

**THE STATE OF NEW HAMPSHIRE
BEFORE THE
SITE EVALUATION COMMITTEE
DOCKET NO. 2015-04**

PRE-FILED DIRECT TESTIMONY OF WILLIAM J. QUINLAN

**APPLICATION OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
D/B/A EVERSOURCE ENERGY
FOR A CERTIFICATE OF SITE AND FACILITY FOR CONSTRUCTION OF A
NEW 115 kV TRANSMISSION LINE**

THE SEACOAST RELIABILITY PROJECT

April 12, 2016

1 The Seacoast Region's electric demand is growing and is expected to represent
2 approximately 25% of New Hampshire's electric demand by 2020. Under certain
3 conditions, the risk of system overloads could lead to power outages for large groups of
4 customers in and around the Seacoast Region. The Seacoast Solution strengthens the
5 resiliency of the transmission system in New Hampshire allowing the system to withstand
6 the loss of generation units or other critical transmission lines and maintain the reliable
7 delivery of electric power required to meet the region's current demand and support the
8 region's future economic growth.

9 The Solution was selected through the stakeholder review process facilitated by
10 the Independent System Operator of New England ("ISO-NE"). ISO-NE is responsible
11 for planning the regional transmission network and approving project costs that are
12 included in regional transmission rates charged to all customers in New England. ISO-NE
13 analyzes whether the transmission system meets national and regional reliability
14 standards and identifies facilities that could be overstressed under certain system
15 conditions, potentially leading to system overloads, insufficient voltage levels, and power
16 outages.

17 After identifying the critical infrastructure needs, ISO-NE, in conjunction with the
18 stakeholders, then evaluates proposed alternatives to meet the identified needs. Through
19 this process, the ISO-NE identifies the most cost-effective and reliable solutions that
20 meet the identified needs.

21 In this case, the results of the ISO-NE New Hampshire/Vermont 2011 Needs
22 Assessment Report ("Needs Assessment") determined that the New Hampshire Seacoast
23 Region is in need of additional generation resources and/or transmission capacity to serve
24 the 115 kV transmission system when a single facility or multiple facilities are out of
25 service. As discussed further in Robert Andrew's pre-filed testimony, ISO-NE concluded
26 that the transmission system in the Seacoast Region violates both thermal and voltage
27 transmission planning criteria and that these violations become more significant when
28 generation connected to the system is unavailable. This means that the lines could
29 overload or the voltage could drop below acceptable limits, leading to line and power
30 outages.

1 structure inland from the westerly shore of Little Bay in Durham. There, the line will
2 transition to a submarine cable to cross under Little Bay and continue underground
3 through Gundalow Landing to a transition structure on the east side of Little Bay Road in
4 Newington, where the line transitions back to overhead. For a further description of these
5 underground and underwater segments, please see Section 301.03 (h)(1) of the
6 Application.

7 **Q. Why was underground / submarine construction selected for these**
8 **locations?**

9 A. The original overhead design in Durham consisted of 107 and 93 foot tall
10 structures on each side of Main Street. Poles of this height were required to maintain
11 clearance over the Main Street bridge, maintain clearance from the railroad and with
12 other existing local distribution infrastructure. View simulations were performed using
13 the overhead design which indicated the structures would be visible from historic
14 properties along Main Street and the new stadium being constructed by UNH. The Town
15 of Durham and officials at UNH raised concerns about the potential impacts these
16 structures would have on the gateway into town and on the UNH campus. In consultation
17 with the Town and UNH, PSNH altered the Project to include an underground design.

18 PSNH has chosen to utilize submarine construction across the Little Bay because
19 there is an existing underwater utility corridor in this location where underwater
20 distribution cables have been located since the early 1900s. An overhead transmission
21 line construction option across Little Bay was initially considered in this general location.
22 However, for several technical and practical reasons, this overhead option was
23 determined to be infeasible. This conclusion was based primarily on the construction
24 challenges related to the significant height of the structures required to cross the bay
25 aerially and which would not only result in a substantial visual impact, but would also
26 raise concerns due to the proximity of the Pease International Airport runway. Given
27 these factors and the previous history of submarine cable crossings at this location, a
28 proposed submarine design was selected.

29 To further minimize visibility from Little Bay, PSNH adjusted its design to locate
30 the transition structures away from the shores of the bay. On the Durham side, this
31 required PSNH to contract to acquire shoreland property, while on the Newington side,

1 the transition structure was relocated approximately 1,500 feet from the shore to the
2 eastern edge of Little Bay Road. The location of the transition structure in Newington
3 was complicated by physical constraints and a lack of underground rights through
4 Gundalow Landing neighborhood.

5 PSNH also considered locating the Little Bay Road transition structures further
6 inland within Newington and to utilize an underground design through the Newington
7 Center Historic District. These additional design changes require PSNH to obtain new
8 underground rights from the Town of Newington for the Little Bay Road transition
9 structures and from multiple stakeholders within the Newington Center Historic District
10 located in the vicinity of Nimble Hill Road. However, PSNH was unable to acquire all of
11 the necessary underground rights.

12 As discussed in Section 301.03 (h)(2) of the Application, PSNH continues to
13 work closely with the Town of Newington and abutting landowners to secure the
14 necessary land rights to make these design adjustments. Should PSNH be able to obtain
15 these rights and the necessary approvals, PSNH will submit an amendment to its
16 Application prior to commencement of discovery in this proceeding.

17 See also the pre-filed testimony of James Jiottis for additional details.

18 **Q. Why isn't underground construction being proposed at other**
19 **locations along the Project route?**

20 A. The design and construction of transmission infrastructure is required to
21 be consistent with Good Utility Practice and is defined by ISO-NE as:

22 Any of the practices, methods and acts engaged in or approved by a
23 significant portion of the electric utility industry during the relevant time
24 period, or any of the practices, methods and acts which, in the exercise of
25 reasonable judgment in light of the facts known at the time the decision
26 was made, could have been expected to accomplish the desired result at a
27 reasonable cost consistent with good business practices, reliability, safety
28 and expedition. Good Utility Practice is not intended to be limited to the
29 optimum practice, method, or act to the exclusion of all others, but rather

1 includes all acceptable practices, methods, or acts generally accepted in
2 the region.¹

3 To put it simply, in general, overhead construction is significantly less expensive
4 than underground construction, has a proven reliability history and PSNH has or has
5 contracted to acquire the necessary land rights to construct an overhead line. PSNH
6 exercised Good Utility Practice in agreeing to utilize short stretches of underground to
7 avoid the impacts of the overhead construction in Durham at Main Street, and on either
8 side of Little Bay submarine crossing. Similarly, for the submarine crossing itself,
9 overhead construction is technically infeasible and would not be consistent with Good
10 Utility Practice.

11 Please also see the Pre-filed testimony of James Jiottis for additional details
12 regarding the technical reasons for selecting underground construction in certain
13 locations for the Project.

14 **Project Benefits**

15 **Q. Please describe the benefits associated with the proposed Project.**

16 A. SRP is a key component of a suite of projects selected by ISO-NE that
17 provides the least cost solution needed to enhance system reliability and operation of the
18 transmission system in the Seacoast Region. Specifically, the Project provides an
19 alternate parallel path for the transmission of electricity. As a result, the Project will
20 eliminate existing system overloads under various system conditions and enhance overall
21 system reliability in the Seacoast Region.

22 As SRP is designed to alleviate system overloads and improve overall system
23 reliability, SRP will support future economic growth in this expanding region. SRP will
24 directly address the issues identified by ISO-NE by introducing additional transmission
25 capacity to the region in order to support the reliable delivery of electric power to
26 consumers, both residential and commercial.

27 While the Project is designed to meet growing demand in the Seacoast Region,
28 the Project will both foster anticipated economic growth and provide additional tax

¹ ISO New England Inc. Transmission, Markets and Services Tariff § II.1.35.

1 revenues to the host communities. SRP will create economic benefits locally and
2 statewide during the construction phase of the Project, beginning in 2017 through 2018.
3 Jobs and sales directly and indirectly associated with the Project will be created. PSNH
4 has also negotiated a project labor agreement with the local International Brotherhood of
5 Electrical Workers (“IBEW”) union that provides for the use of local (NH-based) union
6 labor to the extent possible, with certain activities that allow for local non-union
7 participation in the Project, as well.

8 In addition to the construction jobs and materials, additional jobs and sales at
9 hotels, gas stations, convenience stores, etc. will be created. These economic benefits are
10 real and significant. The estimated benefits associated with the construction of the
11 Project are explained in greater detail in the pre-filed testimony of Dr. Lisa Shapiro.

12 **Project Stakeholder Outreach**

13 **Q. When were the pre-application Public Information Sessions held and**
14 **what did they consist of?**

15 A. PSNH conducted Public Information Sessions in Durham on April 22,
16 2015 for Strafford County and in Newington for Rockingham County on April 23, 2015.
17 At both sessions, the initial statutory pre-application public information sessions were
18 preceded by a voluntary open house. The purpose of the open house is to provide a forum
19 for one-on-one communication with individual residents, property owners, and business
20 owners to answer questions they may have regarding the Project. Subject matter experts
21 in the areas of planning, engineering, real estate, environmental, siting, and
22 communications were in attendance to ensure that PSNH could address all aspects of the
23 Project including the need for the Project, the design of the Project, its location with
24 respect to specific properties, its environmental impacts, health and safety concerns, and
25 the regulatory process. Landowners were also given the opportunity to view an
26 interactive map of the route near and/or on their property. This allowed landowners to
27 view where the ROW is in relation to their home, and provided an opportunity to
28 visualize how the structures are currently designed and where they are located.

29 Following the open house, PSNH presented a video and gave a brief presentation
30 on the Project, which included a description of the proposed route, an explanation of the
31 need for the Project, a description of Project benefits and many other topics. Once the

1 presentation was complete, the general public was permitted to make public comments
2 about the Project. A copy of the transcript from each public information session and the
3 written comments are included in Section 301.03 (h)(3) of the Application.

4 **Q. Did PSNH make any modifications to the format of the Public**
5 **Information Session held after the Durham event?**

6 A. Yes, the first Public Information Session conducted in Durham consisted
7 of an open house, a presentation by Project staff, and a period for the public to make oral
8 comments on the record.

9 Several attendees raised concerns with the lack of an interactive question and
10 answer session with the Company during the Public Information Session itself. In
11 response to the concerns raised, the Company modified its approach for the session held
12 in Newington the following night. After the video was shown, Company representatives
13 responded to a series of questions from the moderator. This was followed by the public
14 comment period. A copy of the Transcript from the Newington public information
15 session contains the question and answer period and can be found in Section 301.03
16 (h)(3) of the Application.

17 Following the original public information session in Durham on April 22, at the
18 Town's request, the Company returned to the Town of Durham to give another
19 presentation and to receive and answer questions from residents and landowners on June
20 22, 2015. The session was broadcast live on Durham Cable Access Television, and many
21 residents emailed inquiries to the Durham Town Manager for Eversource to answer
22 during the session.

23 **Q. Following the required pre-application Public Information Sessions,**
24 **what did the Company do with the comments received from the public?**

25 A. After the pre-application Public Information Sessions, representatives of
26 PSNH thoroughly reviewed the public comments delivered orally and all public
27 comments submitted in writing. Those comments were categorized as either requiring
28 further consideration or based on inaccurate information. Those comments requiring
29 further consideration were elevated to management for review and those based on
30 inaccurate information were discussed with our communications and outreach teams. In
31 addition, for those comments based on inaccurate information, the Application and

1 associated pre-filed testimony were reviewed and revised to more clearly explain those
2 issues which gave rise to public concern. PSNH also prepared an open letter to all four
3 towns following up on key issues and continued to engage directly with residents and
4 town officials about concerns and potential solutions.

5 **Q. What other outreach efforts has PSNH made to engage with the**
6 **affected municipalities regarding the development of the Project?**

7 A. SRP is proposed to be located in the towns of Madbury, Durham, and
8 Newington and the City of Portsmouth. Since the Project inception, PSNH has been
9 committed to working with the towns, including municipal officials, residents and
10 businesses potentially impacted by the Project. PSNH has engaged in significant
11 outreach to inform stakeholders about the Project, respond to any questions or concerns,
12 and to elicit feedback. PSNH held local meetings with each host community, including
13 numerous meetings with Durham and Newington municipal officials. In addition,
14 representatives of PSNH met with and consulted with representatives of the UNH.

15 After the pre-filing public information sessions, PSNH continued to meet with the
16 towns where the Project will be built. PSNH had numerous meetings with both the towns
17 of Durham and Newington to discuss the Project, receive feedback, and to elicit input and
18 potential changes to the design. As a direct result of these discussions PSNH made
19 numerous changes to the design of the Project, including siting portions of the Project
20 underground, making certain structure type modifications to reduce potential visual
21 impacts, removing the distribution line that currently traverses the open field portions of
22 the Newington Center Historic District to facilitate lower structure heights, and by
23 relocating certain structures to reduce views of the Project.

24 PSNH also reviewed numerous suggested alternative routes through the Town of
25 Newington that were presented and suggested by Town officials. PSNH thoroughly
26 analyzed each of the suggested routes and presented the analyses to Town officials and
27 residents at a Board of Selectmen meeting on September 3, 2015. However, as discussed
28 in more detail in the pre-filed testimony of James Jiottis, the routes recommended by the
29 Town of Newington were determined to be infeasible for numerous reasons.

30 More specifically, PSNH investigated the possibility of siting the proposed
31 Project using two different route alternatives, one through the Great Bay National

1 Wildlife Refuge (“Wildlife Refuge”) and another along roadways through Newington.
2 Once the possible route across Pease Development Authority property was reached, all
3 alternatives would have required crossing through a United States Environmental
4 Protection Agency (“USEPA”) identified Superfund site. The Wildlife Refuge advised
5 that an overhead or underground transmission line cutting across the Wildlife Refuge
6 would fragment habitat in the area and would not consider a route across its property.
7 Therefore, the Wildlife Refuge was unwilling to provide an easement to PSNH for the
8 purpose of this Project. In addition, crossing the Superfund site presented extensive
9 environmental, technical and cost challenges to the Project. As an available route existed
10 without use of the Wildlife Refuge or crossing the Superfund site, these alternatives were
11 determined to be infeasible.

12 Also, in consultation with the Town of Newington, PSNH proposed to construct
13 the Project underground while simultaneously removing the existing distribution line
14 within the Newington Center Historic District. Such a proposed action would have
15 returned the landscape and viewscape in the Historic District to its original 19th century
16 scenery. However, after numerous meetings with the Town of Newington and the
17 property owners along this portion of the corridor, PSNH was not granted all of the
18 necessary underground rights to support an underground design through the Historic
19 District.

20 PSNH remains committed to working with the Town of Newington and its
21 residents in this area, however, we can only consider design changes in this area after the
22 necessary property rights are granted to PSNH and the necessary local, state, and federal
23 approvals are received in a timely manner.

24 See Appendix 36 for the Project Outreach Summary for a list of meetings with the
25 Town of Newington.

26 **Q. Has the Company made any design changes as a result of the outreach**
27 **discussions with the communities?**

28 A. Absolutely. PSNH made numerous design changes to address specific
29 concerns raised by each town along the Project route. Each specific design change is
30 thoroughly discussed in Section 301.03 (h)(2) of the application and further engineering
31 information is provided in the pre-filed testimony of Jim Jiottis. The following is a list of

1 major Project changes that were made as a direct result of outreach discussions with the
2 communities:

- 3 • In the Town of Madbury, PSNH acquired additional property and an
4 easement adjacent to the railroad to eliminate two structures and reduce structure heights.
- 5 • In the Town of Durham, PSNH revised its original overhead design to an
6 underground design across Main Street for approximately 2,100 feet from the UNH
7 parking lot A north of Main Street to the intersection of Colovos Road and Waterworks
8 Road south of Main Street. PSNH also contracted to acquire additional easements
9 between Madbury Road and Route 4 to eliminate structures and reduce structure heights.
10 In addition, some structures were relocated and altered to reduce visibility from the road
11 or adjacent properties, especially at road crossings and in the neighborhoods that are
12 located east of Route 108. PSNH has also contracted to acquire additional easements to
13 avoid a construction road crossing of the Oyster River. Lastly, to address significant
14 concerns from the Town of Durham, PSNH was able to enter into an agreement to
15 purchase property on the western side of Little Bay in order to relocate the transition
16 structure from the edge of the water to a location inland from Little Bay.
- 17 • In the Town of Newington, the Project has contracted to acquire new
18 easement rights on the eastern side of Little Bay to minimize impacts to the landowner
19 where the cable comes ashore from the water crossing. The Project has chosen to site the
20 new transition structures approximately 1,500 feet from the shoreline of Little Bay
21 thereby limiting potential visual impacts. Additionally, PSNH has committed to removing
22 the existing 34.5 kV distribution line that traverses the Newington Center Historic
23 District including the Frink Farm, resulting in fewer and shorter structures. At the request
24 of the Town, PSNH altered its design to use H-frame structures instead of monopoles,
25 which will reduce the average structure height from approximately 90 feet to
26 approximately 65 feet. As previously stated, PSNH will continue to work with the Town
27 and abutters on the underground proposal through the Historic District and at the edge of
28 Little Bay Road. Furthermore, PSNH also examined whether the Project could be
29 constructed underground at additional locations in Newington, separate and apart from
30 the Newington Historic District and near Little Bay Road, as requested by Town officials

1 and other stakeholders during the outreach. Additional underground construction was
2 deemed not feasible based on existing property rights, engineering issues,
3 constructability, and increased cost.

4 **Project Cost Recovery**

5 **Q. How are costs for projects such as SRP collected from customers?**

6 A. Projects required to maintain the reliability of the regional transmission
7 system, like SRP, are typically collected from all electric customers across the New
8 England States (or “Regionalized”). Approximately 9% of Regionalized project costs are
9 borne by the customers in the State of New Hampshire.

10 However, ISO-NE has the ultimate authority to determine Regionalized costs. To
11 the extent that the SEC approves a design with features deemed by ISO-NE to exceed
12 reasonableness standards, the costs associated with such features may be determined to
13 be “Localized Costs” and would not be allocated across the New England States.
14 Localized Costs would be recovered from all, or a subset of, NH customers.

15 **Q. How are Regionalized and Localized Costs determined?**

16 A. As previously mentioned, ISO-NE approves the Project costs to be
17 recovered in regional rates. After a project is completed and in service, ISO-NE reviews
18 project costs upon the Transmission Owner’s submission of an Application for
19 Transmission Cost Allocation (TCA) for review. In the TCA, project costs are proposed
20 to be allocated based on guidelines established by ISO-NE. These guidelines are
21 published on the ISO-NE website at [http://www.iso-ne.com/system-](http://www.iso-ne.com/system-planning/transmission-planning/transmission-cost-allocations)
22 [planning/transmission-planning/transmission-cost-allocations](http://www.iso-ne.com/system-planning/transmission-planning/transmission-cost-allocations).

23 When doing so, the ISO-NE will consider Good Utility Practice, current
24 engineering and design practices in the area, and the relative cost of alternatives. Costs
25 exceeding these reasonableness standards will be determined to be Localized Costs.

26 **Q. What is the mechanism by which Localized Costs are allocated?**

27 A. Transmission costs are recovered through a tariff approved by the Federal
28 Energy Regulatory Commission (“FERC”). Once ISO-NE determines that some of a
29 project’s costs do not qualify as Regionalized Costs and are deemed Localized Costs, the
30 Company is required to submit a filing to FERC proposing allocation of Localized Costs
31 and the tariff mechanism by which such costs will be collected. Following submission of

1 this proposal, there is a process by which stakeholders can intervene and provide
2 comment. Ultimately, after taking the submissions of the Company and any intervenors
3 into consideration, FERC determines how Localized Costs will be allocated through the
4 applicable tariff.

5 At this time, there is no established formula for collecting Localized Costs within
6 New Hampshire. However, in Massachusetts and Connecticut, the Company has
7 proposed and received approval to collect costs from all customers within the state
8 including customers not served by the Company's local operating company.

9 **Conclusion**

10 **Q. Do you have any other comments you would like to make?**

11 A. Yes. Given the projected electrical demand growth and exposure to system
12 outages even at current demand levels, SRP is vitally needed to directly address
13 reliability concerns in the Seacoast Area and allow the economy in the area to continue to
14 grow. The Company is committed to working closely with host communities, residents
15 and business owners in the area throughout the siting and construction process. Our
16 objective is to ensure that the Project will be constructed in a professional, efficient and
17 respectful manner and to minimize impacts to the extent possible.

18 **Q. Does this conclude your testimony?**

19 A. Yes, it does.