BEFORE THE STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

In the matter of:

Public Service Company of New Hampshire	**)**
d/b/a Eversource Energy	**)**
DE 19-057	**)**

Direct Prefiled Testimony

Of

Scott J. Rubin
On behalf of AARP

Dated: **December 20, 2019**

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Introduction

Q. Please state your name and business address.

A. My name is Scott J. Rubin. My business address is 333 Oak Lane, Bloomsburg, PA.

Q. By whom are you employed and in what capacity?

A. I am an independent consultant and an attorney. My practice is limited to matters affecting the public utility industry.

Q. What is the purpose of your testimony in this case?

A. I have been asked by AARP and its New Hampshire state office to review various aspects of the proposed permanent rate increase, as well as various tariff provisions, filed by Public Service Company of New Hampshire d/b/a Eversource Energy ("Eversource" or "Company") in this case.

Q. What are your qualifications to provide this testimony in this case?

A. I have testified as an expert witness before utility commissions or courts in the District of Columbia, the province of Nova Scotia, and the states of Alaska, Arizona, California, Connecticut, Delaware, Kentucky, Illinois, Maine, Maryland, Minnesota, Mississippi, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, South Carolina, Washington, and West Virginia. I also have testified as an expert witness before federal, state, and local legislative committees. I also have served as a consultant to the staffs of four state utility commissions, as well as to several national utility trade associations, and state and local governments throughout the country. Prior to establishing my own consulting and law practice, I was employed by the Pennsylvania

Office of Consumer Advocate from 1983 through January 1994 in increasingly responsible positions. From 1990 until I left state government, I was one of two senior attorneys in that Office. Among my other responsibilities in that position, I had a major role in setting its policy positions on water and electric matters. In addition, I was responsible for supervising the technical staff of that Office. I also testified as an expert witness for that Office on rate design and cost of service issues.

Throughout my career, I developed substantial expertise in matters relating to the economic regulation of public utilities. I have published articles, contributed to books, written speeches, and delivered numerous presentations, on both the national and state level, relating to regulatory issues. I have attended numerous continuing education courses involving the utility industry. I also have participated as a faculty member in utility-related educational programs for the Institute for Public Utilities at Michigan State University, the American Water Works Association, and the Pennsylvania Bar Institute. Attachment SJR-1 to this testimony is my curriculum vitae.

Q. Have you published any papers on the topic of electric utility rate design?

A. Yes, in November 2015 I published a paper entitled "Moving Toward Demand-Based Residential Rates" in *The Electricity Journal*.

Q. Have you testified previously before this Commission?

A. Yes, I testified as an expert witness on behalf of the Office of Consumer Advocate in eight cases between 2011 and 2016. Most of those were rate cases involving several of the state's water, natural gas, and electric utilities.

Q. Do you have any recent experience that is particularly relevant to the issues in this case?

A. Yes, I do. From 2016 to the present, I have testified on rate design, cost allocation, and/or tariff and policy issues in rate cases involving the following electric utilities: Alaska Power, Ameren Illinois, Arizona Public Service, Central Maine Power, Commonwealth Edison (Illinois), Connecticut Light & Power, Liberty Utilities - Granite State Electric (New Hampshire), Massachusetts Electric and Nantucket Electric, Minnesota Power, NSTAR Electric and Western Massachusetts Electric, United Illuminating (Connecticut), Unitil Electric (New Hampshire), and UNS Electric (Arizona). I would note that these cases include recent rate cases for Eversource affiliates in Connecticut (Connecticut Light & Power where I testified on behalf of the Office of Consumer Counsel) and Massachusetts (NSTAR Electric and Western Massachusetts Electric where I testified on behalf of the Office of Attorney General).

AARP's Interest in this Case

Q. Why is AARP interested in this case?

A. Eversource provides electricity distribution service to almost 450,000 New Hampshire households. According to the U.S. Census, in 2017 there were about 1,331,000 people living in 627,000 housing units in the entire state.[1] So Eversource provides electric service to about two-thirds of all households in New Hampshire. AARP has more than 225,000 members in New Hampshire, or about one out of every six people living in the state. It is likely, therefore, that at least 75,000 of the Company's residential customers

[1] U.S. Census Bureau, American Community Survey 2013-2017, Table DP05, https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

include at least one AARP member. I am also advised by AARP's New Hampshire state office that several members of the state AARP Executive Council (its volunteer governing body) are Eversource customers.

Q. What are the qualifications to be a member of AARP?

A. To the best of my knowledge, the only requirements are to be age 50 or older and pay membership dues.

Q. Are the interests of older Americans different from the interests of utility consumers in general?

A. Yes. As people age, they tend to use less electricity than they did when they were younger. This can be due to several factors, including having fewer people living in the household (as children leave to establish their own households or families), moving to smaller housing units, and cutting back on energy consumption due to limited or fixed incomes once they retire. According to the U.S. Department of Energy's Residential Energy Consumption Survey (RECS), in 2015 the average New England household used about 7,500 kWh per year. Households headed by a person in their 60s, however, used an average of only about 6,780 kWh per year, while those in their 80s used less than 6,000 kWh per year. I provide a summary of my analysis of RECS data for New England in Attachment SJR-2.

Q. Does older Americans' lower energy consumption have any implications for utility ratemaking?

A. Yes. A sound utility rate design should provide all customers with an opportunity to reduce their bills by reducing their energy consumption. If a rate structure includes high fixed charges (that is, charges that do not vary with energy consumption), then customers lose the opportunity to benefit from lowering their consumption. This is particularly important for households headed by retirees living on fixed (and often lower) incomes.

In recent years, utility fixed charges have garnered increasing attention throughout the United States. High fixed charges can act as a disincentive to the installation of onsite generation and they can impose an onerous burden on lower-income customers. I have been involved in several rate cases over the past few years where utilities have been required to set their fixed charges so that they collect no more than the costs associated with metering, the service drop to the home, billing, and call center support. For example, when that requirement was implemented in Connecticut, Eversource's affiliate in Connecticut reduced its residential customer charge from more than $19 per month to less than $10 per month.

Overview and Summary

Q. Please provide an overview of your analyses, conclusions, and the focus of your testimony.

A. Eversource has asked to increase its distribution rates by $69.9 million -- a 19.9% increase over its existing permanent rates. The Company has proposed that the largest increase -- 23.9% -- should be borne by the Residential class of customers. All other

classes of customers would receive increases that are less than the overall percentage increase, with the Outdoor Lighting class receiving a 26.8% rate reduction.

The Company's filing also includes proposals for new automatic rate adjustments, changes in various miscellaneous charges, and changes in the rules and terms of service that are part of its tariff. My testimony addresses six issues that I believe have a significant effect on consumers in general and AARP members in particular. Briefly, the issues I will discuss are summarized as follows:

- **Proposed Distribution Recovery Adjustment Mechanism (DRAM).** The Company is proposing an automatic rate adjustment mechanism that would be used for a variety of adjustments and could be expanded even further in the future. I oppose the proposed DRAM both because of its scope and because it would violate the matching principle (that revenues, expenses, capital investments, and capital costs all should be synchronized to the same point in time). The purpose of the matching principle is to establish a relationship among all elements of the Company's operations so that the rates will reasonably reflect that relationship. That relationship would be broken by the selective adjustments proposed to be included in the DRAM.

- **Revenue decoupling.** Eversource has a revenue decoupling mechanism in place that is subject to being reviewed in this case. I recommend that the Commission reject the Company's proposal to continue its revenue decoupling experiment. Decoupling is not consistent with traditional regulatory principles, elevates the utility's interest above the interests of consumers, erodes the economic foundation underlying ratesetting, and is not necessary to ensure the provision of safe and reliable service at reasonable rates.

- **Allocation of any increase among customer classes.** Eversource has recommended a decrease of more than $2 million in Outdoor Lighting rates and an above-average increase in Residential rates. Utility ratemaking should have a long time horizon and rates should not bounce around (going up one year then down the next). Even if one accepts the results of the Company's cost-of-service studies, it is not reasonable to implement a large rate reduction for one class while imposing greater-than-average increases for other customer classes. Given the apparent

magnitude of the amount by which revenues exceed costs for the Outdoor Lighting class, I recommend freezing Outdoor Lighting rates at their present level. The difference should be used to reduce the increase for the Residential class, which is the only class receiving an above-average increase.

- **Residential customer charge.** Eversource's residential customer charge is currently $12.69 per month. The Company proposes to increase the charge to $13.89 per month. Such an increase is not needed to recover the basic costs associated with customer service (such as billing, metering, and call center activities). By way of comparison, Eversource's electric customer charges in Massachusetts and Connecticut are $7.00 and $9.44, respectively. As I explain below, high customer charges impose a significant burden on low-use customers, particularly those with low or fixed incomes, many of whom are elderly. I recommend, therefore, that any increase in Residential rates should be collected solely through increases in volumetric (per kilowatt-hour (kWh)) charges.

- **Optional Residential Time of Day Rate (Rate R-OTOD).** The Company has an optional time-of-use rate that, in theory, could provide some residential customers with an opportunity to reduce their bills for electricity distribution service. Unfortunately, the rate is not designed to be attractive to most residential customers. Incredibly, out of the Company's more than 400,000 residential customers, only 39 customers have signed up for the rate -- and most of those customers are worse off than they would be under the standard Residential rate (Rate R). I recommend, therefore, that the rate should be eliminated. The Company should be encouraged to work with other interested stakeholders and develop an optional time-of-use rate that has the potential to save customers money, and that is consistent with any potential savings in distribution costs the Company may incur if customers move their energy demands to off-peak periods.

- **Proposed anti-fraud measure.** The Company has proposed a new tariff rule (Rule 9) that would give residential and small business customers the option to ask the Company to "block Electronic Enrollments from Suppliers." I support this proposal as a common-sense measure to reduce the fraudulent practice known as "slamming" -- transferring a customer's supplier without the customer's knowledge and consent.

Proposed Distribution Recovery Adjustment Mechanism (DRAM)

Summary of Eversource's Proposal

Q. What is your understanding of the Company's proposed DRAM?

A. The actual DRAM tariff proposed by Eversource is very broad and general. Using the marked-up tariffs (Exh. EAD-2 (Perm)), the proposed DRAM is on Original Page 22 (Bates 001953). It states only that "the cost incurred by the Company for certain distribution related services not being recovered through the Company's base distribution rates" will be reconciled annually, or more often if there is a "significant over-recovery or under-recovery." The proposed tariff does not contain any information about the types of costs to be included in the DRAM and does not define "significant." The tariff also does not explain how the rate will be calculated, how costs will be allocated among customer classes, or any other provision that would inform customers about the costs that will be reconciled.

Q. What costs would be reconciled in the DRAM?

A. According to the testimony of witnesses Chung and Dixon, the Company proposes to include five types of costs in the initial DRAM, though other costs could be added in the future. The initial costs proposed for inclusion are major storm response costs; vegetation management; regulatory costs (such as Commission and Consumer Advocate consultant costs and assessments); costs of a new arrearage-forgiveness program for low-income customers; and costs under the general category known as the Grid Transformation and Enablement Program (GTEP), including system resiliency and rehabilitation and clean energy demonstration projects.

Q. Do you know how the DRAM would be calculated?

A. No. From the tariff, it appears that the resulting rate would be expressed in cents per kWh for classes without demand charges and in cents per kilowatt (kW) for classes with demand charges. See, for example, proposed Original Pages 41 and 50 (Bates 001978 and 001987) (the charges for Rates R and G, respectively). Eversource witness Davis states only that DRAM costs would be allocated "based on the allocations of distribution revenue ultimately approved by the Commission in this case." Davis PFT, p. 22 (Bates 001819). Neither his testimony nor the tariff provides any formulas to be used in determining the rates that would be paid by customers.

Q. If approved, when would DRAM rates change?

A. The date of the annual rate change is not stated in the tariff, but the Company's witnesses testify that the change would be effective on July 1 of each year. Davis PFT, p. 23 (Bates 001820); Chung and Dixon PFT, p. 102 (Bates 000163). Eversource anticipates making the filing on May 1 (Chung and Dixon PFT, p. 102 (Bates 000163).

General Principles for Automatic Rate Adjustment Mechanisms

Q. As a general matter, how should the Commission determine whether it is reasonable and necessary for a large utility to have automatic rate adjustment tariffs?

A. In addition to any legal constraints that may exist (and that I expect counsel will address in briefs), there are several factors that, in my opinion, the Commission should consider as a matter of sound regulatory policy.

Initially, the ratemaking process involves a matching of revenues, expenses, investment, return, customers, and consumption. Automatic rate adjustments for specific expense or capital items break this relationship. The matching principle involves a synchronous examination of the cost of service and sources of revenue, as well other considerations such as the quality of service and efficiency of management. That synchronization is the reason why we use a test year when a rate case is filed. One treatise on utility regulation discusses this synchronization, or the matching principle, as follows:

> If the utility proposes a change, particularly a major change, in the test year rate base, it is required also to consider the related changes in other costs or in revenue. Additional investments may result in efficiencies that reduce operating costs or quality improvements that will increase sales. Unless the utility shows that it has taken such matters into account, its revenue requirement is likely to be out of balance or overstated.[2]

For example, under normal circumstances, when a utility replaces an aging piece of equipment, it might increase rate base and depreciation expense, but it also could reduce maintenance expenses or produce other cost savings (such as reducing losses). To keep costs synchronized might require adjustments to rate base, depreciation expense, expenses, working capital, and taxes.

The use of automatic rate adjustment mechanisms for only certain aspects of the Company's revenue requirement violates the matching principle and helps to destroy the underlying relationship between utility rates and levels of cost and investment.

[2] Leonard Saul Goodman, *The Process of Ratemaking* (1998), vol. II, p. 735.

As a general rule, therefore, automatic rate adjustments should be used, if at all, only for significant volatile expenses largely outside the utility's control. A good example of this is a gas cost adjustment for a natural gas utility if the Commission finds that the utility does not have any reasonable level of control over the level of expenditures. A similar justification has been used for surcharges to recover state or local revenue taxes or franchise taxes that are imposed on the utility.

Q. Why is a utility's ability to control expenditures an important consideration in determining whether an automatic adjustment tariff should be adopted?

A. Automatic rate adjustments remove any incentive for the utility to become more efficient. The ratemaking process is designed to foster management efficiency between rate cases. That is, ratemaking provides an opportunity for a utility to achieve additional profit between rate cases and then to subsequently share these efficiencies with ratepayers in successive rate cases. This aspect of ratemaking provides utility management with a strong incentive to achieve operational efficiencies and to be a zealous negotiator with its suppliers. If the utility can wring additional efficiencies out of its operations or reduce purchasing costs between cases, it can increase earnings for its investors. Likewise, this aspect of ratemaking forces utilities to maintain existing efficiencies to try to ensure that profits do not decline between rate cases. A focus on achieving and maintaining efficiency is a pillar of informed ratemaking. Automatic rate adjustments, however, remove any incentive the utility has to achieve or maintain efficiencies. Under automatic rate adjustment mechanisms, any change in the unit cost of the product, and any change in the amount of the product purchased, would flow directly to captive

customers. Failure to obtain available efficiencies, or failure to protect existing efficiencies, can only lead to ever-increasing utility rates. As an example, if a utility were allowed to automatically recover the cost of heating and cooling its office buildings, there would be no incentive for the utility to try to find a lower-cost energy supplier, invest in insulation or re-program the thermostats in its buildings – actions that most every other business would take in response to changes in energy costs.

So, as a matter of public policy – that is, as a way to ensure that utilities retain the incentive to improve efficiency between rate cases – automatic rate adjustments should not be used for costs that the utility has the ability to control.

Q. Are there other factors that should be considered in determining whether an automatic rate adjustment is appropriate?

A. Yes, in addition to the matching principle and a utility's ability to control the cost, the Commission also should consider whether the cost is related to other expenditures that are not subject to the adjustment mechanism (that is, what trade-offs exist and are they reasonable).

Q. Please discuss what you mean by trade-offs and why that is an important policy consideration.

A. Let me use a simple example. Let's assume a utility has an automatic rate adjustment to recover its postage expenses for sending bills to customers. A utility could increase or decrease its postage costs by changing the manner in which it provides other billing options to customers (such as electronic or on-line billing). If a utility eliminated its

electronic billing operations, it would greatly increase its postage expenses while saving itself substantial computer-related costs. With an automatic postage expense flow-through, the resulting increase in postage expense would be recovered automatically from customers, but the utility would get to retain all of the cost savings from reduced computer expenses. Similarly, such an adjustment mechanism would provide an incentive for the utility to avoid enhancing the efficiency of its billing efforts because it would be unable to recover any additional savings for its shareholders between rate cases.

This example shows how an automatic rate adjustment can adversely skew the normal evaluation of new technologies or processes that might improve efficiency and save costs in the long term. The unreasonable trade-off occurs when one aspect of the cost is recognized automatically, but another aspect is not.

As I explain below, Eversource's proposed DRAM fails in this regard. The Company provides no information on how its proposed automatic increases balance the costs and efficiencies discussed above. Simply put, the Company's proposal fails to show how the utility will avoid making investment or other decisions that will result in the type of unreasonable trade-offs inherent in its automatic rate adjustment proposal.

Q. Earlier, you mentioned the volatility of the expense. Please describe what you mean.

A. Volatility relates to how much the expense varies over time. If an expense is relatively stable, there is no reason to have a special ratemaking process – and the costs it entails – to recover relatively minor changes in costs. Volatility helps the Commission determine

whether it is worth the effort (and potential customer concern) to automatically adjust rates between base rate cases.

Concerns with Proposed DRAM

Q. Do you have any concerns about the proposed DRAM?

A. Yes, I have several concerns. First, from a procedural standpoint, I am concerned that the proposed tariff does not provide customers with reasonable notice. The proposed tariff is very general, contains no information about the costs to be reconciled, and does not explain how costs will be allocated among customer classes or result in specific rates to be charged. In my experience, the typical practice for an automatic rate adjustment tariff is to specifically set forth the costs (or revenues) that will be reconciled and provide specific formulas that will be used to calculate the rates. None of that information is present in the proposed tariff.

Second, I am very concerned about the proposed two-month time period between filing the DRAM adjustment and the effective date of the new rate. While two months might be adequate for a routine reconciliation of expenses (such as regulatory expenses), the proposed DRAM would include costs for significant capital investments and multi-million-dollar reconstruction and rehabilitation programs. Those types of costs should not be included in rates without a thorough examination of their reasonableness, need, and relationship to the provision of safe and reliable service to current customers. A two-month time period between filing and the effective date does not provide interested parties, such as AARP, with any meaningful opportunity to review and comment on the filing prior to the entry of a Commission order.

Third, and most importantly, the scope and substance of the proposed DRAM are neither just nor reasonable. It is one thing to use an automatic adjustment mechanism to ensure the recovery of well-defined costs outside the utility's control (like the annual Commission assessment or the Consumer Advocate's consulting costs from a rate case). Such adjustment mechanisms are common and ensure that the utility recovers the cost imposed on it by outside parties, with no opportunity to either profit from or be harmed by the cost-recovery mechanism. That is very different, however, from allowing the utility to automatically collect the costs of significant maintenance or capital investment activities, such as outage response, vegetation management, and GTEP projects.

Q. Why are outage response, vegetation management, and GTEP projects fundamentally different from externally imposed items like regulatory costs?

A. Each of those categories is largely within the utility's control and is susceptible to having significant trade-offs that would not be captured by the DRAM. For example, outage response costs can be affected not just by weather (which, obviously, is outside the utility's control), but also by the utility's spending on preventive maintenance, pole inspections, facilities (such as SCADA systems or storm-hardened poles), and others.

Similarly, the proposed GTEP costs are for capital investments over which the Company has significant control -- how aggressively to work with its suppliers and contractors, what brand of equipment to purchase, the particular specifications of the facilities to be purchased, costs paid for land and land rights, and many others. An automatic adjustment mechanism would remove the Company's usual incentive to

control costs (an incentive based on investors bearing the carrying costs of investments made between rate cases).

The proposed GTEP investments also have a substantial likelihood of having trade-offs that are not captured in the DRAM. For example, replacing old poles with storm-hardened poles should reduce spending on pole inspections and maintenance, and may increase the efficiency of line crews (if they can reduce the time spent on inspecting poles prior to climbing or working on the pole). The same would be true for essentially every type of project proposed to be included in the GTEP -- there will be some aspect of the project that could result in expense savings that would not be captured by the DRAM.

Incredibly, the Company is proposing that it include in the GTEP expenses associated with those new investments. Messrs. Chung and Dixon state: "The Company expects to incur incremental O&M associated with the resiliency-focused investments, as well as recurring non-labor O&M for warranty and maintenance costs for the Westmoreland Clean Innovation Project." Chung & Dixon PFT, p. 123 (Bates 000184). Yet, no mention is made of crediting customers with expense savings associated with reduced maintenance spending, increased efficiency, or other changes in Company operations.

Q. Would the proposed DRAM violate the matching principle that you discussed?

A. Yes, absolutely. There are many costs that would not be captured in the proposed DRAM. One of the largest, for example, is the cost of capital. In the Company's last base rate case (DE 09-035), its filing showed a weighted cost of long-term debt of

5.389%. DE 09-035, Baumann/Eckenroth Schedule I (attached hereto as Attachment SJR-3). In this case, the comparable figure is 4.30%. Attachment EHC/TMD-1 (Perm), Schedule EHC/TMD-40 (Perm), p. 1. This represents a decline of more than 20% in the cost of debt in the past decade, saving the Company millions of dollars per year in interest expense. Those savings, however, would not be captured in the proposed DRAM.

If the DRAM were approved, the Company would be allowed to automatically increase rates for increased capital spending and higher expenses in certain categories, but it would completely ignore other cost categories in which the Company could achieve significant cost savings. This is the very definition of a violation of the matching principle, and it would result in rates that are neither just nor reasonable.

Q. What do you recommend?

A. I recommend that the Commission reject the Company's proposed DRAM. It may be reasonable for the Commission to continue automatic reconciliations of costs outside the Company's control, such as regulatory assessments imposed by the Commission and Consumer Advocate. Under no circumstances, however, should the Commission permit Eversource to automatically increase rates for new capital investments or operations and maintenance expenses over which the Company has significant control.

Revenue Decoupling

Summary of Company's Proposal

Q. What is your understanding of the Company's revenue decoupling mechanism?

A. Mr. Davis discusses this issue on pages 23-24 of his direct testimony (Bates 001820-21). My understanding is that the Company's System Benefits Charge (SBC) is calculated to include a Lost Revenue Adjustment Mechanism (LRAM) to collect revenues allegedly "lost" from energy efficiency measures and distributed generation. Eversource is proposing to continue the existing LRAM.

Q. Is it your understanding that Commission action is required to keep the LRAM in place?

A. In Order No. 25,932 (Docket No. DE 15-137, Aug. 2, 2016), the Commission ordered as follows: "our approval of the LRAM does not limit our subsequent consideration and approval at any time of a different lost revenue recovery mechanism, and that the Joint Utilities (except NHEC) are required to seek approval of a decoupling or other lost-revenue recovery mechanism as an alternate to the LRAM in their first distribution rate cases after the first EERS triennium, if not before." Order No. 25,932, p. 60. This is Eversource's first rate case since that order was issued, so it appears to me that Commission review and approval of a so-called lost-revenue recovery proposal is required.

Overview of Revenue Decoupling

Q. Is Eversource's LRAM a form of revenue decoupling?

A. Yes, it is. Any ratemaking mechanism that attempts to hold the utility harmless from changes in sales is a form of revenue decoupling.

Q. Before you discuss the Company's proposal in detail, what is revenue decoupling?

A. Revenue decoupling is an approach to utility ratemaking that seeks to sever the link between a utility's sales and the revenue the utility receives. Decoupling was first advanced by advocates who sought to garner utility support for demand-side management and other conservation programs. Under the theory of decoupling, if a utility's revenues were no longer dependent on the amount of service sold, utilities would no longer oppose utility-sponsored demand-side management programs. As such, revenue decoupling dramatically changes the nature of utility regulation.

Q. How does decoupling change the nature of utility regulation?

A. When I began working in the field of utility regulation more than 35 years ago, the purpose of regulation was to set the prices that consumers pay for a service when the market is not sufficiently competitive to set the price through normal market forces.

Economic regulation of utilities also serves another essential purpose: to minimize the swings between surplus and scarcity that are characteristic of a competitive market seeking theoretical (but rarely obtainable) equilibrium. When a monopoly provides an essential service, there is no tolerance for - and potential serious harm to public health and safety from - the scarcity that can occur in a competitive market. Traditional economic regulation of utilities is designed to set the price at a level that is close to, but somewhat higher than, a competitive market clearing price so that the risk of scarcity (demand exceeding supply) is minimized. This is one of the reasons that utility rates usually are based on average costs rather than marginal costs. By definition, a natural monopoly has declining marginal costs, so average costs usually are higher than marginal

costs. Setting prices at this higher level tends to depress demand and minimize the chance that demand will exceed supply, creating a shortage.

Q. How does revenue decoupling differ from traditional regulation?

A. Revenue decoupling deviates significantly from the traditional purpose of utility regulation. While traditional regulation is focused on setting the price the consumer pays for the service, revenue decoupling focuses on the revenues the utility receives. To understand the differences between traditional regulation and decoupling, we can think about the essential economics of a marketplace.

In a competitive market, when prices change, consumers respond to the change in prices and other factors (weather, household income, the relative price of other goods and services, and numerous other factors) and determine how much of the good or service they will buy. The seller's revenues are based on the amount of the good or service sold at each price. Prices to the consumer and revenues to the seller change constantly.

Under traditional utility regulation, regulators estimate a utility's costs (including operating costs, taxes, depreciation, and capital costs) and the amount of service the utility will sell. Based on those estimates, the regulator determines the price consumers will pay. What actually happens after that is left to normal market forces. If the summer is hot or if a customer changes its gas clothes dryer to an electric one, the consumer will buy more electricity and the utility's revenues will be higher than anticipated. If the reverse occurs (there is a cool summer or a consumer replaces its electric stove with a gas one, or the utility provides poor service and the consumer looks for alternatives), then the

consumer will use less electricity and the utility's revenues will fall. Traditional regulation sets one thing – the price the consumer will pay. Once the price is set, the market takes over from there. There are no guarantees: consumers do not know what their total bill will be (that will depend on how much electricity they use, which is the product of numerous factors) and the utility does not know what its revenues will be (that will depend on how much electricity it sells, which is also the product of numerous factors).

Revenue decoupling represents a wholly different approach to regulation. Under decoupling, rather than setting the price for service, the regulator determines the revenues the utility will receive. Prices can change frequently (under some decoupling mechanisms, they may change each month) and market forces no longer have an effect on the utility. Consumers still will respond to the price (as well as all of the other factors that affect consumption), but if they decrease consumption in response to those factors, it may lead to price increases rather than a decline in the utility's revenues.

At its core, then, revenue decoupling is focused on the utility (ensuring a particular level of revenues for the utility) rather than on the customer (setting the price the customer pays).

Residential Sales Have Increased Since the Company's Last Rate Case

Q. Have the Company's sales to residential customers actually declined since its last base rate case?

A. No. Apparently ignored in all of the attempts to try to "make the Company whole" and "compensate" it for the effects of conservation and distributed generation is a fundamental fact: Eversource's residential sales have increased since its last base rate case. The Company's last case was DE 09-035, using a 2008 test year. The Company's filing in that case shows that it sold 3,120,318 megawatt-hours (mWh) to residential customers in 2008. Docket No. DE-09-035, Item 1604.01(a)(20) (attached hereto as Attachment SJR-4). In this case, Attachment EAD-7 (Perm), pages 2-4, shows that the Company sold 3,274,664 mWh to residential customers in 2018 -- an increase in sales of almost 5%. At the Company's current rates, this translates into additional transmission and distribution revenues of approximately $9.7 million annually.[3]

Q. What does this mean?

A. It means that "lost sales" are a fiction. The Company's residential sales are almost $10 million per year higher than they were 10 years ago when it last filed a full base rate case.

In addition, the Company's customer charge revenues from residential customers have increased significantly. When the 2009 case was settled, the Company's Rate R customer charge was $11.60 per month for 416,400 customers, or total customer-charge revenues of $58.0 million.[4] In this case, under present rates, the Company shows current Rate R customer charge revenues of $67.1 million. Attachment EAD-7 (Perm), p. 2.

[3] Additional sales 2018 compared to 2008: (3,274,664,000 kWh - 3,120,318,000 kWh) x $0.06276 per kWh (Rate R distribution, transmission, stranded costs, system benefits, and energy service charges from Attachment EAD-7 (Perm), p. 2) = $9,686,755.

[4] 416,400 customers from DE 09-035 Attachment SRH-6 (attached hereto as Attachment SJR-5) x 12 months per customer x $11.60 per month from DE 09-035, Settlement, Attachment 3 (attached hereto as Attachment SJR-6).

Thus, residential customer charge revenues increased by more than $9 million over the past decade.

Simply stated, the Company does not need to be compensated for anything because it did not lose anything. Between its customer charge revenues and its kWh-based revenues, the Company is collecting at least $18 million more from residential customers today than it did 10 years ago. Nothing has been "lost."

Finally, I would note that even if its sales or revenues had declined since the last case (which did not occur), that still would not make it appropriate to "compensate" the Company for "lost" sales. The proper response would be to have a rate case, synchronize all aspects of the Company's operations (including the significant decline in interest expense), and set rates to collect the revenue requirement based on the test-year level of sales.

Q. What do you recommend?

A. I recommend that the Commission reject the Company's claim of "lost" sales. The LRAM adjustments for sales allegedly lost because of demand management or distributed generation should be removed from the calculation of the System Benefits Charge.

Allocation Among Customer Classes of Any Revenue Increase

Q. How does Eversource propose to allocate any revenue increase among the customer classes?

A. Table 1 on the next page, summarized from Eversource Attachment EAD-7 (Perm), shows the Company's proposed allocation of distribution revenues. Briefly, the Company proposes to reduce Outdoor Lighting revenues by more than $2 million. All of that revenue reduction, as well as any increase the class otherwise might pay, is imposed on the Residential class (the only class receiving a greater-than-average increase in revenues).

Table 1
Eversource Proposed Allocation of Distribution Revenues

Class	Present Revenues	Proposed Revenues	Percent Increase
Residential	$ 202,012,310	$ 250,340,293	23.9%
General Service	84,312,407	98,182,431	16.5%
Large Comm. & Ind'l	36,426,129	42,516,564	16.7%
High Voltage	20,150,790	23,813,544	18.2%
Outdoor Lighting	7,590,790	5,554,739	(26.8%)
Total	**$ 350,492,426**	**$ 420,407,571**	**19.9%**

Q. Do you agree with the Company's revenue allocation proposal?

A. No. Utility ratemaking should have a long time horizon and rates should not bounce around (going up one year then down the next). The typical approach to setting rates for a class that may be providing revenues in excess of the cost of service is to either freeze the rates or implement a lower-than-average increase (for example, an increase that is one-half of the system-average percentage increase) until allocated costs increase. Given the apparent magnitude of the amount by which revenues exceed costs for the Outdoor Lighting class, I would recommend freezing the rates. The difference should be used to

reduce the increase for the classes receiving an above-average increase. In this case, the only such class is the Residential class. This would reduce the Residential increase by about $2 million to approximately a 22.9% increase. My proposal would move each class closer to the indicated cost of service under the Company's allocated cost-of-service study, but it would do so in a manner more gradual than proposed by Eversource.

Q. Please provide a table summarizing your proposed revenue allocation under the Company's proposed revenue requirement.

A. Table 2 shows my proposed revenue allocation under Eversource's proposed revenue requirement.

Table 2
AARP Proposed Allocation of Distribution Revenues

Class	Present Revenues	Proposed Revenues	Percent Increase
Residential	$ 202,012,310	$ 248,304,242	22.9%
General Service	84,312,407	98,182,431	16.5%
Large Comm. & Ind'l	36,426,129	42,516,564	16.7%
High Voltage	20,150,790	23,813,544	18.2%
Outdoor Lighting	7,590,790	7,590,790	0.0%
Total	**$ 350,492,426**	**$ 420,407,571**	**19.9%**

Residential Customer Charge

Q. Is the Company proposing to increase the Residential customer charge?

A. Yes. Eversource's residential customer charge is currently $12.69 per month; it proposes to increase the charge to $13.89 per month.

Q. Why is the Company proposing to increase the customer charge?

A. Company witness Davis states that the customer charge is being "moved closer to the marginal customer cost." Davis PFT, p. 11 (Bates 001808).

Q. Do you agree that the customer charge should be based on the marginal customer cost?

A. No, I do not. The Company's revenue requirement is based on its embedded costs. Most customers do not have brand new service lines and meters and it is not appropriate to set rates as if they did. Indeed, if every customer was served by brand new facilities, the Company's maintenance costs would be a small fraction of their actual costs. Eversource's marginal cost study, however, assumes both that customers would be served by brand new facilities and that the Company would continue to incur typical maintenance costs (based on its actual installed facilities which, of course, are much older). This is not a reasonable way to determine the rates customers should pay. In addition, the calculation of marginal costs includes adders for overheads such as general plant, officers' salaries, and other administrative costs. Those costs are not directly related to providing a customer with a service drop, meter, and bill.

Further, high fixed charges can act as a disincentive to the installation of onsite generation and they can impose an onerous burden on lower-income customers, especially those on fixed incomes. In my experience, it is becoming more common to have residential fixed charges set to collect no more than the costs associated with metering, the service drop to the home, billing, and call center support. For example, when that requirement was implemented in Connecticut, Eversource's affiliate in

Connecticut reduced its residential customer charge from more than $19 per month to less than $10 per month.

Q. Can you estimate the average embedded cost to a residential customer of providing a meter, service drop, and bill?

A. Yes. On Attachment SJR-7, I estimate these costs for the Residential class, using data from the Company's allocated embedded cost-of-service study (Attachment ACOSS-2 (Perm)). My analysis results in an estimated customer-related cost of $8.69 per month for each residential customer.

Q. Is it reasonable to conclude that the Company's residential customer charge should be only $8.69 when its current charge is almost 50% higher at $12.69 per month?

A. Yes, it is. By way of comparison, Eversource's electric customer charge for residential customers in Massachusetts is $7.00 per month. Its residential customer charge in Connecticut is $9.44 per month. Thus, it appears reasonable to me that its customer charge in New Hampshire should fall right in the middle of that range.

Q. What do you recommend?

A. The existing charge of $12.69 exceeds the cost of providing a customer with metering, billing, service drop, and call center support. Ideally, the customer charge should be lowered to no more than $8.69 per month. I recognize, however, that such a significant decrease in the customer charge could impose significant bill increases on larger-use residential customers. In the interests of gradualism, therefore, I recommend that there should be no increase in the Residential customer charge in this case.

Residential Optional Time-of-Day Rate

Q. Do you have concerns with any other aspect of Eversource's proposed Residential rates?

A. Yes. The Company has an optional time-of-day rate (Rate R-OTOD) that, in theory, could provide some residential customers with an opportunity to reduce their bills for electricity distribution service. Unfortunately, the rate is not designed to be attractive to most residential customers. In fact, to have any reasonable chance at even breaking even (let alone benefitting from the rate), I estimate that under present rates a customer would need to use at least three or four times as much electricity as the typical customer and use at least 75% of its electricity between the hours of 8 pm and 7 am. Specifically, I show on Attachment SJR-8 that a residential customer would need to use more than 2,400 kWh per month, and use 75% of that energy in the off-peak period, just to pay the same amount under Rate R-OTOD as it would pay under Rate R. If the customer uses less electricity or uses less than 75% of its electricity off-peak, then it becomes even harder to achieve any benefit from the time-of-day rate. In other words, it is highly unlikely that a residential customer could benefit from the rate.

Q. Have you determined whether customers are, in fact, benefiting from the rate?

A. According to the Company's filing (Attachment EAD-7 (Perm), p. 4), Rate R-OTOD has attracted only 39 customers (466 bills ÷ 12 monthly bills per customer). Collectively, those customers use 153,613 kWh on-peak and 307,097 kWh off-peak. That is, they use approximately 33% of their kWh during the on-peak period.

Using the data on that page, I calculate that those customers are paying almost $10,000 per year in excess of what they would pay under Rate R, as I show on Attachment SJR-9. In other words, on average each of the 39 customers is paying $20 per month more than it would pay under the standard residential rate. In short, the rate is poorly designed; it is not attractive to most residential customers; and the few customers who signed up for the rate (fewer than 1/100 of 1% of residential customers are on the rate) are worse off than they would be if they stayed on the standard rate.

Q. If a customer uses one-third of its electricity during the on-peak period, is it mathematically possible for the customer to benefit from Rate R-OTOD as currently structured?

A. No. A customer would need to use less than 31% of its electricity on-peak in order to have any opportunity to save under Rate R-OTOD. That figure represents the ratio of the Rate R rate per kWh to the Rate R-OTOD rate per kWh. If a customer uses more than 31% of its electricity on-peak, the charge for just the on-peak electricity would exceed the total for all electricity used under Rate R. Thus, unless a customer can shift at least 70% of its electricity usage to between the hours of 8 pm and 7 am it is impossible for the customer to be better off under Rate R-OTOD. I would note, however, that at the 70% level, the customer would need to use more than 47,000 kWh per month in order to break even compared to Rate R.

Q. Do the Company's proposed rates for Rate R-OTOD change your conclusions?

A. No. I entered the Company's proposed rates into the spreadsheet model I used to produce Attachments SJR-8 and SJR-9 and the results are essentially the same. It would remain

impossible for a customer using more than 30% of its electricity on-peak to benefit from Rate R-OTOD. The combined detriment to the 39 customers currently on the rate would increase somewhat compared to the detriment under present rate (the harm would be slightly more than $10,000 per year, compared to just under $10,000 at present rates).

Q. What do you recommend?

A. I recommend that Rate R-OTOD should be eliminated and that all customers on the rate should be transferred to Rate R. The rate is not consistent with the public interest and is neither just nor reasonable. It is essentially impossible for a customer to receive a lower bill under Rate R-OTOD than the customer would pay under Rate R.

Finally, my testimony would be incomplete on this point if I did not mention that I generally support the use of well-designed optional time-of-use rates, as long as the rate reflects cost savings to the utility. The Company should be encouraged to work with other interested stakeholders and develop an optional time-of-use rate that has the potential to save customers money, and that is cost-based (that is, that the Company can document any potential savings in distribution costs associated with customers moving their energy demands to off-peak periods).

Proposed Block on Electronic Enrollments

Q. Is the Company proposing any other changes to its tariff's terms and conditions?

A. Yes, among the miscellaneous changes proposed by Eversource is a new Rule 9. The rule would give residential and small business customers the option to ask the Company

to "block Electronic Enrollments from Suppliers." The block can be removed by the customer contacting the customer service center.

Q. What is an Electronic Enrollment under the Company's tariff?

A. The tariff defines an "Electronic Enrollment" as "a request submitted electronically to the Company by a Supplier for the initiation of Supplier Service to a Customer." In other words, the proposed rule would give each customer the option of blocking changes in the customer's electric generation supplier unless the customer either submits written acknowledgment of the change or removes the block.

Q. Do you support the Company's proposed Rule 9?

A. Yes, I do. This provision is a reasonable anti-fraud measure that can keep a customer's supply service from being transferred without the customer's knowledge and consent. In the utility industry, this is often referred to as "slamming" (changing a customer's supplier without the customer's knowledge or consent). I prefer to use the term "fraud" because it is more commonly understood by customers, and it is a very accurate description of the practice -- a salesperson for a supplier (or agent) fraudulently says a customer consented to buy something the customer did not agree to buy. The proposed electronic block would help to prevent this type of fraud, and I urge the Commission to adopt it.

Conclusion

Q. Please summarize your recommendations to the Commission.

A. In summary, I recommend that the Commission take the following actions in this case:

- Reject Eversource's proposed DRAM;
- Terminate the experimental Lost Revenue Adjustment Mechanism that has been part of Eversource's SBC for the past three years;
- Eliminate the proposed rate reduction for the Outdoor Lighting class and use those revenues to reduce the above-average increase to the Residential class;
- Reject Eversource's proposed increase in the Residential customer charge;
- Eliminate the Optional Residential Time of Day rate (Rate R-OTOD) and move those customers to Rate R; and
- Approve the Company's proposed Rule 9 that would give residential and small business customers the option to block electronic enrollments from energy suppliers.

Q. Does this conclude your direct testimony?

A. Yes, it does.