BEFORE THE

PUBLIC UTILITIES COMMISSION

OF NEW HAMPSHIRE

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A/ EVERSOURCE, REQUEST FOR CHANGE IN DISTRIBUTION RATES	))))))	**Docket DE 24-070**

Direct Testimony of
Ben Havumaki

On Behalf of
The Office of Consumer Advocate

January 23, 2025

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I. INTRODUCTION AND QUALIFICATIONS

Q Please state your name, title, and employer.

A Mr. Havumaki: My name is Ben Havumaki. I am a Principal Associate at Synapse Energy Economics (Synapse), located at 485 Massachusetts Avenue #3, Cambridge, MA 02139.

Q Please describe Synapse Energy Economics.

A Synapse is a research and consulting firm specializing in electricity and gas industry regulation, planning, and analysis. Our work covers a range of issues, including economic and technical assessments of demand-side and supply-side energy resources; energy efficiency policies and programs; integrated resource planning; electricity market modeling and assessment; renewable resource technologies and policies; and climate change strategies. Synapse works for a wide range of clients, including attorneys general, offices of consumer advocates, public utility commissions, environmental advocates, the U.S. Environmental Protection Agency, the U.S. Department of Energy, the U.S. Department of Justice, the Federal Trade Commission, and the National Association of Regulatory Utility Commissioners. Synapse has over 40 professional staff with extensive experience in the energy industry.

Q Please summarize your professional and educational experience.

A Since arriving at Synapse in 2018, I have focused on electric and gas utility regulatory issues, usually in the context of litigated proceedings. I provide technical analysis, consulting, and expert witness support in general rate cases, where I focus on rate design and cost allocation. I also have expertise in performance-based regulation and grid modernization, and I focus on helping stakeholders navigate the many interactions between these emerging paradigms on the one hand, and enduring utility regulatory principles and priorities on the other. I have provided testimony in Georgia, Illinois, Minnesota, Rhode Island, New Hampshire, New Brunswick, Pennsylvania, and West Virgina. I have also drafted comments and contributed to formal reports in numerous other jurisdictions in the United States and Canada. I hold a Bachelor of Arts degree in History from McGill University and a Master of Arts degree in Applied Economics from the University of Massachusetts. My resume is attached as Schedule BH-1.

Q Have you previously testified before the New Hampshire Public Utilities Commission?

A Yes. I sponsored written testimony before the New Hampshire Public Utilities Commission (the Commission) in Docket DE 21-030, the general rate case of Until Energy Systems, Inc., and in Docket DG 21-104, the general rate case of Northern Utilities, Inc.

Q On whose behalf are you testifying in this case?

A I am presenting testimony on behalf of the Office of the Consumer Advocate (OCA).

Q What is the purpose of your testimony?

A The purpose of my testimony is to address certain aspects of the distribution rate application of Public Service Company of New Hampshire d/b/a Eversource (hereafter "the Company"). Specifically, my testimony addresses the revenue cap formula and performance mechanisms that are components of the Company's proposed PBR Plan.

Q What materials did you rely on to develop your testimony?

A The sources for my testimony are the Company's application and responses to discovery requests, public documents, and my professional knowledge and experience.

Q Was your testimony prepared by you or under your direction?

A Yes.

II. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Q Please summarize your primary conclusions.

A My primary conclusions are as follows:

1. Adopting a multi-year rate plan (MRP) for Eversource may be reasonable if risks and benefits can be appropriately balanced. Eversource's current proposal unduly shifts risks to ratepayers and should be modified as recommended in my testimony.
2. In general, linking revenue increases during the MRP term directly to utility spending erodes cost containment incentives for the utility. Thus, the Commission should only accept Eversource's proposal to include a mechanism for supplemental revenues driven by the Company's own spending during the MRP term if the Commission finds that Eversource has demonstrated that such supplemental revenues are truly required due to increases in the level of necessary capital investment.
3. A K-Bar mechanism, if properly designed, is an acceptable approach for providing supplemental revenue during the term of the next MRP. The K-Bar mechanism proposed by Eversource, as well as alternative mechanisms discussed in my testimony, should not be adopted because each contains significant design flaws that would harm ratepayers.
4. Eversource's proposed service quality metrics unduly shift risk from the Company to its customers.

Q Please summarize your recommendations.

A My recommendations are as follows:

1. If the Commission approves an MRP for Eversource and determines that Eversource has reasonably demonstrated that it requires supplemental revenues to support necessary capital investment spending during the forthcoming MRP term, then the Commission should approve Eversource's proposed K-Bar mechanism, with the following modifications:

   a. The Commission should eliminate the variance proposed by the Company that would allow for the total value of new capital additions included in the calculation of the annual K-Bar allowance to exceed the forecasted budget for the given year by up to 10 percent.

   b. The limit on capital additions that may be included in calculating the K-Bar allowance should be capped at the forecasted budget amount for the given year.

   c. The Commission should not permit the Company to exclude co-optimization investments from the cap on the annual K-Bar adjustment.

2. If the Commission approves the K-Bar mechanism as a component of the revenue cap formula, then the Commission should establish a formal annual review process for capital additions made during the MRP term, as described below.

   a. The Commission should require the Company to make an annual filing that should include at least the following components:

      i. A forecast of the capital projects planned to go into service in the rate year, along with the costs of those projects ("Annual MRP Forecast").

      ii. A detailed comparison between the Annual MRP Forecast and the forecast for the same year provided in the Distribution Solutions Plan (DSP), identifying any projects that appear in one forecast but not the other, any differences in project costs or timing between the two forecasts for projects appearing in both forecasts, and the difference in aggregate costs between the Annual MRP Forecast and the forecast for the same year in the DSP.

      iii. The actual distribution plant additions reported on FERC Form 1 for the prior calendar year.

iv. Workpapers presenting the calculation of the K-Bar allowance and adjustment.

b. The Commission should establish a process for this annual review with scope for intervenor participation. Through this process, intervenors should be permitted to ask discovery questions and to address the reasonableness of specific investments through written comments, testimony, or some other formal written submission that would contribute to record development.

c. If the Commission determines that any new additions are substantially lacking in merit, to the extent that it appears likely that they would be disallowed in the context of a prudence review, then any such new additions should be placed into a regulatory tracker and excluded from the calculation of the K-Bar adjustment.

3. The service quality metrics should be modified as follows:

a. The deadband should be constructed to be equal to one standard deviation *above* the target rather than two standard deviations on either side of the target.

b. The Company should not be permitted to retain credits for use in offsetting future penalties.

III. A MULTI-YEAR RATE PLAN FOR EVERSOURCE IS REASONABLE

Q What is a multi-year rate plan?

A A multi-year rate plan or MRP is an alternative form of ratemaking with certain features that distinguish it from the traditional, cost-of-service approach. In each year during the term of an MRP, the utility is granted an annual revenue adjustment that is calculated formulaically and used to determine the utility's base revenue requirement for the year. In turn, the utility is not permitted to file a rate case for the duration of the MRP, which is termed the "stay-out" period.

Q How is the annual revenue adjustment for each year determined under the Company's MRP proposal?

A The Company has proposed a revenue cap formula as a component of its PBR plan to determine this annual revenue adjustment.[1] At a high level, the adjustment accounts for inflation (I-factor) and productivity trends (X-factor), certain exogenous events (Z-factor), changes in the rolling average of capital investments (K-Bar adjustment), a stretch factor (consumer divided), and an earnings sharing mechanism (ESM).

Q How long is the stay-out period under the Company's proposal?

A The Company proposes a four-year stay-out period. In addition, the Company also proposes that it be permitted to request an extension of the stay-out period for up to another four years.[2]

Q What is the timeline of rate increases proposed by the Company in the PBR plan?

A The Company's proposed PBR plan provides for four revenue increases: an initial adjustment in the first year, which would be effectuated through a one-time K-Bar increase, followed by annual increases mediated by the whole revenue cap formula that would take effect on August 1 of each year 2026-2028.[3,4] The Company would be eligible to file for a base rate increase on August 1, 2029.[5]

[1] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 36 with adjustments based on Attachment ES-EAD-8 pp. 9 – 10.
[2] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 72, lines 11 – 16.
[3] The Company calculated a required distribution revenue increase of $181,898,881 based on a test-year ending on December 31, 2023.

[4] Eversource Response to PUC 1-003, pp. 2-3.
[5] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 42 lines 6-9.

Q What is the K-Bar mechanism?

A The K-Bar mechanism is a supplemental capital mechanism that provides an adjustment to base revenues based upon a rolling three-year historical average of the Company's actual capital revenue requirement.

Q How does the K-Bar mechanism work?

To determine the K-Bar adjustment for a given year, the Company calculates a parallel K-Bar revenue requirement that is the average of the actual capital revenue requirement for each of the prior three years. The Company proposes that there be a cap on the total value of capital additions made during an MRP year that may included in the K-Bar revenue requirement equal to 10 percent above the forecast capital expenditure for that year in the DSP.[6]

Q Does the Company propose any exceptions in the K-Bar calculation?

A Yes. The Company proposes that co-optimization investments be excluded from the K-Bar cap.[7] This would allow the Company to recover any co-optimization investments that exceed the K-Bar cap through the K-Bar mechanism.

Q What are the benefits that the Company cites for the PBR plan?

A The Company states about PBR that it is "the optimal ratemaking mechanism to promote long-term cost control, mitigate bill impacts for customers and avoid the need for multiple, sequential base distribution rate proceedings, as would otherwise be needed to address the rising costs of providing electric service on a distribution system experiencing

[6] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 43, lines 7-8.
[7] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 59, lines 12-17.

increasing investment requirements, largely due to aging infrastructure and the need to modernize the grid, increased customer expectations, and increased system impacts caused by the frequency and magnitude of major storms."[8]

Q Does the Company specifically address the benefits of its revenue cap formula?

A Yes, the Company does address the revenue cap formula in the context of the broader discussion of PBR benefits. The Company states that "the annual revenue adjustments provided each year are intended to track an industry cost trend, providing a revenue 'allowance' to the Company to support utility operations while the stay-out term pushes the utility to achieve cost efficiencies in order to maintain financial integrity within the parameters of the annual revenue adjustment."[9]

Q Do you agree with the Company's description of the benefits of an MRP?

A Yes, I agree with the Company's description of the *theoretical* benefits of an MRP and revenue cap formula. If properly designed, these ratemaking structures can promote cost control, rate stability, and administrative efficiency. It is critical, however, that the revenue cap formula and other regulatory provisions associated with the MRP strike an appropriate balance between risk and reward for the Company. If the revenue cap formula is appropriately designed, then it should induce the Company to operate more efficiently and should also provide for regulatory efficiency, reducing the frequency of rate cases.

[8] Direct Testimony of D. Foley, R. Coates, and D. Horton, pp. 36-37.
[9] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 39.

Q Should the Commission establish an MRP and revenue cap formula for the Company?

A I believe that it is reasonable for the Commission to establish an MRP and revenue cap formula for the Company. However, the Company's proposal suffers from certain flaws. Therefore, while I am supportive of the Commission adopting an MRP for the Company with annual revenue adjustments determined through a revenue cap formula, I do not support every detail of the Company's proposal.

IV. THE COMMISSION SHOULD ONLY AUTHORIZE THE K-BAR MECHANISM UNDER CERTAIN CIRCUMSTANCES

Q What are your concerns about the Company's revenue cap formula proposal?

A I am mainly concerned about the Company's proposed K-Bar mechanism. This is not a mainstream or essential element of a revenue cap formula, and I cannot offer unqualified support for it. The K-Bar mechanism should only be adopted in certain limited circumstances. It should not embraced as an enduring feature of ratemaking in New Hampshire. Further, even if the K-Bar mechanism were to be adopted as a component of the revenue cap formula, I would not recommend that the Commission grant the Company's specific K-Bar proposal.

Q Under what circumstances should the Commission approve a K-Bar mechanism as a part of the revenue cap formula?

A The Commission should only approve a K-Bar mechanism if the Commission finds that the Company has demonstrated the reasonableness of its capital investment spending plans for the forthcoming MRP term. In such a case, the Commission may choose to approve the K-Bar mechanism, but only if it also makes the specific modifications to the K-Bar mechanism that I recommend in the next section.

Q Why would it be acceptable for the Commission to approve a K-Bar mechanism in this limited case?

A If the Company's spending forecast is reasonable and the Company goes forward with the forecast level of spending without any supplemental revenue mechanism included as a part of the revenue cap formula, then its earned ROE would be expected to fall significantly over the term of the next MRP. The K-Bar mechanism would help to stem this earnings erosion.[10]

Q Would the Company actually proceed with its spending plans if the Commission were not to approve the proposed K-Bar mechanism?

A It is not possible to say. A key premise of alternative ratemaking is that the ratemaking structure itself affects the extent to which the subject Company seeks to minimize costs and find efficiencies.[11] Furthermore, the Company's discussion of certain types of contemplated investments, including co-optimization investments and grid modernization projects, acknowledges that the Company necessarily exercises some discretion in which projects it chooses to pursue.[12]

[10] Eversource Response to OCA 1-081, Attachment OCA 1-081(a)
[11] An Overview of Performance Based Regulation and Its Application. M. Kolesar and A. Ros, pp. 7-11.
[12] Direct Testimony of D. Foley, R. Coates, and D. Horton, pp. 58-61.

Q What is the implication of your observation that ratemaking structures may affect investment behavior?

A For the present case, the implication is that the Commission's approval of the K-Bar mechanism as a component of the revenue cap formula is also an endorsement in some fashion of the Company's spending program. Approving the K-Bar mechanism could catalyze an increase in investment activity to an extent that might not occur under a different ratemaking structure.

Q Why do you offer qualified support for the K-Bar mechanism rather than for another alternative to provide supplemental revenues during the term of the MRP?

A While the K-Bar mechanism suffers from certain deficiencies in attenuating the cost control incentives associated with the MRP, it is as good as or better than several flawed options for providing supplemental revenues during the MRP term.

Q Why do you find that the alternatives to the K-Bar mechanism are no better or possibly worse than a properly designed K-Bar mechanism?

A I focus on two main alternatives: the system of step-increases under which the Company previously operated, and an alternative capital tracker that would provide for recovery of new investments in a dollar-for-dollar manner. Step increases may be worse than the K-Bar mechanism because they are unlikely to provide for as much regulatory lag as would the K-Bar mechanism; the K-Bar adjustment is based upon a historical average, whereas step increases are based on specific-year capital needs. Meanwhile, capital trackers that provide dollar-for-dollar recovery of additions made during the stay-out period are likely worse than the K-Bar mechanism because they effectively remove regulatory lag.

Q Why is regulatory lag desirable?

A From the customer's perspective, regulatory lag is desirable because it means that the utility must put its own dollars at risk and wait some period before it can begin recovery of an investment, encouraging financial discipline and cost control.

Q Do you agree with the Company's justifications for the K-Bar mechanism?

A Not entirely. I find certain aspects of the Company's defense of its K-Bar mechanism proposal to be problematic. The Company suggests that it is opting for the K-Bar mechanism rather than a negative X-factor because "a negative X-factor may be unpalatable for the Commission."[13] The Company further states that "it is proposing to set the X-factor to zero and to substitute the K-bar mechanism to create a tighter link to capital expenditures."[14]

Q Why do you take issue with the Company's suggestion that it is proposing a K-Bar mechanism as a substitute for a negative productivity factor?

A Because this statement makes a category error. The K-Bar mechanism is fundamentally unlike the X-Factor and is not a substitute for a negative X-Factor in either concept or effect. The X-Factor supports the PBR objective of uncoupling utility revenues from utility spending; the K-Bar mechanism strengthens the link between utility spending and utility revenues during an MRP. All else equal, strengthening this link is not desirable during an MRP. In effect, the Company would need a very negative X-factor to provide the level of revenue support that its proposed K-Bar mechanism is expected to yield.

[13] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 48 lines 16-18.
[14] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 48 lines 16-18.

Making the X-factor so negative would be arbitrary and would likely result in controversy.

Q Why do you take issue with the Company's portrayal of a tighter link between actual capital expenditures and revenues?

A All else equal, this tighter link is *undesirable* in the context of PBR. The tighter link between revenues and spending that the K-Bar mechanism provides relative to a negative X-factor or step increases is only a benefit if there is a concession to the need for supplemental revenues. In other words, once it has been determined that the revenue cap formula will need to include some supplemental revenue mechanism, then providing for sufficient linking between actual spending and supplemental revenues is desirable. In this context, it is also necessary to ensure sufficient transparency into, and accountability for the spending that is driving these supplemental revenues. I address the need for transparency and accountability in the next section on recommended modifications to the K-Bar mechanism.

Q Do you support making the K-Bar mechanism an enduring feature of the Company's revenue cap formula?

A No. My support for the K-Bar mechanism is conditional. The K-Bar mechanism should be approved only on an as-needed basis in special cases where the Company's forecast capital spending *needs* significantly exceed those of its utility peers.

V. THE COMMISSION SHOULD MODIFY THE K-BAR MECHANISM IF ADOPTED TO ENHANCE TRANSPARENCY AND INCREASE ACCOUNTABILITY

Q What are the specific features of the Company's proposed K-Bar mechanism design that raise concerns?

A The Company's proposal does not provide for sufficient review of new capital additions during the term of the MRP. The proposal is also overly flexible, both in providing for a variance that would allow spending in excess of forecast levels to count in the calculation of the K-Bar revenue requirement, and in excluding co-optimization investments from the K-Bar cap.

Q Why are review and accountability important for new capital additions made during the term of the MRP?

A Without a supplemental capital support mechanism, there is less concern about capital investments during the term of an MRP because the subject utility is structurally incentivized not to spend wastefully. With the K-Bar mechanism included as a component of the revenue cap formula, however, the cost control incentives inherent in an MRP may be attenuated since new capital additions will drive an increase in supplemental revenues through the K-Bar up to the cap established on the K-Bar adjustment. Moreover, the expected scale of supplemental revenues provided by the K-Bar mechanism is very significant.

Q How much additional revenue is the K-Bar mechanism expected to provide?

A According to the Company's projection, about $300 million in supplemental revenues is expected to flow through the K-Bar mechanism between 2025–2028.[15]

Q How do you recommend that the Commission strengthen transparency and accountability for new capital additions made during the MRP?

A I recommend that the Commission establish an annual review process with scope for stakeholder participation. As a component of this annual process, the Company would be required to make a filing including at least the following components:

- A forecast of the capital projects planned to go into service in the rate year, along with the costs of those projects ("Annual MRP Forecast").
- A detailed comparison between the Annual MRP Forecast and the forecast for the same year provided in the Distribution Solutions Plan (DSP), identifying any projects that appear in one forecast but not the other, any differences in project costs or timing between the two forecasts for projects appearing in both forecasts, and the difference in aggregate costs between the Annual MRP Forecast and the forecast for the same year in the DSP.
- The actual distribution plant additions reported on FERC Form 1 for the prior calendar year.
- Workpapers detailing the calculation of the K-Bar adjustment for the forthcoming year.

Q How would the review process work?

A After the Company makes each annual filing, the Commission should establish a review process with scope for stakeholder participation. The Commission should then use its discretion to selectively review certain new capital additions. Intervenors might also

[15] Eversource Response to TS1-002, p. 2.

petition the Commission for more intensive review of specific capital additions. If any new additions are found to be substantially lacking in merit, to the extent that it appears likely that they would be disallowed in the context of a prudence review, then any such new additions should be placed into a regulatory tracker and excluded from the calculation of the K-Bar adjustment.

Q Please explain your concern with the 10-percent variance proposed for spending above forecast levels.

A This variance would enable the Company to recover through the K-Bar mechanism a portion of investment spending exceeding the forecast level in the DSP. The Company has not provided justification for this variance. As it stands, the K-Bar mechanism should be viewed as an exception to the ideal revenue cap formula. It is therefore necessary to establish tight guardrails around this supplemental revenue mechanism.

Q What is your recommendation concerning this variance?

A I recommend that this variance be eliminated and that the K-Bar cap be set at the level of investment forecast in the DSP.

Q What is your concern about excluding co-optimization projects from the K-Bar cap?

A The Company has not fully justified the need for these exclusions. To the maximum extent possible, these projects should be included in the Company's investment plans so that they can be reviewed during the instant proceeding. To the extent that given projects may not be included in the DSP –as, for example, in the case of certain co-optimization projects where the opportunity is emergent without significant lead time– the Company should still proceed with these projects to the extent that they appear reasonable to the

Company, even without prior authorization and even if this means that the K-Bar cap will be exceeded and that the Company will be able to recover a comparatively smaller share of its new capital investments during the term of its MRP.

Q Are you concerned that the Company will not pursue beneficial projects if not granted the requested exclusions?

A I recognize that this is a possibility, though I'm not sure that it would reflect well on the Company if it skipped projects merely because of regulatory lag or the absence of prior authorization.

VI. THE COMMISSION SHOULD MODIFY THE SERVICE QUALITY METRICS

Q Please summarize the Company's performance metrics proposal.

A The Company proposes seven total metrics, including two metrics with penalties, which the Company refers to as the "service quality metrics" and five reporting metrics. The service quality metrics address the reliability outcomes of SAIDI and MBI, and the reporting metrics cover customer satisfaction, solar interconnection, customer work requests, and active demand response.[16]

Q Which portions of the Company's performance metrics proposal do you address through your recommendations?

A I have focused on the proposed service quality metrics, since these are specified with penalties. I do not have any specific concerns about the proposed reporting metrics; in

[16] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 31.

general, I believe that reporting metrics are a low risk and potentially high reward part of the regulatory framework.

Q Please summarize the Company's service quality metric proposals.

A The Company proposes two incentive mechanisms, for System Average Interruption Duration Index (SAIDI) and for Months Between Interruptions (MBI), which is equivalent to the System Average Interruption Frequency Index (SAIFI) metric. For each of these metrics, the Company proposes to establish the target for a given year based upon a five-year rolling historical average of performance that is *inclusive* of the given year. Around this average, the Company proposes to construct a deadband that is equal to two standard deviations on either side, calculated from the same five-year sample of performance. For the given measurement year, only performance above the penalty threshold (calculated as the target for the same year plus two standard deviations) would result in a penalty. The Company proposes to set the penalty at $1.5 million. Finally, the Company proposes that it be permitted to retain a credit for any year in which its performance is better than the target *minus* two standard deviations; this credit could then be used to offset a future penalty, should any be incurred.[17]

Q Do you support the Company's service quality metric proposals?

A I support these proposals in concept. Establishing accountability for service reliability through penalty-only mechanisms is an establish practice that can help to ensure that a given utility assigns sufficient priority to reliability performance – especially during the

[17] Direct Testimony of R. Coates, P. Renaud, B. Dickie, W. Boutin, S. O'Brien, and A. Findlay, pp. 12-17.

stay-out term of an MRP when the incentives to cut spending may be at cross purposes from achieving sound reliability.

Q Do you have any concerns about the Company's proposed service quality metrics?

A Yes. While I support the Company's proposal for these metrics in concept, I do not agree with certain details in this proposal. Specifically, I do not support the proposed provision for retaining credits from good performance to offset future penalties incurred for poor performance. Further, I find that the proposed deadband is too large. Finally, I am concerned about the Company's proposal to include given-year performance results when setting the performance target and calculating the deadband for the same year. Rectifying these issues is critical if the service quality metrics are to serve their purpose as a bulwark against poor performance.

Q What are your specific concerns about the proposed crediting approach?

A As proposed by the Company, the crediting approach would render the two service quality metrics quasi-symmetrical; if the Company is able to retain credits from good performance years for use in bad performance years, then these metrics cannot truly be considered to be penalty-only in their structure. The purpose of the service quality metrics is not to induce reliability performance improvements so much as to backstop against eroding performance. Under the Company's proposal, a year of very good performance would offset a year of very bad performance. But from the customer's perspective, such an outcome is hardly desirable, since a good performance year does not redeem a bad one.

The service quality metrics proposed by the Company would have large deadbands, and these metrics are normalized to exclude major event days, so the threshold for incurring a penalty under the Company's proposal is very high. Things would have to go very poorly in order for the Company to be penalized. It is not clear why the Company would require further insulation from the incurrence of penalties through the crediting approach that it has proposed.

Q What do you recommend concerning the proposed crediting approach?

A I recommend that the Company not be permitted to retain credits from good performance years for potential use in offsetting future penalties.

Q What are your specific concerns about the proposed deadband?

A The deadbands that have been proposed by the Company for the service quality metrics are very large. The Company has proposed a deadband of plus or minus two standard deviations around the performance target for each service quality metric. If the Company's statistical approach is taken to be valid –there may be statistical issues with calculating standard deviations from such a small sample that is representative of a population that may not even be normally distributed– then the two standard deviations represent about 96 percent of total outcomes. In other words, the theoretical implication of the Company's proposal with respect to the deadband is that, under its proposed approach, the Company would only incur penalties or receive credits in about one out of every 25 years. This assessment is supported by the Company's own analysis of how it would have fared in past years had these service quality metrics been in effect, which is provided in the direct testimony of Coates, et al.[18] Per the Company's analysis, under its proposal, it would have been neither penalized nor rewarded on either of its service quality metric in any of the years between 2016-2023.

Q What do you recommend in regard to the proposed deadbands?

A I recommend that the deadbands be reduced to one standard deviation, which is consistent with the approach employed for reliability incentive mechanisms in Hawaii.[19] I would further clarify that were these service quality metrics to be rendered as truly penalty-only, as I recommend, through eliminating the crediting approach that the Company has proposed, then the deadband should only be added to the target to set the threshold for penalties. There would be no need for a deadband below the target to set any threshold for earning credits.

Q Should the Company be permitted to retain credits for good performance if the deadband is reduced in size?

A No, the crediting scheme proposed by the Company would still be unwarranted even with a reduced (but still adequate) deadband.

Q Why do you object to the Company's approach to setting targets and deadbands that is inclusive of the given year's performance?

A This approach is problematic since it results in a correlation between the given year's performance and the applicable performance target and deadband. Stated plainly, the

[18] Direct Testimony of D. Foley, R. Coates, and D. Horton, p. 15-16.
[19] Hawaiian Electric Company. Performance Incentive Mechanism Provision. June 1, 2021. Revised Sheet No. 98C.

Company benefits from this approach following bad performance, since a decline in performance results in a higher threshold for penalization.

Q What is your recommendation regarding the approach to establishing targets and deadbands?

A I recommend that performance targets and the standard deviations used to establish deadbands be calculated from a trailing five-year sample, with the given year's performance excluded. So, for example, to establish the performance targets and deadbands for 2024, historical data for the period 2019-2023 would be considered.

VII. SUMMARY OF FINDINGS AND RECOMMENDATIONS

Q Please summarize your primary conclusions.

A My primary conclusions are as follows:

1. Adopting a multi-year rate plan (MRP) for Eversource may be reasonable if risks and benefits can be appropriately balanced. Eversource's current proposal unduly shifts risks to ratepayers and should be modified as recommended in my testimony.

2. In general, linking revenue increases during the MRP term directly to utility spending erodes cost containment incentives for the utility. Thus, the Commission should only accept Eversource's proposal to include a mechanism for supplemental revenues driven by the Company's own spending during the MRP term if the Commission finds that Eversource has demonstrated that such supplemental revenues are truly required due to increases in the level of necessary capital investment.

3. A K-Bar mechanism, if properly designed, is an acceptable approach for providing supplemental revenue during the term of the next MRP. The K-Bar mechanism proposed by Eversource, as well as alternative mechanisms discussed in my testimony, should not be adopted because each contains significant design flaws that would harm ratepayers.

4. Eversource's proposed reliability PIMs unduly shift risk from the Company to its customers.

Q Please summarize your recommendations.

A My recommendations are as follows:

1. It is reasonable for the Commission to approve an MRP for Eversource.
2. If the Commission approves an MRP for Eversource and determines that Eversource has reasonably demonstrated that it requires supplemental revenues to support necessary capital investment spending during the forthcoming MRP term, then the Commission should approve Eversource's proposed K-Bar, with the following modifications:
    a. The Commission should eliminate the variance proposed by the Company that would allow for the total value of new capital additions included in the calculation of the annual K-Bar allowance to exceed the forecasted budget for the given year by up to 10 percent.
    b. The limit on capital additions that may be included in calculating the K-Bar allowance should be capped at the forecasted budget amount for the given year.
    c. The Commission should not permit the Company to exclude co-optimization investments from the cap on the annual K-Bar adjustment.
3. If the Commission approves the K-Bar as a component of the revenue cap formula, then the Commission should establish a formal annual review process for capital additions made during the MRP term, as described below.
    a. The Commission should require the Company to make an annual filing that should include at least the following components:
        i. A forecast of the capital projects planned to go into service in the rate year, along with the costs of those projects ("Annual MRP Forecast").
        ii. A detailed comparison between the Annual MRP Forecast and the forecast for the same year provided in the Distribution Solutions Plan (DSP), identifying any projects that appear in one forecast but not the other, any differences in project costs or timing between the two forecasts for projects appearing in both forecasts, and the difference in aggregate costs between the Annual MRP Forecast and the forecast for the same year in the DSP.
        iii. The actual distribution plant additions reported on FERC Form 1 for the prior calendar year.

iv. Workpapers presenting the calculation of the K-Bar allowance and adjustment.

b. The Commission should establish a process for this annual review with scope for intervenor participation. Through this process, intervenors should be permitted to ask discovery questions and to address the reasonableness of specific investments through written comments, testimony, or some other formal written submission that would contribute to record development.

c. If the Commission determines that any new additions are substantially lacking in merit, to the extent that it appears likely that they would be disallowed in the context of a prudence review, then any such new additions should be placed into a regulatory tracker and excluded from the calculation of the K-Bar adjustment.

4. The PIMs for SAIDI and MBI should be modified as follows:

a. The deadband should be constructed to be equal to one standard deviation *above* the target rather than two standard deviations on either side of the target.

b. The Company should not be permitted to retain credits for use in offsetting future penalties.

Q Does this conclude your testimony?

A Yes.

Ben Havumaki, Principal Associate

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PROFESSIONAL EXPERIENCE

Synapse Energy Economics, Inc., Cambridge, MA*. Principal Associate,* April 2024 – Present; *Senior Associate,* June 2021 – April 2024; *Associate,* July 2018 – June 2021.

- Provides research, analysis, and consulting services, frequently in the context of regulated proceedings, with expertise in the following topic areas:
  - Rate design and performance-based regulation: Evaluates utility proposals and formulates new recommendations based on best practices and informed by innovative emerging models. Evaluates rate designs for consistency with policy goals using quantitative modeling and jurisdictional data. Provides expert testimony and other formal input in the context of regulated proceedings.
  - Benefit-cost analysis: Evaluates utility BCAs with reference to best practices, including emerging standards for grid modernization and distributed energy resources. Engaged in the development of new BCA practices in the arenas of grid modernization and resilience.
  - Macroeconomic analysis: Uses the IMPLAN model in conjunction with primary research and analysis and core economic principles to evaluate the GDP, job, and income implications of major grid changes.
- Contributing author to reports covering a range of topics including plant decommissioning, transportation electrification, and distributed energy resources (DER) growth.

University of Massachusetts Boston, MA*. Graduate Teaching and Research Assistant,* 2017 – 2018

- Led ecosystem-valuation workshops for EPA-funded initiative to shape resilience policymaking in the Great Bay region of New Hampshire.
- Served as a teaching assistant in graduate econometrics course and undergraduate macroeconomics and urban economics courses.

Notre Dame Education Center and Jewish Vocational Service Boston, MA. *Math Instructor*, 2012 – 2017

- Taught foundational math to adult learners and standard high school math curriculum to students in non-traditional school program.

The City of New York New York, NY. *Senior Investigator*, 2007 – 2010

- Investigated complaints against officers of the New York City Police Department and issued disciplinary recommendations in formal reports to the agency board.

EDUCATION

University of Massachusetts, **Boston,** Boston, MA
Master of Arts in Applied Economics, 2018
Recipient of the Arthur MacEwan Award for Excellence in Political Economy

McGill University, Montreal, Quebec
Bachelor of Arts in History, 2007

PUBLICATIONS

Glaser Schoff, A., B. Havumaki, E. Borden, T. Nguyen. 2024. *Community Solar Garden Study, 2024.* Synapse Energy Economics with Great Plains Institute and the National Association of State Energy Offices for the Minnesota Commerce Department.

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Knight, P., J. Frost, T. Fitch, E. Sinclair, J. Tabernero, O. Griot, B. Havumaki, J. Smith, L. Metz, S. Chavin. 2023. *TVA's Clean Energy Future: Charting a course to decarbonization in the Tennessee Valley.* Synapse Energy Economics for GridLab and Center for Biological Diversity.

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Havumaki, B., C. Lane, D. Bhandari. 2022. *Comments on AGIS Related Scoping & Procedures: In Response to the Notice of Comment in Docket No. E-002/M-21-814*. Synapse Energy Economics for Minnesota Department of Commerce.

Havumaki, B., T. Woolf, C. Lane, E. Sinclair, C. Roberto, P. Alvarez. 2022. *Review and Assessment of Grid Modernization Plans: Guidance for Regulators, Utilities, and Other Stakeholders*. Synapse Energy Economics for Minnesota Department of Commerce.

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Kallay, J., A. Napoleon, J. Hall, B. Havumaki, A. Hopkins, M. Whited, T. Woolf, J. Stevenson, R. Broderick, R. Jeffers, B. Garcia. 2021. *Regulatory Mechanisms to Enable Investments in Electric Utility Resilience.* Synapse Energy Economics for Sandia National Laboratories.

Kallay, J., S. Letendre, T. Woolf, B. Havumaki, S. Kwok, A. Hopkins, R. Broderick, R. Jeffers, K. Jones, M. DeMenno. 2021. *Application of a Standard Approach to Benefit-Cost Analysis for Electric Grid Resilience Investments*. Synapse Energy Economics for Sandia National Laboratories.

Kallay, J., A. Napoleon, B. Havumaki, J. Hall, C. Odom, A. Hopkins, M. Whited, T. Woolf, M. Chang, R. Broderick, R. Jeffers, B. Garcia. 2021. *Performance Metrics to Evaluate Utility Resilience Investments.* Synapse Energy Economics for Sandia National Laboratories.

Woolf, T., D Bhandari, C. Lane, J. Frost, B. Havumaki, S. Letendre, C. Odom. 2021. *Benefit-Cost Analysis of the Rhode Island Community Remote Net Metering Program.* Synapse Energy Economics for the Rhode Island Division of Public Utilities and Carriers.

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Woolf, T., L. Schwartz, B. Havumaki, D. Bhandari, M. Whited. 2021. *Benefit-Cost Analysis for Utility-Facing Grid Modernization Investments: Trends, Challenges, and Considerations.* Prepared by Lawrence Berkeley National Laboratory and Synapse Energy Economics for the Grid Modernization Laboratory Consortium of the U.S. Department of Energy.

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Timmons, D., A.Z. Dhunny, K. Elahee, B. Havumaki, M. Howells, A. Khoodaruth, A.K. Lema-Driscoll, M.R. Lollchund, Y.K. Ramgolam, S.D.D.V. Rughooputh, D. Surroop. 2019. *Cost Minimization for Fully Renewable Electricity Systems: A Mauritius Case Study.* Energy Policy. 133, 110895.

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Havumaki, B., E. Camp, B. Fagan, D. Bhandari. 2019. *Planning for the Future at the CTGS Site: Report on the Decommissioning Proposal of Maritime Electric*. Synapse Energy Economics for Carr, Stevenson, and MacKay.

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Pennsylvania Public Utility Commission (Docket No. R-2023-3037933): Direct Testimony of Ben Havumaki on behalf of Power Interfaith. May 31, 2023.

Nova Scotia Utility and Review Board (NSUARB M11199): Expert Evidence of Ben Havumaki on behalf of Counsel to Nova Scotia Utility and Review Board. August 28, 2023.

New Brunswick Energy and Utilities Board (Matter 529): Expert Evidence of Synapse Energy Economics, Inc. On behalf of the New Brunswick Energy and Utilities Board. April 25, 2023.

Minnesota Public Utilities Commission (Docket No. E-002/GR-21-630): Direct and Surrebuttal Testimony of Ben Havumaki regarding Xcel Energy's application to increase rates. On behalf of the Division of Energy Resources of the Minnesota Department of Commerce. December 6, 2022, and October 3, 2022.

Public Utilities Commission of New Hampshire (Docket No. DE 20-161): Direct Testimony of Tim Woolf and Ben Havumaki regarding Eversource's 2020 least-cost integrated resource plan. On behalf of the Office of the Consumer Advocate. August 19, 2022.

Public Service Commission of West Virginia (Case No. 21-0857-E-CN): Direct Testimony of Ben Havumaki regarding the petition of Monongahela Power Company and the Potomac Edison Company for the issuance of a certificate of public convenience and necessity for environmental compliance and modernization, upgrade, and improvement program and related surcharge for coal-fired boilers at electric power plants. On behalf of Appalachian Mountain Associates. July 20, 2022.

Illinois Commerce Commission (Docket No. 22-0067): Direct and Rebuttal Testimony of Melissa Whited and Ben Havumaki regarding the performance incentive mechanisms and tracking metrics proposed by Commonwealth Edison Company and Ameren Illinois Company. On behalf of the State of Illinois. April 6, 2022.

Public Utilities Commission of New Hampshire (Docket DG 21-104): Direct Testimony of Ben Havumaki and Courtney Lane Regarding Northern Utilities' Proposed Rate Increase for the Residential Class and Multi-Year Rate Plan. On behalf of New Hampshire Office of the Consumer Advocate. April 1, 2022.

Illinois Commerce Commission (Docket No. 22-0063): Direct Testimony of Melissa Whited and Ben Havumaki regarding performance incentive mechanisms and tracking metrics proposed by Ameren Illinois Company. On behalf of the State of Illinois. March 30, 2022 and May 25, 2022.

Public Utilities Commission of New Hampshire (Docket DG 21-104): Direct Testimony of Courtney Lane and Ben Havumaki regarding Northern Utilities Inc.'s proposed multi-year rate plan, which includes a proposed residential customer charge, the company's reliance on the minimum-system method for classifying distribution mains costs and its implication for rate design and class cost allocation. On behalf of the Office of the Consumer Advocate. April 1, 2022.

Public Utilities Commission of New Hampshire (Docket No. DE 21-030): Direct testimony of Melissa Whited and Ben Havumaki regarding Until Energy Systems' multi-year rate plan, grid modernization proposal, overall rate increases for the residential class, allocation of costs among rate classes, increase to the residential customer charge, and revenue decoupling mechanism. November 23, 2021.

Rhode Island Division of Public Utilities & Carriers (Docket No. 5189): Direct Testimony of Tim Woolf and Ben Havumaki. November 17, 2021.

Hawaii Public Utilities Commission (Docket No. 2018-0088): Panel testimony by Ben Havumaki regarding performance incentive mechanisms. On behalf of the Division of Consumer Advocacy, Department of Commerce and Consumer Affairs. September 21, 2020.

Georgia Public Service Commission (Docket No. 42516): Direct Testimony of Melissa Whited and Ben Havumaki. On behalf of Sierra Club. October 17, 2019.

PRESENTATIONS

Woolf, T. B Havumaki. 2022. "Economic Assessment of Grid Modernization Plans." Presentation at the NASUCA 2022 Mid-Year Meeting.

Resume updated January 2025