

Public Service Company of New Hampshire  
d/b/a Eversource Energy  
Docket No. DE 19-057  
Rebuttal Testimony of Joseph A. Purington  
March 3, 2020

**STATE OF NEW HAMPSHIRE**  
**BEFORE THE**  
**NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION**

**DOCKET NO. DE 19-057**  
**REQUEST FOR PERMANENT RATES**

**REBUTTAL TESTIMONY OF JOSEPH A. PURINGTON**

*Policy Overview and GTEP*

**On behalf of Public Service Company of New Hampshire**  
**d/b/a Eversource Energy**

**March 3, 2020**

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**STATE OF NEW HAMPSHIRE**  
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**PETITION OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**  
**d/b/a EVERSOURCE ENERGY**  
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1 **I. INTRODUCTION**

2 **Q. Please state your full name, position and business address.**

3 A. My name is Joseph A. Purington. I am employed by Eversource Energy Service Company  
4 as President of Eversource New Hampshire Operations. My business address is 780 North  
5 Commercial Street, Manchester, New Hampshire.

6 **Q. What are your principal responsibilities in this position?**

7 A. I became President of Eversource New Hampshire Operations on January 1, 2020. In this  
8 role I am responsible for assuring that Public Service Company of New Hampshire d/b/a  
9 Eversource Energy (“PSNH” or the “Company”) provides safe and reliable electric service  
10 to over half a million customers in 211 cities and towns throughout New Hampshire, as  
11 well as overseeing the Company’s construction, operation and maintenance of its electric  
12 distribution infrastructure in the state.

1 **Q. Have you previously submitted testimony in this proceeding?**

2 A. Yes. On May 28, 2019, I submitted direct, pre-filed joint testimony with Mr. Lee G. Lajoie  
3 on the Company's proposed Grid Transformation and Enablement Program ("GTEP"), which  
4 also included discussion of the Company's current system performance levels, organizational  
5 structure, and base capital plan. In that testimony, I described my educational and professional  
6 background. In addition, given my new role as President of the Company, I am hereby  
7 adopting the direct, pre-filed testimony of Mr. William J. Quinlan that was submitted on May  
8 28, 2019 with the Company's initial filing.

9 **Q. What is the purpose of your rebuttal testimony?**

10 A. The purpose of my testimony is to provide an overview and context as to the reasons why  
11 this case is so important to the Company and its customers, particularly in relation to capital  
12 expenditures and vegetation management. Given the overlap in the procedural schedule  
13 between rebuttal testimony and settlement discussions, I recognize that it is critical that the  
14 Company provide substantive information and context to the record for the proceeding,  
15 while underscoring the Company's commitment to engage seriously in the settlement  
16 process. As explained below, the Company is strongly committed to potential settlement  
17 discussions with Staff and the Office of Consumer Advocate ("OCA") and other parties in  
18 the proceeding, and the Company's rebuttal testimony is a necessary parallel step. My  
19 testimony also provides a brief overview of the topics addressed in the other pieces of  
20 rebuttal testimony from the Company Witnesses. Lastly, I discuss the Company's GTEP  
21 proposal to respond to concerns raised in Staff's testimony.

1    **II.    OVERVIEW**

2    **Q.    Why is it necessary for PSNH to file rebuttal testimony at this time?**

3    A.    The procedural schedule proposed by the parties and adopted by the Commission in this  
4           docket established the timeline for discovery, intervenor testimony, technical sessions,  
5           settlement conferences, and rebuttal testimony, among other events. The schedule includes  
6           dates for rebuttal testimony on March 3, 2020; settlement conferences on March 24 and  
7           25, 2020; and a target date for filing any settlement on April 7, 2020, prior to hearings on  
8           the merits that would begin in mid-April. This results in an overlap of settlement  
9           discussions with the litigation process, which necessitates having the Company file its  
10          rebuttal testimony while working in parallel with Staff and OCA to explore the possibility  
11          of settlement.

12   **Q.    The procedural schedule allowed for rebuttal testimony “if needed.” Does this mean**  
13   **the Company had the option to forego rebuttal testimony?**

14   A.    Theoretically yes, but under the current posture of the case, no. At this stage of the process,  
15          it is simply too early to tell if a settlement on some or all issues is achievable. At the same  
16          time, the testimony filed by Staff and OCA has challenged key aspects of the Company’s  
17          proposals in this case. Their testimony requires a thoughtful, substantive and factual  
18          response from the Company for completeness and clarity in the evidentiary record. For  
19          this reason, the Company determined that it had no option but to proceed on parallel paths  
20          to preserve its rebuttal positions while engaging in settlement discussions.

1 **Q. Does this mean the Company is stepping back from the settlement process?**

2 A. No, not at all. To the contrary, PSNH recognizes that a settled outcome on appropriate  
3 terms could be beneficial to all parties. PSNH is strongly committed to working with Staff,  
4 OCA and other parties to determine if a settlement of some or all issues can be achieved in  
5 this docket. The Company intends to engage seriously and cooperatively in that process.  
6 However, the Company's rebuttal testimony is a necessary backstop to preserve its rights  
7 in the event a settlement is unachievable, which may not be known for a month or more.

8 **Q. Is the Company troubled about some of the overarching concerns and theories**  
9 **indicated by Staff in relation to the Company's proposals?**

10 A. Yes. PSNH appreciates Staff's perspectives and recognizes fully the value of a cooperative  
11 effort that enables free discussion and transparency on issues affecting customers. PSNH  
12 looks to engage directly and substantively on issues important to the operation of the  
13 system and the provision of service to customers because open discourse will ultimately  
14 lead to the best outcome for customers, which is the common goal for all stakeholders in  
15 the ratemaking process. To the extent Staff has raised concerns with the Company's rate  
16 case proposals or has differing views, PSNH will take those concerns seriously and greatly  
17 appreciates the opportunity to address those concerns at their core.

18 That said, the Company has grown increasingly troubled in this docket with recognition of  
19 the fact that there appears to be a massive gap between: (1) the Company's perspective on  
20 the age and condition of the distribution system; the capital work plan that should be  
21 implemented to maintain reliability and enhance resiliency of the system over the next few

1 years to avoid detrimental customer outages both on blue sky days and following major  
2 weather events; and the level of daily work necessitated in the area of vegetation  
3 management and other activities to maintain a resilient system; versus (2) the Staff's  
4 perspective on the system that all of these activities may be scaled back or are even  
5 unnecessary. The Company is simply not at a point that the investments undertaken for  
6 system reliability reasons are not cost-effective, nor are the Company's actions to upgrade  
7 materials and construction approaches in any way ill-advised or unjustified. Since gaining  
8 insight into these perceptions held by Staff, the Company has given substantial thought to  
9 the possibilities for reconciling these two, disparate perspectives so that the interests of  
10 customers are protected and advanced through the settlement process, if possible. The  
11 Company anticipates that the settlement process may afford an opportunity to reconcile  
12 these differing perspectives.

13 **Q. What is the scope of the Company's rebuttal testimony?**

14 A. PSNH has limited its rebuttal testimony to provide fact-based information on certain  
15 assertions in the Staff and OCA testimony. It is intended as a substantive and balanced  
16 response to addresses those assertions while focusing on the best outcome for customers.

17 **III. REBUTTAL TESTIMONY OVERVIEW**

18 **Q. Please describe the topics covered in the Company's rebuttal testimony.**

19 A. The Company is presenting rebuttal testimony on the following topics:

- 20 • Revenue Requirements: Douglas H. Horton, Vice President, Distribution Rates and  
21 Regulatory Requirements, and Troy M. Dixon, Director of Revenue Requirements

1 present joint rebuttal testimony to respond to various revenue requirement adjustments  
2 proposed by Staff and OCA to the Company's operating expenses;

- 3 • Capital Additions: Erica L. Menard, Manager of New Hampshire Revenue  
4 Requirements, Mr. Lajoie, Manager of System Resiliency, and David L. Plante,  
5 Manager of the Project Management Department, present joint rebuttal testimony on  
6 Staff's proposed adjustments to plant-in-service, providing additional support for the  
7 Company's historical capital additions proposed for inclusion in rate base. The  
8 testimony demonstrates that, without exception, all of the Company's capital additions  
9 were approved and documented in accordance with the Company's capital  
10 authorization policies, and that the investments are used and useful and were prudently  
11 incurred;

- 12 • Vegetation Management: Robert D. Allen, Manager of Vegetation Management, and  
13 William A. Van Dam, Director of Vegetation Management, provide joint rebuttal  
14 testimony to respond to Staff's proposed cuts to vegetation management expense,  
15 which would substantially undermine the progress PSNH has made in recent years to  
16 improve system reliability and resiliency from tree-related outages. The testimony  
17 provides further evidence in support of the need to maintain spending on enhanced tree  
18 trimming ("ETT"), hazard tree removal, and full-width right-of-way clearing  
19 initiatives. This testimony also addresses Staff and OCA's positions on the issue of  
20 third-party reimbursements for vegetation management costs;

- 1           • AMR Deployment and Customer Issues: Penelope McLean Conner, Chief Customer  
2           Officer and Senior Vice President of the Customer Group for Eversource Energy  
3           Service Company, presents rebuttal testimony to respond to Staff’s proposal for further  
4           investigation of the Company’s meter investments, and also to address OCA’s  
5           proposed disallowance of the Company’s AMR system, providing further evidence to  
6           support the fact that these investments are used and useful and prudently incurred. Ms.  
7           Conner also provides rebuttal testimony to respond to various recommendations  
8           regarding the Company’s fee free proposal and New Start arrearage forgiveness  
9           proposal;
- 10          • Return on Equity: Ann E. Bulkley, Senior Vice President of Concentric Energy  
11          Advisors, Inc., presents rebuttal testimony on the Company’s return on equity (“ROE”)  
12          analysis to correct the record as to positions and assertions by Dr. Woolridge and other  
13          ROE witnesses filing testimony in this docket;
- 14          • Cost of Service Studies and Rate Design: Amparo Nieto, Senior Vice President at  
15          Economists Incorporated, provides rebuttal testimony to respond to Staff, OCA and  
16          other parties in regard to cost studies, revenue allocations and related issues; and
- 17          • Revenue Allocation: Edward A. Davis, Director of Rates, provides rebuttal testimony  
18          to respond to several issues in relation to revenue allocation and additional aspects of  
19          the Company’s rate design.

1 Although Staff included testimony raising concerns regarding the Company's electric  
2 vehicle ("EV") proposals, the Company is not providing rebuttal testimony on this topic in  
3 light of Staff's February 5, 2020 motion to move Docket No. IR 20-004 and any subsequent  
4 related proceedings that may follow.

5 **IV. GRID TRANSFORMATION AND ENABLEMENT PROGRAM**

6 **Q. Have you reviewed the direct testimony of Staff witness Kurt F. Demmer in relation**  
7 **to GTEP?**

8 A. Yes. Mr. Demmer submitted testimony on all three aspects of the Company's GTEP  
9 proposal, which are Pole Replacement, Line Reconstruction and Reconductoring, and  
10 Substation Renewals. In the sections that follow, I respond to Mr. Demmer's analyses,  
11 conclusions and recommendations with respect to each asset category. In addition, I also  
12 address Mr. Demmer's concerns about certain investments made by the Company over the  
13 past three years as part of its resilience guidelines.

14 **Q. What is your perspective on Staff's position relative to GTEP?**

15 A. There is a fundamental disagreement between Staff and the Company on the imperative  
16 for the GTEP initiatives. In its initial filing in this proceeding, the Company put forth an  
17 overall assessment of the electric distribution system in New Hampshire. The Company  
18 took this step because the Company had not had a rate case in 10 years and the Company  
19 has an ongoing, overwhelming concern about system condition and the pace of  
20 replacement. The inescapable fact is that the system is old and needs to be replaced; there  
21 are updated modes of construction that embed greater resilience in the system for major

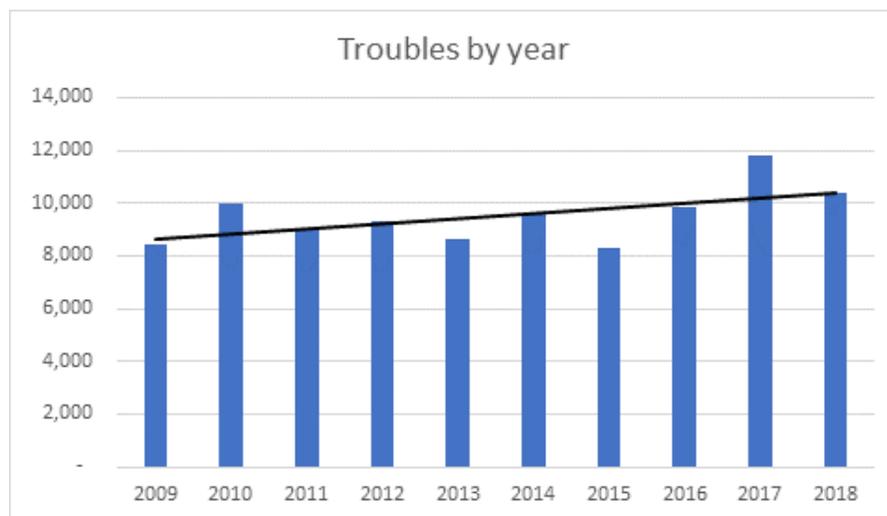
1 events. For the Company, there is a strong imperative to bring the system up to a condition  
2 that meets the challenges of global climate change and the introduction of new, clean  
3 energy technologies, while also meeting the basic reliability needs of customers.

4 The Company is currently completing this type of work in its base capital program, but the  
5 pace of replacement that is achievable in the base capital program is insufficient to protect  
6 the interests of customers. Yet Staff's perspective appears to be that these system  
7 investments are not needed or must be justified on a cost-benefit analysis to make sure that  
8 there is a benefit for customers. However, despite the Staff's representation to the contrary,  
9 preparation or reliance of a "cost benefit" justification for reliability and resiliency  
10 reinforcements is not exercise that is generally performed in the electric distribution  
11 industry (and certainly not to justify condition-based replacements). There is no discrete,  
12 accepted method that the Company is aware of to cost justify condition-based projects.  
13 However, the Company is certainly willing to work with Staff to figure out an approach  
14 that addresses any areas of concerns that Staff has. The Company does understand that the  
15 Staff is looking to make sure investment will benefit customers.

16 Therefore, the Company is focused on discussing these issued with Staff to perhaps identify  
17 a mode or strategy by which the Staff and the Company could analyze, examine or  
18 otherwise obtain information to elucidate the state of affairs on the Company's system for  
19 regulatory purposes. Again, the Company's concern on these points is high; therefore, the  
20 Company sees an imperative to work through this difference of opinion.

1 **Q. Is your concern regarding the age and conditions of the system borne out by trends**  
2 **in system performance?**

3 A. Yes. With respect to system reliability, the chart below shows the total number of customer  
4 outages (excluding major storms) occurring over the ten-year period, from 2009 to 2018.  
5 The chart shows that, while the number of outages has remained fairly constant in the range  
6 of 8,000 to 10,000 per year (with a spike in 2017), *the trend line is actually moving up*.  
7 This demonstrates the fact the total number of outages requires a constant and consistent  
8 approach to vegetation management practices along with continued focus on infrastructure  
9 upgrades (primarily, poles and wires) in order to maintain *a stable level* of reliability across  
10 time.



11  
12 This trend is occurring while, at the same time, the number of customers impacted by each  
13 outage is going down (even more so when the number of customers restored in under five  
14 minutes is examined). This demonstrates that the Company's investment in distribution

1 automation is reducing and minimizing the number of customers impacted during an  
2 outage.

3 **A. Pole Replacement**

4 **Q. Please summarize the key issues raised in Mr. Demmer's testimony with respect to**  
5 **the Pole Replacement component of GTEP.**

6 A. Mr Demmer's position is that the Company has not provided a cost benefit analysis or  
7 business case that would provide Staff with the quantifiable resilience or reliability  
8 information that Staff requires to support this proposal (Demmer Test. at Bates 12).  
9 According to Mr. Demmer, the poles identified in the GTEP, which are older than 50 years,  
10 should not be replaced solely based on their age (*id.* at 8, 9). Mr. Demmer asserts that an  
11 asset's field lifespan is not dictated by its book value and replacement should be dictated  
12 by the Company's periodic (*i.e.*, every 10 years) inspection program, which evaluates the  
13 condition of the Company's poles (*id.* at 8, 9).

14 Mr. Demmer also argues that the Company's proposed accelerated pole replacement  
15 program under GTEP would have the following unintended consequences: "(1)  
16 significantly greater amount of double poles in Eversource's custodial maintenance area;  
17 (2) significantly higher costs to either TDS or Consolidated Communications as the  
18 telecommunications utility (ILEC) would be responsible for a fixed cost per pole  
19 replacement and any cost required to transfer telecommunications assets to the new pole  
20 pursuant to the established Intercompany Operating Procedures (IOP); (3) possible  
21 significant pushback from the ILEC joint owner because poles are being replaced based on

1 age rather than a prescribed process such as what is established in IOP #7; and (4) third  
2 party providers (e.g. Comcast) incurring additional pole transfer costs due to accelerated  
3 and premature pole replacements.” (Demmer Test. at Bates 11).

4 **Q. How do you respond to Mr. Demmer’s assertion that poles should not be replaced**  
5 **based solely upon their age?**

6 A. Mr. Demmer relies on the faulty premise that the poles on the electric distribution system  
7 can continue to provide adequate service to customers for an indeterminate time period  
8 regardless of their age, diameter, and location. This proposition ignores the fact that the  
9 average useful life of a wooden distribution pole is 35 years and that 35 percent of the  
10 Company’s poles are over 40 years old, and over 50,000 of the Company’s poles are over  
11 50 years old (OCA 6-033; STAFF Attachment 10-018 D). If the Company were to ignore  
12 replacing any poles under 40 years old and just replace those poles over 40 years old, it  
13 would take the Company close to a century to complete the replacements of just the existing  
14 over-40 poles at the current average rate of 1,000 total pole replacements per year (OCA  
15 6-060). During that time all the other poles would age to well beyond 40 years so the  
16 process would never end (id.). The Company is concerned about the pole inventory and  
17 needs to step-up the annual replacement level. Given that Staff does not see it the same  
18 way, the Company is focused on trying to find a way through settlement to balance these  
19 competing viewpoints.

1 **Q. How do you respond to Mr. Demmer’s assertion that the Company’s pole**  
2 **replacement proposal under GTEP should not be approved because it is not**  
3 **supported by quantifiable resilience or reliability information?**

4 A. There is no logical or practical basis for the Commission to limit its inquiry to a quantitative  
5 method with respect to the proposed pole replacement program under GTEP. Such an  
6 approach is unreasonably narrow because it fails to acknowledge that the resilience and  
7 reliability information is difficult to quantify with the level of specificity envisioned by Mr.  
8 Demmer and it would fail to account for the qualitative record evidence presented by the  
9 Company. There are no industry-standard methods that the Company is aware of to rely  
10 on to produce these quantitative assessments, which is the reason that the Company is  
11 interested in obtaining Mr. Demmer’s thoughts on how he has seen it done, or how he  
12 thinks it could be done. Again, the Company’s strongly held viewpoint that the system is  
13 in need of accelerated investment is providing motivation to work closely with Staff to  
14 devise an approach that would provide confidence that the work should be done and will  
15 be to the benefit of customers, if done.

16 In fact, Staff and the Commission have relied on qualitative criteria in the past. *See, e.g.,*  
17 *Dev. of New Alternative Net Metering Tariffs &/or Other Regulatory Mechanisms & Tariffs*  
18 *for Customer-Generators*, Order No. 26,316, at 26 (December 18, 2019) (finding that the  
19 use of qualitative review or quantitative proxy values is a reasonable means of cost  
20 effectively addressing hard-to-quantify values without ignoring particular avoided cost  
21 categories or assigning them no value); *In Re Investigation into Implementation of Energy*  
22 *Policy Act of 2005*, Order No. 24,763, at 8 (June 22, 2007) (noting Staff’s conclusion that

1 the Commission should recognize the qualitative benefits to time-based pricing); *Re New*  
2 *Hampshire Elec. Co-Op., Inc.*, 70 N.H.P.U.C. 573 (June 28, 1985) (accepting an analysis  
3 that included qualitative judgmental elements which were applied to New Hampshire  
4 Electric Cooperative's system when that analysis was supported by the record).

5 **Q. Has the Company experienced improved system performance as a result of pole**  
6 **replacements?**

7 A. Yes. As discussed in my pre-filed joint testimony with Mr. Lajoie, the Company has  
8 experienced improved performance in major weather events (and day-to-day operations)  
9 when older, substandard poles are replaced with higher class poles that are better able to  
10 withstand weather impacts (Purington-Lajoie Test. at Bates 438). The statement is based  
11 on the Company's knowledge of the system and its practical experience in the field with  
12 the performance of Class 2 poles (OCA 6-056). The specific cause of improved  
13 performance in major weather events, however, is difficult to pinpoint because  
14 performance is a function of a combination of factors including the installation of  
15 distribution automation and upgrades to the distribution system, investment in vegetation  
16 management, and operational practices that help avoid outages or reduce outage time (OCA  
17 6-056). However, there are several indisputable facts that lead the logical conclusion that  
18 when older, smaller diameter poles are replaced with a higher class of poles that there will  
19 be improvements in system resilience.

20 As discussed in the Company's response to STAFF 12-035, every step increase in pole  
21 class results in a pole that is approximately 25 percent stronger (STAFF 12-035).

1           Therefore, changing from a Class 4 to a Class 2 pole increases pole strength by 50 percent  
2           (*id.*). This step-up in pole strength helps to lessen the universe of impacts that would have  
3           the potential to damage the system, such as impacts caused by falling limbs or trees,  
4           resulting in a hardened, more resilient distribution system (*id.*). Also, as discussed in the  
5           Company’s response to OCA 6-052, steel poles are not susceptible to bugs, woodpeckers,  
6           dry rot, and are less susceptible to moisture rot (OCA 6-052). The manufacturers of steel  
7           poles claim life expectancy approximately twice that of wooden poles (*id.*). Simply put,  
8           investment in stronger poles increases system resiliency because the poles are the first line  
9           of defense in maintaining uninterrupted service to customers through a range of operating  
10          conditions.

11   **Q.    Why are pole replacements an important part of GTEP?**

12   A.    GTEP is a proposal to accelerate the rate of replacement on asset condition projects,  
13          including poles, that the Company is already doing as part of its base investment program  
14          (STAFF 15-008). The current asset replacements are entirely critical to the safe and  
15          reliable operation of the system. The Company does not undertake a “cost effectiveness”  
16          or “business case” analysis of its current asset-replacement projects for that reason, *i.e.*, the  
17          projects must be done if service is going to be maintained to customers (*id.*). Mr.  
18          Demmer’s position implies that by quantifying the resilience benefits of pole replacement,  
19          the Company might find that doing more of the same projects is not a warranted  
20          expenditure because the cost of the investment does not produce a sufficient change in

1 service quality or system performance for customers (*id.*). This position is not correct for  
2 several reasons.

3 First, the work is condition-based and must be performed before the asset fails (*id.*).  
4 Therefore, the cost must be incurred at some point (*id.*). The quantification of benefits will  
5 not change the outcome that the poor condition is requiring a replacement, i.e., the asset  
6 has to be replaced regardless of the benefit quantification because no service can be  
7 provided to customers without the asset component in place (*id.*). At the same time, there  
8 is no doubt that benefits will result from the asset replacement because providing reliable  
9 service is always going to have a greater benefit than not providing service (zero benefit)  
10 (*id.*).

11 Second, the cost of waiting to conduct asset replacements will cause proportionately greater  
12 costs for customers than doing replacements now, given the age and condition of the system  
13 components in question (*id.*). With the GTEP in place, the Company will be able to  
14 structure an incremental asset replacement work roadmap to conduct work on a systematic,  
15 planned basis with procurement of resources designed to obtain resources on a least-cost  
16 basis (*id.*). If asset replacements are not accelerated, then a bulk of work will need to be  
17 done at a later date, with less leverage to engage least-cost resources (*id.*).

18 Instead, the Company will have to conduct work projects as assets fail and as a bulk of  
19 assets are on the edge of failure, which means that the Company will be reacting to  
20 circumstances and calling upon resources without the ability to plan more seasonably for

1 the use of resources (*id.*). When the Company has to procure resources on a reactive basis,  
2 the cost is always, inevitably higher (*id.*). From a cost effectiveness perspective, a  
3 proactive approach to replacing this infrastructure allows the Company to complete these  
4 infrastructure replacement projects through its planning, scheduling, and execution  
5 processes at the least cost rather than on an unplanned, reactive approach (*id.*). Therefore,  
6 the most cost-effective solution for customers is achieved with planned investment (*id.*).

7 Third, although there appears to be debate in this case around the level of reliability and  
8 resiliency that customers expect (and demand), there cannot be any debate that customers  
9 fundamentally want to have access to electricity when they want to use their electricity  
10 (*id.*). The GTEP projects are condition-based asset replacement projects that are necessary  
11 now -- and in the future -- to make sure that customers have access to power when they  
12 want to use it (*id.*). There are incremental benefits from an overall system perspective that  
13 will be derived through GTEP such as increased resiliency and enablement of new,  
14 distributed energy technologies, but beyond that, all of the projects that would be  
15 completed through GTEP will have to be completed through the Company's base capital  
16 program over time, if GTEP is not approved to maintain service to customers (*id.*). The  
17 only difference will be when the project gets done. But the lack of acceleration of these  
18 necessary projects will create risk for customers in terms of safety, cost and the availability  
19 of power following large-scale outage events and, eventually, even day-to-day operations  
20 (*id.*).

1 The Company is raising the issue regarding the need to accelerate condition-based asset-  
2 replacements in this docket because the time has come to make changes in the pace of  
3 replacements to protect the interests of customers (*id.*). If the pace is not accelerated,  
4 customers will ultimately pay a steeper price than the cost of the program today (*id.*).  
5 Therefore, the Company is obligated to bring this issue to the attention of the Commission  
6 so that decisions can be made as to the best strategy for protecting the long-term interests of  
7 customers (*id.*).

8 **Q. How does the Company respond to Mr. Demmer's speculations that accelerated pole**  
9 **replacement could have unintended consequences?**

10 A. The Company's primary focus is to ensure reliability and resilient performance of the  
11 electric distribution system. The Company's system performance should not be dependent  
12 upon how this program may or may not impact the ILECs.

13 **B. Line Reconstruction and Reconductoring**

14 **Q. Please summarize the key issues raised in Mr. Demmer's testimony with respect to**  
15 **the Line Reconstruction and Reconductoring component of the Company's GTEP**  
16 **proposal.**

17 A. Similar to his position on pole replacements, Mr. Demmer asserts that Staff cannot support  
18 the Company's Line Reconstruction and Reconductoring proposal because it is not  
19 supported by a quantification of the resiliency and reliability benefits (Demmer Test. at  
20 Bates 13-14). Mr. Demmer argues that because the Company experienced good-  
21 performance on SAIDI and SAIFI metrics and has not experienced any significant  
22 reliability issues with the existing right of way ("ROW"), this indicates the Line

1 Reconstruction and Reconductoring investments are unnecessary (*id.* at 13). He further  
2 argues that the proposal to relocate distribution assets to the street could result in double  
3 poles, space constraints in the public ROW and may not even be necessary (*id.*). The  
4 Company disagrees completely with each of these propositions.

5 **Q. How do you respond to Mr. Demmer's assertions regarding the Line Reconstruction**  
6 **and Reconductoring component of the Company's GTEP proposal?**

7 A. For all of the reasons that I discuss above, this infrastructure is in poor, aging condition  
8 and needs to be replaced with modern construction modes on a timeframe in the range of  
9 20-30 years, rather than 50-60+ years. In addition, Mr. Demmer does not take into  
10 consideration the importance of these ROW lines as sub-transmission infrastructure  
11 between substations. Nor does Mr. Demmer take into consideration the geographic  
12 territory, age of the ROW infrastructure and critical nature of how these lines are operated  
13 to support the transmission system in NH. The Company's primary focus is to ensure  
14 reliability and resilient performance of the electric distribution system. The Company's  
15 system performance should not be dependent upon how this program may or may not  
16 impact the ILECs and there is no evidence of constraints in the public ROW as a result of  
17 line relocations. The Company is looking to work closely with Staff to resolve these  
18 concerns in a manner that will assure that customers are paying for appropriate investments  
19 that are necessary for safe and reliable electric service.

1           **C.     Substation Renewals**

2           **Q.     Please summarize the key issues raised in Mr. Demmer’s testimony with respect to**  
3           **the Substation Renewals component of the Company’s GTEP proposal.**

4           A.     Mr. Demmer recommends that the Commission deny recovery of the proposed accelerated  
5           replacement of oil circuit breakers (“OCBs”). According to Mr. Demmer, recovery should  
6           be denied because the Company has failed to establish the four bases advanced by the  
7           Company in support of the program: (1) OCBs have failed resulting in widespread outages;  
8           (2) OCBs are costly to maintain; (3) OCBs may result in costly environmental damages  
9           upon failure; and (4) a significant number of the Company’s OCBs are in excess of 40  
10          years old. (Demmer Test. at Bates 14).

11          Concerning widespread outages, Mr. Demmer argues that the Company was only able to  
12          identify two OCB failures in 2005, which resulted in a loss of power to 25,000 customers  
13          (*id.* at 15). Regarding maintenance costs, Mr. Demmer argues that because the cost of  
14          replacing an OCB is approximately \$500,000, the difference in annual maintenance costs  
15          between an OCB and a vacuum breaker of \$650/year does not support accelerated OCB  
16          replacement (*id.*). On the subject of environmental impacts, Mr. Demmer argues that the  
17          Company was unable to provide a specific example of any cleanup efforts and the relevant  
18          costs associated with OCB bushing failures (*id.*). Lastly, with respect to the age of the  
19          Company’s OCBs, Mr. Demmer argues that only approximately 30 percent of the  
20          Company’s OCBs are beyond their useful life of 55 years and replacement of high cost

1 items before the end of their useful life should only occur when adequate justification is  
2 provided (*id.* at 16).

3 **Q. How do you respond to Mr. Demmer’s assertions regarding the Substation Renewals**  
4 **component of the Company’s GTEP proposal?**

5 A. Based on consideration of Mr. Demmer’s viewpoint, the Company is willing to drop the  
6 Substation Renewal components from its GTEP proposal. The Company will work to  
7 perform this work through its base capital plan. The other part of the GTEP proposal are  
8 far more critical (i.e., pole replacement and line reconstruction and reconductoring).

9 **D. Other Resilience Investments**

10 **Q. Please summarize the concerns express by Mr. Demmer with respect to the resiliency**  
11 **investments made by the Company.**

12 A. Mr. Demmer asserts that the Company has made multiple, resiliency investments over the  
13 past three years that appear to be driven by an enterprise-wide initiative for distribution  
14 resiliency in Connecticut, Massachusetts and New Hampshire (Demmer at 16). Although  
15 Eversource Energy is focused on good performance on an overall, enterprise-wide basis,  
16 PSNH is not choosing projects for replacement on the basis that the project is enabling  
17 service quality *in some other jurisdiction*. To the contrary, the Company has a deep and  
18 abiding concern for the customer outcome in the absence of increased capital investment  
19 to address aging and poor-condition infrastructure.

20 For example, Mr. Demmer views the Company’s policy of replacing all poles in the public  
21 ROW with a minimum Class 2 pole as excessive and not justifiable because, in part, Class

1 2 poles are \$75 more expensive than the previous Class 4 standard poles (*id.* at 17). Mr.  
2 Demmer adds that: “[t]he Company has stated a 50% increase in pole strength due to the  
3 new Class 2 standard; however, since the standard pole was a Class 4 pole and that standard  
4 was driven by actual field conditions (weight of the attachments, wire tension, and guying)  
5 and calculated by distribution design engineer, the additional strength of the new standard  
6 Class 2 pole is excessive and not justifiable.” (*id.*).

7 Mr. Demmer is also concerned about the Company’s new standard of replacing wooden  
8 cross arms with fiberglass crossarms because the increase in structural strength is  
9 “excessive” and the cost increase is approximately \$65 higher per unit (*id.*). However, these  
10 composite crossarms have twice the life span of a wooden cross arm (thereby eliminating  
11 a replacement cycle and saving that cost) and serve as a critical component for energized  
12 wire attachments between pole and insulator.

13 Lastly, Mr. Demmer takes issue with the Company’s new standard of using light duty steel  
14 poles instead of wood poles in ROWs (*id.* at 18). According to Mr. Demmer, the Company  
15 is “installing an asset that is higher in cost and has an increased strength that is redundant  
16 and will not be utilized.” (*id.*). However, Mr. Demmer does not factor in the life cycle cost  
17 of a steel pole vs. wood pole; the manufacturing consistency of the steel pole compared to  
18 wood or escalating costs of compliance with environmental regulation in ROWs. Mr.  
19 Demmer’s claims reference material component cost only. The life-cycle perspective is  
20 critical in this analysis because, while Mr. Demmer is focused on the cost of one material

1 component today versus another component, the Company is able to avoid a whole cycle  
2 of replacement by stepping up to the *slightly* more expensive material component, but one  
3 that last substantially longer than the less expensive component. Therefore, the Company  
4 views that additional discussion may enable the Company and Staff to map out an  
5 appropriate cost justification for the change.

6 **Q. How do you respond to the concerns express by Mr. Demmer with respect to the**  
7 **resiliency investments made by the Company?**

8 A. The Company's reliability investment strategy coupled with the vegetation management  
9 programs have demonstrated clear benefits as outlined in the Company's testimony. As  
10 stated, the number of outages occurring annually has remained relatively consistent, while  
11 the number of customers restored in under 5 minutes through automation and circuit ties  
12 continues to increase which is reducing the number of customers impacted for each of these  
13 outages. To continue to maintain the safety of our system and existing system  
14 performance, .the investment strategy must expand to the include the acceleration of  
15 replacement rates of the aging infrastructure in the field to reduce the inevitable costs in  
16 the future. The Company's rate proposals in this proceeding are directly founded upon the  
17 need to support the system with capital work and vegetation management work, as well as  
18 other items. The step adjustments are an absolutely necessity for the Company if the  
19 Commission does not allow the GTEP funding.

1           **E.     Response to CENH**

2       **Q.     Please summarize the issues raised by Clean Energy New Hampshire (“CENH”)**  
3       **witness Madeline Mineau in her testimony.**

4       A.     Ms. Mineau states that CENH has two primary concerns with respect to the Company’s  
5             GTEP proposal (Mineau at Bates Page 6). First, Ms. Mineau argues that GTEP does not  
6             contain grid-transformational projects but rather, the proposals are focused system on  
7             resiliency and reliability, which are traditional and standard goals of a distribution utility  
8             (*id.*). Therefore, according to Ms. Mineau, the GTEP investments should not be subject to  
9             special rate treatment and recovery under the separate DRAM mechanism (*id.* at 5-6). Ms.  
10            Mineau further adds that the proposed acceleration of pole replacement would not add any  
11            tangible benefit to the integration of clean energy into the electric distribution system (*id.*  
12            at 3).

13            Second, Ms. Mineau argues that to the extent there any projects aimed at facilitating the  
14            integration of advanced energy solutions, those projects should be addressed in the grid  
15            modernization proceeding (Docket No. IR 15-296) where a “unified framework” can be  
16            developed for all the regulated utilities in New Hampshire (*id.*).

17       **Q.     How do you respond to these issues?**

18       A.     Ms. Mineau is incorrect in her assertion that the GTEP investments are more properly dealt  
19             with in the context of the grid modernization proceeding. As discussed in response to Staff  
20             10-012 and 10-016, the Staff Recommendation stated at page 25, in Docket No. IR I5-296,  
21             that grid modernization will occur in three “conceptual stages.” (STAFF 15-006). Stage 1

1 is Planning-Reliability & Operational Efficiency, which entails “enhancing reliability,  
2 resilience and operational efficiency while addressing aging infrastructure replacement.”  
3 (*id.*). The Staff Recommendation further states that "a significant part of this stage contains  
4 “business as usual” distribution investments due to aging infrastructure refresh  
5 requirements." (*citing*, U.S. Department of Energy, Office of Electricity & Energy  
6 Reliability, Modern Distribution Grid Report, Volume III, 2017) (*id.*). The Company’s  
7 GTEP proposal addresses foundational investments that the Commission has identified as  
8 the necessary precursor to grid modernization (*id.*). As described in my initial testimony  
9 with Mr. Lajoie, the GTEP is designed to allow for an accelerated pace of replacement to  
10 create the foundation for future grid-modernization objectives in a time period shorter than  
11 the prolonged time period that will be needed if the current pace of replacement is  
12 maintained (*id.*; *see also* Purington-Lajoie Test. at Bates 437, 444).

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

14 **A. Yes.**