occur in the same locations.

To ensure that the Project will not have an unreasonable adverse effect on aesthetics and the Town's scenic roads, Town of Newington insists that Eversource avoid touching stone walls located near these roads, and any other stone walls they may cross over or under. At the very

[8] According to Eversource, the cost for burying the line is approximately $10 million/mile versus the cost of an overhead line which is $1 million/mile minus the cost of the transmission poles.

least, if Eversource removes a portion of a stone wall they must employ a professional stone wall builder to reestablish the stone wall to its prior appearance.

To ensure that the Project will not have an unreasonable adverse effect on public health and safety, in constructing the Project in Newington, Eversource should be required to adhere to the Town of Newington's regulations regarding excavation, blasting and road weight limits as set forth in Attachments DJH-10, 11 and 12.

To ensure that the Project will not have an unreasonable adverse effect on water quality and/or the natural environments, all Project excavations in areas where PFOS and PFOA are present should be undertaken with substantial care and under the direct supervisions of NHDES to avoid further contamination of ground water and soils.

To ensure that the relocation of Eversource's existing 34.5 kV distribution line is relocated in a responsible manner that considers, among other things, avoiding impacts to Newington's scenic roadways, Eversource should be required to take full responsibility for applying to and working with the Town of Newington for permission to move its existing 34.5 kV line.

Q. Do you have anything else to add to your prefiled testimony?

A. Yes. Because the deadline for state agencies to file their final permits and conditions is after the deadline for filing this testimony, Newington respectfully reserves the right to file additional testimony that takes into account information submitted by the state agencies with those permits and conditions.

Q. Does this conclude your prefiled direct testimony?

A. Yes.

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NH/VT Transmission System Solutions Study Update

January 18, 2012 Planning Advisory Committee Meeting

Jinlin Zhang, ISO New England Inc.
Jim DiLuca, Northeast Utilities

Seacoast NH Solutions

- Area Load: Approximately 700 MW *
- Identified Needs:
  - Thermal and voltage violations for loss of 115 kV paths into the area
- Transmission Solution Alternatives:

  #1: New Gosling Road 345/115 kV autotransformers

  #2: New Madbury-Portsmouth 115 kV line

  #3: Dynamic voltage control device at Ocean Road

  #4: New Madbury-Brentwood 115 kV line

* Note: This value provides an order of magnitude for the amount of load in this area.

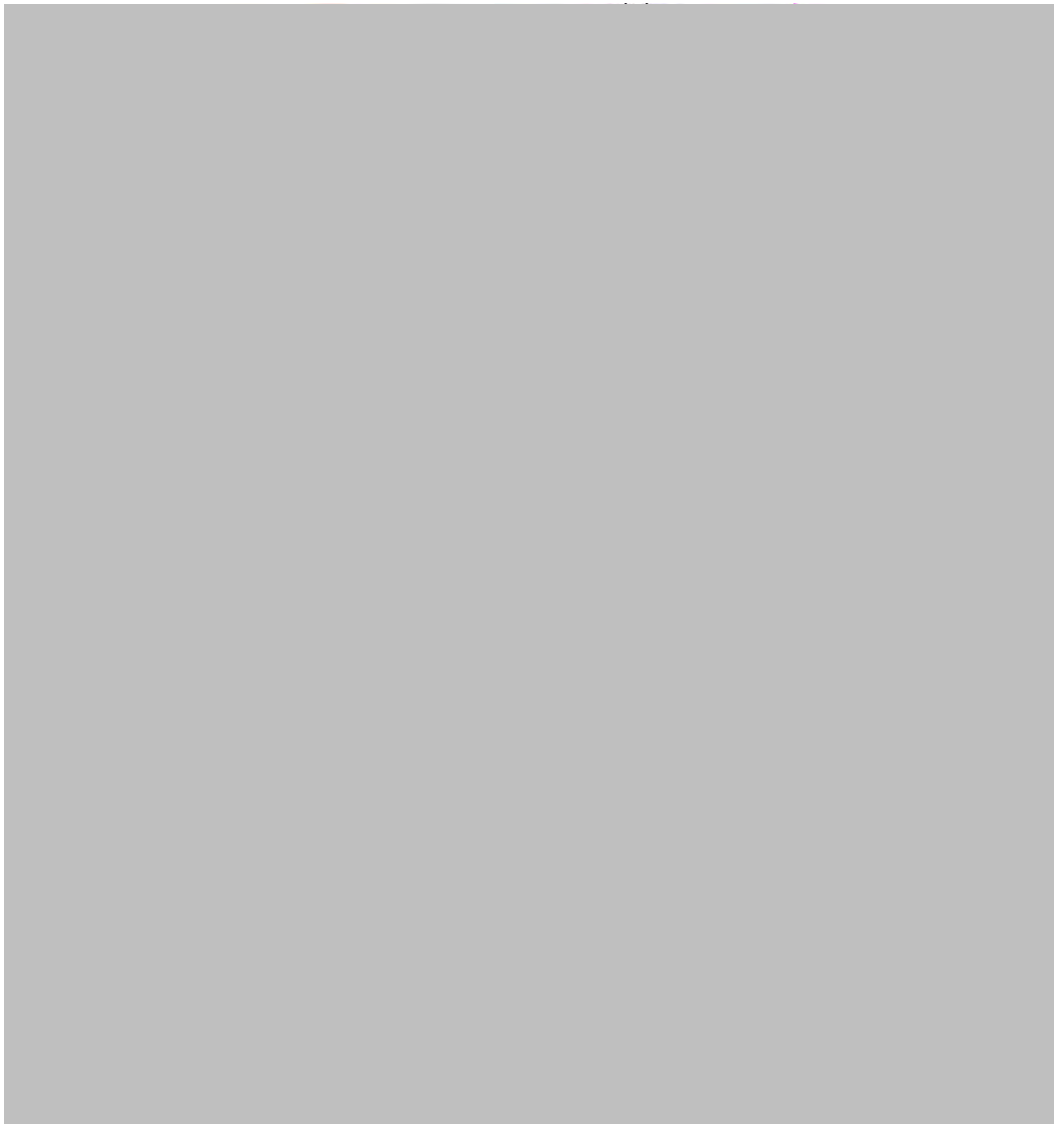
Seacoast NH Solutions, continued

- Leading Alternatives
  - Alternative #1 Gosling Road 345/115 kV autotransformers
  - Alternative #2 Madbury – Portsmouth 115kV line

- Alternatives no longer under consideration
  - Alternative #3
    - High cost estimates
    - Large amount of dynamic voltage support
  - Alternative #4
    - Poor electrical performance

Seacoast NH Solutions – Alternative #1

(Gosling Road 345/115 kV Autotransformers)

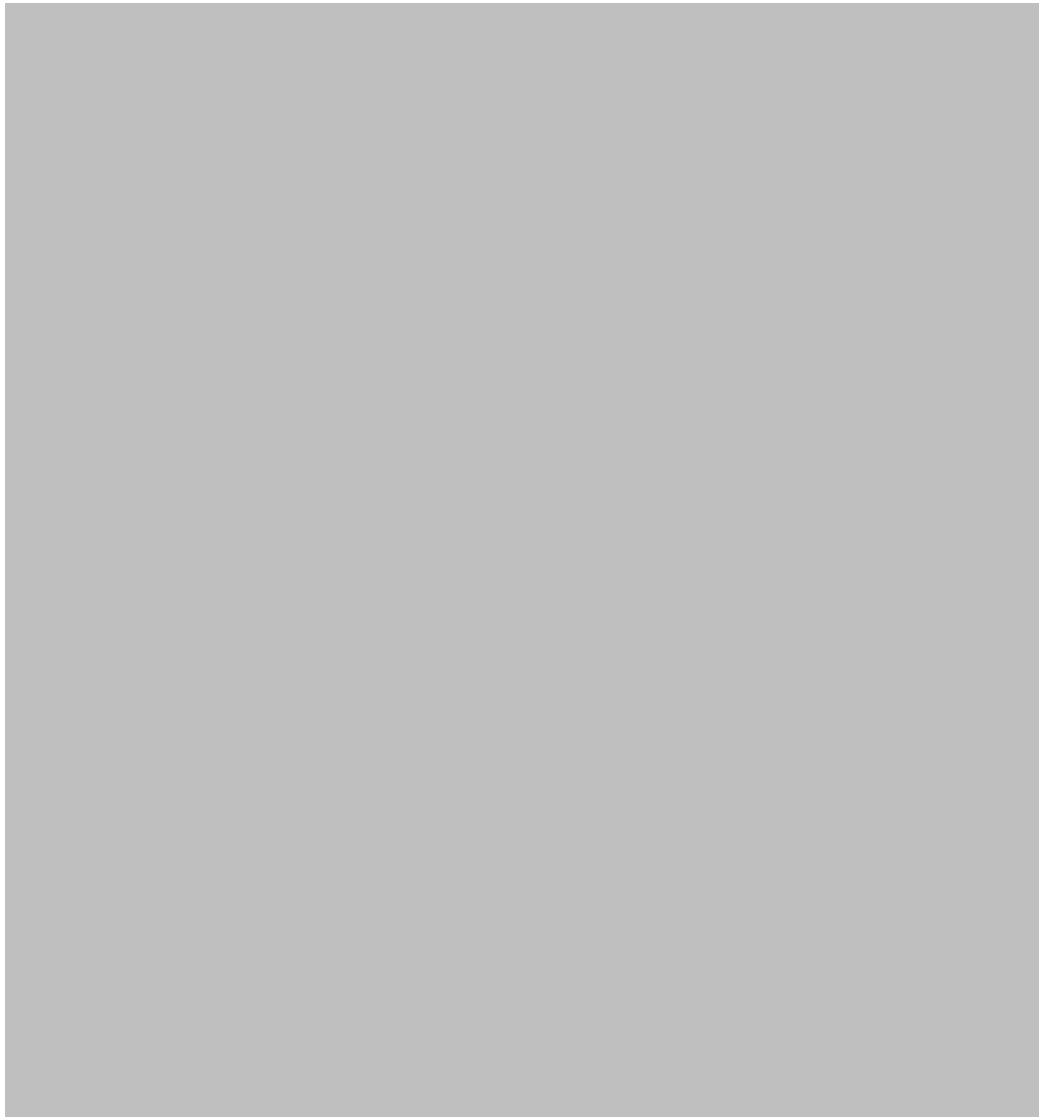


Gosling Road Substation
New Substation, including
(2) 345/115 kV Autotransformers
(2) 115 kV breakers
New control house
Underground cable
Newington Substation
New 345 kV bay
(4) 345 kV Circuit Breakers
New control house
Dover Substation
(2) 115 kV Circuit Breakers
Three Rivers Substation
(1) 115 kV Circuit Breaker
Relocation of the existing capacitor banks
Ocean Road Substation
(1) 115 kV Circuit Breaker
Substation upgrade to accommodate new bus tie breaker
Schiller Substation
(1)115 kV Circuit Breaker
Substation upgrade to BPS design standard and thermal capacity upgrade to accommodate Gosling Road auto
N133, Schiller – Three Rivers 115 kV line
Rebuild, 6-mile existing 115 kV overhead line
E194, Schiller – Ocean Rd. 115 kV line
Rebuild, 6-mile existing 115 kV overhead line
U181, Schiller – Ocean Rd. 115 kV line
Rebuild, 6-mile existing 115 kV overhead line
Dover – Three Rivers 115 kV line
New 3-mile 115 kV overhead/submarine line

Total Project Cost $136 M

Seacoast NH Solutions – Alternative #2

(New Madbury – Portsmouth 115 kV line and upgrades)



Madbury Substation
(1) 115 kV Circuit Breaker
Portsmouth Substation
(1) 115 kV Circuit Breaker
Madbury – Portsmouth 115 kV line
New 13-mile 115 kV overhead/submarine line
Scobie Pond – Chester 115 kV line
New 6-mile 115 kV overhead line
Relocation of the existing 115 kV line
Schiller Substation
(6) 13.3 MVAR 115 kV capacitor banks
(3) 115 kV Circuit Breakers
Chester Substation
(6) 115 kV Circuit Breakers
(3) 13.3 MVAR 115 kV capacitor banks
Three Rivers Substation
(1) 115 kV Circuit Breaker
Scobie Substation
Terminal upgrades
H141, Chester - Great Bay 115 kV line *
Upgrade, 19-mile existing 115 kV overhead line
R193, Scobie Pond - Kingston Tap 115 kV line *
Upgrade, 11-mile existing 115 kV overhead line

Total Project Cost $110.7 M

*All upgrades necessary to allow existing conductor to operate at 140°C

Seacoast NH Leading Alternatives Comparison Matrix

	Preferred Alternative	Economics	Cost to Construct ($M, 2016$)	MW Loss Reduction (PK)	Capability to Expand Proposed Facility	Environmental	State Siting Required (SEC)	Existing Right of Way(s)	Within Existing Property	New Right of Way(s)	New Circuit Miles	Rebuild Circuit Miles	Expand Existing Substation(s)	Greenfield Substation(s)	Operation & Maintenance	Construction Outage(s) Impact	Construction Outage(s) Impact to Generation	Time to Construct	Flexibility	Reliablity	MVAR Margin (QV) to 0.95 p.u. V (N-1)	MW Load Growth (PV) to 0.95 p.u. V (N-1-1)	Existing MW Load in Area	Existing Mvar Capacitor Installed	MVAR Capacitor Additions	Impact to Circuit Breakers (% Duty)	Converts Substation(s) to BPS	Local Area Voltage Control
Gosling Auto. and upgrades			$136	2-7	C		YES- Residential NH & ME	YES	YES	NO	3	18	YES	YES		Regional /Local	YES	C	A		430	400	760	164	0	>100%	Yes	A
				✓					✓	✓	✓								✓		✓	✓			✓			✓
New Madbury-Portsmouth 115kV line and upgrades			$111	.5-2	C		YES- Residential	YES	YES	NO	19	0	YES	NO		Local	NO	C	B		100	190	760	164	120	<100%	NO	A/B
	✓		✓						✓	✓		✓		✓		✓	✓									✓	✓	

A= Better B=Good C=Fair n/a = not available ✓= Positive attribute

Seacoast NH Preferred Solution

- Alternative #2
  - New Madbury – Portsmouth 115 kV line
  - New Scobie – Chester 115 kV line
  - Existing line upgrades and new capacitor banks
- Solution Attributes
  - ***Less costly than the other alternatives***
  - Provides adequate voltage support
  - Provides long term load growth margin
  - Minimal impact to circuit breaker short circuit duties