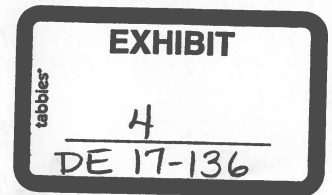


STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION



In the matter of

2018-2020 Energy Efficiency Resource  
Standard Implementation Proceeding

Docket No. DE 17-136

DIRECT TESTIMONY

OF

**Jeffrey Loiter**

On Behalf of  
**Office of the Consumer Advocate**

November 1, 2017

1 **Q. Please state your name and business address.**

2 A. My name is Jeffrey Loiter and my business address is Optimal Energy,  
3 Incorporated, 10600 Route 116, Hinesburg, Vermont, 05461.

4 **Q. On whose behalf are you testifying?**

5 A. I am testifying on behalf of the New Hampshire Office of Consumer Advocate.

6 **Q. Mr. Loiter, by whom are you employed and in what capacity?**

7 A. I am a Partner in Optimal Energy, Inc., a consultancy specializing in energy  
8 efficiency and utility planning. In this capacity, I direct and perform analyses,  
9 author reports and presentations, manage staff, and interact with clients to serve  
10 their consulting needs. My clients include state energy offices and efficiency  
11 councils, utilities and third-party program administrators, and non-governmental  
12 organizations. For example, I participate on the consultant team supporting the  
13 work of the Massachusetts Energy Efficiency Advisory Council, which guides the  
14 development of energy efficiency plans by the state's investor-owned gas and  
15 electric utilities and energy providers and monitors the implementation of these  
16 plans. I have recently begun providing similar services to the newly-formed  
17 Delaware Energy Efficiency Advisory Council.

18 **Q. Please summarize your work experience and educational background.**

19 A. I have over 20 years of consulting experience in environmental policy, energy,  
20 and natural resource issues. For the past 11 years, I have been engaged in a  
21 variety of work at Optimal Energy related to energy efficiency program design  
22 and analysis. For example, I prepared two documents for inclusion in EPA's  
23 *National Action Plan for Energy Efficiency (NAPEE)*: a guidebook on conducting

1 efficiency potential studies, and a handbook describing the funding and  
2 administration of clean energy funds.<sup>1</sup>

3 In my capacity as a Partner at Optimal, I also advise clients on efficiency  
4 program design and implementation. I have assisted with the design and  
5 development of statewide and utility-specific efficiency programs in Maine,  
6 Maryland, New York, Massachusetts, Rhode Island, and Tennessee. I currently  
7 support program implementation and on-going program design and development  
8 for Orange and Rockland Utilities in New York, and the Connecticut Municipal  
9 Electric Energy Cooperative. I have submitted written testimony to and/or  
10 testified before public utility commissions in Arkansas, Kansas, Kentucky,  
11 Maryland, Ohio, Virginia, and West Virginia on topics such as demand-side  
12 management, integrated resource planning, and efficiency as a resource in state  
13 energy plans.

14 Prior to joining Optimal Energy in 2006, I was a Senior Associate at  
15 Industrial Economics, Inc. in Cambridge, Massachusetts, where I supported state,  
16 federal, and international governmental clients with analysis on topics of  
17 environmental policy and natural resources damages. I have a *B.S. with distinction*  
18 in Civil and Environmental Engineering from Cornell University and an *M.S.* in  
19 Technology and Policy from the Massachusetts Institute of Technology.

---

<sup>1</sup> These documents can be found at [http://www.epa.gov/cleanenergy/documents/suca/potential\\_guide.pdf](http://www.epa.gov/cleanenergy/documents/suca/potential_guide.pdf)  
and [http://epa.gov/cleanenergy/documents/clean\\_energy\\_fund\\_manual.pdf](http://epa.gov/cleanenergy/documents/clean_energy_fund_manual.pdf), respectively.

1 **Q. Have you previously testified before the New Hampshire Public Utility**  
2 **Commission ( “the Commission” or “PUC”)?**

3 A. Yes. I submitted pre-filed direct testimony in Docket DE 15-137. In addition, I  
4 have participated in several working groups related to both that docket and the  
5 current one.

6 **Q: How is your testimony organized?**

7 A: My testimony is organized into the following sections:

8 I. The proposed programs

9 II. The cost-effectiveness of the proposed programs

10 III. The utilities’ proposal for cost-recovery

11 IV. Other models for delivering efficiency to New Hampshire consumers

12 **Q. Are you submitting attachments along with your testimony?**

13 A. Yes. I have attached my resume as Attachment JML-1.

14 **Q. What actions do you recommend the Commission take in this proceeding?**

15 A: I recommend that the Commission:

- 16       ▪ Accept the proposed three-year Plan for implementation of the Energy  
17       Efficiency Resource Standard (EERS) and the programs, budgets, and  
18       savings targets contained therein.
- 19       ▪ Ask the utilities to supplement their Plan with additional information  
20       regarding some details of the financing program for residential customers,  
21       to support better understanding of the factors that may be limiting  
22       customer uptake of this offer.

- 1           ▪ Accept the proposed 10 percent “adder” for non-energy impacts in the  
2           assessment of cost-effectiveness, until such time as studies can be  
3           completed to determine state-specific evidence-based values for New  
4           Hampshire.
- 5           ▪ Determine if discussing changing the delivery model for energy efficiency  
6           is warranted, and if so, begin those discussions no later than the second  
7           quarter of the second program year of the Plan.

8   **Q: Beyond these specific Commission actions, do you have any**  
9   **recommendations on other matters?**

10 A: Yes, I do. I will discuss each of these separately later in my testimony, but first I  
11 wish to preface these comments by commending the utilities for the collaborative  
12 spirit reflected in their filing. I reviewed the draft Plan circulated in May and  
13 participated in the extensive working group sessions with the Energy Efficiency  
14 and Sustainable Energy (EESE) Board and its EERS Committee in June and July.  
15 These efforts clearly indicate the value of engaging stakeholders, particularly  
16 when assisted by a knowledgeable consultant such as was available to the  
17 Committee this summer. The small amount of SBC funds dedicated to that  
18 purpose resulted in substantial benefits in the form of the improvements to the  
19 Plan filed in September. As a result, I have no strong objections to the Plan as a  
20 whole.

- 21           ▪ With respect to the Home Performance with Energy Star program, I would  
22           like to see the New Hampshire Utilities aim for greater participation

1 commensurate with Massachusetts’ experience, or explain why that is not  
2 feasible.

3 ■ With respect to the promotion of “smart” thermostats, the utilities should  
4 consider expanding the use of this technology for demand response of  
5 electric load, not just to realize energy savings.

6 ■ On the topic of performance incentives (PIs), there is an opportunity for  
7 the Commission to advance additional policy priorities through revisions  
8 to the PI formula, which should be discussed and investigated before the  
9 next three-year plan is drafted, to allow the utilities to develop programs in  
10 response to the incentives and driving factors.

11 ■ Based on the success of the EERS Committee of the EESE Board,  
12 continued funding of a consultant to facilitate a cooperative and  
13 collaborative approach to developing and implementing efficiency  
14 programs in New Hampshire is a clearly beneficial strategy.

### 15 **I. The Proposed Programs**

16 **Q: Please briefly summarize the portfolio of programs included in the 2018-2020**  
17 **New Hampshire Statewide Energy Efficiency Plan.**

18 A: The Plan includes programs aimed at provided services and incentives for  
19 residential customer (including special programs for income-eligible customers),  
20 commercial and industrial customers, small businesses, and municipal entities.

21 The programs cover a wide range of end-uses and uses a variety of approaches,  
22 including financial incentives, direct installation of energy-saving measures,  
23 programs to decrease the retail cost of efficient equipment to customers by

1 working with wholesalers and distributors (so-called “upstream” programs), and  
2 market-driven offering of incentives for competitive efficiency proposals.

3 **Q: Would you characterize this as a comprehensive portfolio?**

4 A: Yes, moderately comprehensive. The targets are not so aggressive that a deep and  
5 intensive effort is needed to achieve the energy savings. On the other hand, New  
6 Hampshire’s ranking in the annual efficiency “scorecard” from the American  
7 Council for an Energy Efficient Economy (ACEEE) indicates that the state is not  
8 keeping pace with its regional neighbors. New Hampshire ranks 21, while Maine  
9 ranks number 13 and the rest of New England and New York are all in the top 10.

10 **Q: Do you have any comments or concerns on any specific components of the**  
11 **program plan?**

12 A: Yes, I do. I would like to comment on the extent to which the programs will  
13 support comprehensive energy retrofits in the residential sector, the use of  
14 financing to support efficiency projects, and the ability of the programs to reduce  
15 peak demand.

16 **Q: Let’s take those one at a time. Please first explain what you mean by**  
17 **“comprehensive energy retrofit.”**

18 A: The term “retrofit” refers to a project to replace a piece of equipment or building  
19 system before the end of its useful life, primarily in order to realize energy  
20 savings. While there is no single agreed-upon definition of “comprehensive,” I  
21 use it to mean projects that include a whole-building analysis and retrofit process  
22 to achieve greater energy efficiency results than conventional methods that focus  
23 on isolated system upgrades alone.

1 **Q: Are the New Hampshire Utilities proposing to pursue this type of project as**  
2 **part of the Plan?**

3 A: Yes, to some extent. The proposed “Home Performance with Energy Star”  
4 (HPwES) offers a “comprehensive, whole house approach,” that undertakes  
5 “weatherization measures, certain appliance replacements, heating and hot water  
6 saving measures, and lighting upgrades.” (Plan at 60). The Home Energy  
7 Assistance (HEA) program offers similar services to income-eligible customers.

8 **Q: To how many customers do the New Hampshire Utilities propose to deliver**  
9 **the HPwES program, and how does this compare with other similar**  
10 **programs in the region?**

11 A: The New Hampshire Utilities indicate that they expect approximately 5,900  
12 customers to participate in the program between 2018 and 2020.<sup>2</sup> This represents  
13 approximately 1.4 percent of occupied 1 to 4 unit housing units in the state.<sup>3</sup> By  
14 comparison, the Massachusetts 2016-2018 Statewide Energy Efficiency Plan  
15 indicates that Program Administrators in that state plan to reach 6.2 percent of  
16 housing units through a similar Home Energy Assessment program over three  
17 years.<sup>4</sup> While there are some difference in these programs, Massachusetts is  
18 aiming to reach more than four times as many households as in the New

---

<sup>2</sup> Table 6.7: Home Performance with ENERGY STAR Energy Savings and Budget.

<sup>3</sup> There are approximately 417,000 occupied 1-4 unit housing units in New Hampshire, according to 2011-2015 American Community Survey 5-Year Estimates.

<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

<sup>4</sup> Participants based on data from <http://masssavedata.com/Public/PerformanceDetails>. Housing unit values based on 2011-2015 American Community Survey 5-Year Estimates.

<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>



1 Hampshire Plan. I would like to see the New Hampshire Utilities aim for greater  
2 participation in their program, or explain why that is not feasible.

3 **Q: As you previously described, the HPwES program is intended to achieve**  
4 **comprehensive savings from residential customers. How does the depth of**  
5 **savings proposed by the New Hampshire Utilities compare to other similar**  
6 **programs?**

7 A: In comparison with the Massachusetts Home Energy Assessment program, the  
8 electric savings achieved per participant is significantly lower. In Massachusetts,  
9 the Program Administrators plan to achieve approximately 20 lifetime MWh per  
10 participant in 2016-2018, while the New Hampshire HPwES program would save  
11 approximately 6 lifetime MWh per participant in 2018-2021. On the other hand,  
12 the gas savings per participant in New Hampshire (approximately 500 MMBtu) is  
13 projected to be more than twice the savings per participant in Massachusetts  
14 (approximately 230 MMBtu).<sup>5, 6</sup>

15 **Q: Have the New Hampshire Utilities provided any information that might**  
16 **explain this difference?**

17 A: No, but as I will describe later, the HPwES program generates the vast majority of  
18 its benefits in the form of non-electric savings, over 60 percent of which (on a Btu  
19 basis) come from oil and propane.

---

<sup>5</sup> <http://masssavedata.com/Public/PerformanceDetails>

<sup>6</sup> Table 6.7: Home Performance with ENERGY STAR Energy Savings and Budget

1 **Q: Will the proposed New Hampshire HPwES program cover the entire cost of**  
2 **comprehensive retrofits?**

3 A: No, it will only cover roughly half of the cost, although customers are able to  
4 finance the remainder of the project cost through the existing Residential Energy  
5 Efficiency Loan Program, which will continue through the Plan period. This  
6 program has been offering reduced interest-rate loans to utility customers through  
7 a group of five lenders since 2015.

8 **Q: Has this program been successful?**

9 A: To some extent, yes. Data from 2016 indicate that loan recipients implement  
10 larger projects than the average HPwES participant. On the other hand, the  
11 program only supported 105 loans in 2015 and 2016, out of a total of 4,500  
12 HPwES projects, or a little more than 2 percent. For comparison, in  
13 Massachusetts, 9 percent of participants in a similar comprehensive retrofit  
14 program took advantage of financing for the portion of project cost not covered  
15 by utility incentives.

16 **Q: Are there differences in the loan programs or other factors that might**  
17 **explain this disparity?**

18 A: The Plan does not provide sufficient detail regarding the operation of the loan  
19 program to compare it with the Massachusetts program in detail. Before  
20 renewing the existing loan program, the Commission should determine in this  
21 proceeding the answers to a number of questions:

- 22 ▪ What are the underwriting criteria for the loans?
- 23 ▪ What percentage of loan applications are approved?

- 1           ▪ How long does it typically take to process a loan application?
- 2           ▪ What is the average length of time between loan application and
- 3           disbursement of loan proceeds?
- 4           ▪ How have the utilities leveraged their contractor network (the members of
- 5           which are doing the work installing measures and upgrading homes) to
- 6           promote the loan program?

7   **Q: How is contractor involvement relevant to the success of the loan program?**

8   A: Contractors are relevant because they are in direct communication with the  
9   customers, much more so than the utility. There are a number of ways the New  
10   Hampshire Utilities can support the utilities in this role, such as by providing  
11   promotional materials and other ‘leave-behinds’ for the contractors to give to  
12   potential loan customers, providing someone to answer contractor and customer  
13   questions about the loan product, training the contractors on the specifics of the  
14   loans, and engaging contractors in discussions to ensure that the loan product is  
15   designed and implemented in a way that helps them sell larger and more  
16   comprehensive projects.

17   **Q: Are the utilities in New Hampshire doing these things?**

18   A: The Plan does not provide that level of specificity, but I think that, given the  
19   importance of financing as a tool to support energy efficiency and the level of  
20   interest in financing among the stakeholders, the utilities should supplement their  
21   Plan with additional information of this kind, particularly in light of the  
22   uncertainty in the Plan regarding financing approaches for moderate income  
23   customers and the future of on-bill financing.

1 **Q: The third area you wanted to comment on is the ability of the programs to**  
2 **reduce peak demand. By way of introduction, why is reducing peak demand**  
3 **a desirable outcome of efficiency programs?**

4 A: First, energy prices during times of high demand is more expensive than energy  
5 during times of moderate or low demand; this is just basic economic theory.

6 Second, the New Hampshire Utilities are responsible for a share of regional  
7 transmission costs in proportion to their contribution to system coincident peak  
8 load. Therefore, increasing or decreasing this share translates directly into  
9 increases or decreases in the cost of transmission passed on to ratepayers. At a  
10 local level, constraints in the distribution system are often driven by peak load,  
11 and the Commission has ordered that the utilities develop so-called “non-wires  
12 alternatives” in lieu of distribution system upgrades. Both energy efficiency and  
13 demand response are considered a valid non-wires alternative in other  
14 jurisdictions;<sup>7</sup> the utilities seem to agree with this (response to OCA 1-008, part  
15 a).

16 **Q: Are the utilities offering any demand response programs targeted at this**  
17 **outcome?**

18 A: No, not as a joint or “Core” program, although individual utilities may offer  
19 programs for their customer (Response to OCA 1-007, part d). For example, the  
20 New Hampshire Electric Cooperative offers both a voluntary program and a direct  
21 load control program, and Eversource offers interruptible rates.

---

<sup>7</sup> See, e.g., Energy Futures Group. “Energy Efficiency as a T&D Resource: Lessons from Recent U.S. Efforts to Use Geographically Targeted Efficiency Programs to Defer T&D Investments.” January 9, 2015. Available at: [http://www.neep.org/sites/default/files/products/EMV-Forum-Geo-Targeting\\_Final\\_2015-01-20.pdf](http://www.neep.org/sites/default/files/products/EMV-Forum-Geo-Targeting_Final_2015-01-20.pdf).

1 **Q: Are there opportunities for greater demand response efforts?**

2 A: Definitely. Several of the joint utility programs offer rebates on so-called “smart”  
3 or “Wi-Fi” thermostats. While these devices are being supported, presumably, to  
4 generate energy savings associated with temperature set-backs and occupancy  
5 sensing, they represent an opportunity for demand response peak reduction as  
6 well. According to the utilities’ response to OCA 1-007, part e, the majority of  
7 incentives for this measure (roughly 2,400 out of 3,400) have been provided by  
8 gas utilities, for whom peak demand is much less important than for electric  
9 utilities. This suggests there is a large un-tapped opportunity both to promote this  
10 measure as a demand response strategy, potentially in conjunction with revised  
11 rate structures, and to expand the number of these measures installed  
12 dramatically. On the other hand, there is an installed base of 1,000 thermostats  
13 that could form the basis for an initial pilot program. This would seem to be a  
14 valuable opportunity to understand New Hampshire consumers’ response to  
15 various peak reduction strategies.

16 **II. The cost-effectiveness of the proposed programs**

17 **Q: The settlement agreement approved in Docket DE 15-137 adopts a long-term**  
18 **goal of achieving all cost-effective energy efficiency in New Hampshire. Can**  
19 **you please define “cost-effective,” as it’s used in this context?**

20 A: Cost-effective, in this context, means that the benefits of energy efficiency (in this  
21 case, efficiency programs delivered by the utilities), when monetized and  
22 converted to a net present value, are greater than the costs of implementing these  
23 programs. Note that there are several different perspectives that can be considered

1           when measuring these costs and benefits. That is, it is important to define the  
2           group or groups of individuals or entities that bear costs and reap the benefits, and  
3           whether they are considered to be part of the analysis.

4   **Q:    Can you please give an example of these perspectives and groups?**

5   A:    In the energy efficiency industry, practitioners often make the distinction between  
6           costs and benefits that accrue to the utility that implements efficiency programs  
7           and those that accrue to the economy as a whole -- including the utility, customers  
8           participating in the programs, and non-participating customers. The first  
9           perspective is often call the “utility” or “program administrator” perspective,  
10          while the latter is the “total resource” perspective. When referring to the actual  
11          calculation and comparison of benefits and costs from these perspectives, one  
12          often uses the terms “utility cost test” and “total resource cost test,” although both  
13          of these account for benefits of efficiency, not just the costs.

14   **Q:    Is there any guidance as to which perspective to use in assessing cost-  
15          effectiveness?**

16   A:    Traditionally, the California Standard Practice Manual was the key reference for  
17          cost-effectiveness testing of energy efficiency, but that document has not been  
18          updated in over 15 years. More recently, efforts to develop a new guidance  
19          document resulted in the National Standard Practice Manual (NSPM).<sup>8</sup>

---

<sup>8</sup> National Efficiency Screening Project. “National Standard Practice Manual for Assessing the Cost Effectiveness of Energy Efficiency Resources.” (May 2017) Page 12. Available at: [https://nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM\\_May-2017\\_final.pdf](https://nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM_May-2017_final.pdf); See also, Northeast Energy Efficiency Partnerships. “Cost Effectiveness Screening Principles and Guidelines.” November 2014. Page 9. Available at: [http://www.neep.org/sites/default/files/resources/Forum\\_C-E\\_Screening\\_Guidelines\\_Final\\_No\\_2014.pdf](http://www.neep.org/sites/default/files/resources/Forum_C-E_Screening_Guidelines_Final_No_2014.pdf)

1 **Q: How do the New Hampshire utilities assess cost-effectiveness of their**  
2 **programs?**

3 A: According to witness Goldman, they have used the total resource cost (TRC) test  
4 for over twenty years (p. 3).

5 **Q: Are the utilities proposing any changes to this approach as part of the Plan?**

6 A: The utilities have not suggested a change in the nature of the test, but they are  
7 proposing to add a factor to account for a variety of benefits that are not currently  
8 being valued as part of the TRC.

9 **Q: Why are the utilities proposing to add benefits to the assessment of cost-**  
10 **effectiveness?**

11 A: Because one of the best practices in cost-effectiveness, as emphasized in the  
12 NSPM, is to ensure that the analysis is symmetrical. For example, if policymakers  
13 include costs paid by program participants for purchasing a measure within their  
14 screening test, they should also include the quantifiable benefits that participants  
15 derive from the program. Or, conversely, if policymakers choose to include only  
16 the costs associated with the utility or program administrator perspective in their  
17 screening test, benefits that would normally accrue to a program participant  
18 should be excluded. In short, if a policymaker plans to value the costs associated  
19 with one perspective or another, symmetry prescribes that each of the benefits that  
20 accrue to that perspective should be valued as well.

21 **Q: What does this mean, in practice, for the TRC?**

22 A: Because the TRC includes all costs of efficiency, both to the utility and to  
23 participants, the benefits to both of these groups should be included to the

1 maximum extent practical. Traditionally, though, the TRC often omitted several  
2 types of benefits that accrue to various parties.

3 **Q: What benefits are these?**

4 A: Broadly speaking, these benefits are referred to as “non-energy impacts,” or NEIs.  
5 These are benefits beyond the avoided energy and capacity costs that represent the  
6 vast majority of the benefits of energy efficiency. They may accrue to the utility  
7 (e.g., reduced arrearages and debt collection costs), program participants (e.g.,  
8 reduced operations and maintenance costs, improvement of occupant health and  
9 productivity), or the economy in general (e.g., economic development and  
10 environmental impacts not already captured in the energy avoided costs).

11 **Q: What is the utilities’ proposal regarding NEIs?**

12 A: In the absence of New Hampshire-specific studies of the impacts and their value,  
13 the utilities propose a simple 10 percent benefits “adder.” That is, after calculating  
14 the total benefits of the programs as has previously been done, an extra 10 percent  
15 will be added to represent all of the NEIs in aggregate.

16 **Q: What justification do the utilities give for this approach?**

17 A: The utilities state that they have selected this value to represent a conservative  
18 estimate based on evidence from other jurisdictions. Witness Goldman provides a  
19 summary of the total NEIs included in the cost-effectiveness tests in four nearby  
20 states, most of which are based on studies specific to those states and programs. In  
21 all cases, the NEIs exceed 20 percent of the total benefits. Therefore, the utilities  
22 suggest that, were similar studies conducted in New Hampshire, NEIs would  
23 likely be at least 10 percent additional to the currently assessed benefits.



1 **Q: Is it reasonable to assume that the NEIs measured in other states are valid in**  
2 **New Hampshire?**

3 A: At the level of aggregation used here, yes. One of the driving factors in the total  
4 NEIs reported in other jurisdictions is the extent of income-eligible programs,  
5 because on a percentage basis, NEIs are much larger in these programs. The New  
6 Hampshire utilities are also delivering income-eligible programs, representing 17  
7 percent of the three-year plan budget.

8 **Q: Do you support the use of the 10 percent adder for NEIs?**

9 A: Yes, I do. It is reasonable, based on actual evidence and analyses of these benefits  
10 in other jurisdictions, and a conservative value given the magnitude of the  
11 benefits in those other jurisdictions.

### 12 **III. The utilities' proposal for cost-recovery**

13 **Q: The EERS settlement included an important change in the way the utilities**  
14 **are compensated for delivering energy efficiency programs. Can you please**  
15 **briefly summarize this change?**

16 A: Previous to the settlement agreement and this Plan, the utilities received  
17 compensation for delivering efficiency programs in two ways. First, the cost of  
18 delivering the programs was covered by the funds collected by the System  
19 Benefits Charge (SBC), as well as the proceeds from the Regional Greenhouse  
20 Gas Initiative and Forward Capacity Market auctions. Second, the utilities were  
21 able to earn a performance incentive payment if they met certain criteria related to  
22 performance as compared with savings targets. The utilities were not able to  
23 recover revenues related to fixed cost recovery that were "lost" as a result of

1 selling fewer units of energy than were forecast when rates were set. As part of  
2 the settlement agreement, this third component, lost revenue recovery, is being  
3 allowed as of the 2017 program year. In exchange, the utilities receive a lower  
4 performance incentive.

5 **Q: Did the criteria for earning the performance incentive change?**

6 A: No, the criteria remain the same. Only the magnitude changed, from a nominal  
7 incentive of 7.5 percent of program spending to 5.5 percent. The basis for earning  
8 the performance incentive remains the amount of energy saved as compared with  
9 the planned level of savings, as well as the realized benefit-cost ratio as compared  
10 to the planned ratio. Also unchanged is the threshold criterion that the benefit-cost  
11 ratio be greater than 1 and an adjustment to the nominal incentive rate for the  
12 electric utilities if the energy savings from reductions in electricity consumption  
13 as a portion of total energy savings including fossil fuel reductions does not  
14 exceed 55 percent.

15 **Q: Are these criteria aligned with the desired outcomes and objectives of the**  
16 **EERS?**

17 A: Only partially. While acquisition of cost-effective energy savings is the primary  
18 reason to implement energy efficiency, other desirable outcomes result, such as  
19 reduced peak demand (as I discussed earlier), reduced emissions of carbon  
20 dioxide and other greenhouse gases, and reduced total energy bills for New  
21 Hampshire consumers. Peak demand reductions, in particular, would be valuable  
22 to include in the performance incentive formulation. This can be done by either  
23 including peak demand in the formula for calculating the PI, or by dividing the PI

1 into more than one “pot,” one based on energy savings and one based on peak  
2 demand savings. For example, in Rhode Island, 30 percent of the total available  
3 funding for performance incentives is set aside for achieving peak demand  
4 reduction.<sup>9</sup>

5 **Q: Have the utilities indicated that additional revisions to the performance**  
6 **incentive formula may be appropriate?**

7 A: My understanding is that the utilities have indicated that changing the  
8 performance incentive formula would result in changes to the proposed programs  
9 consistent with the utilities’ efforts to ensure the best chance of earning the  
10 maximum performance incentive. The extent to which changes would be needed  
11 is perhaps open to debate, but the concept is reasonable. Regardless of how  
12 substantive the changes would need to be to operate under a different set of  
13 incentives, the recommendation of the EERS Committee of the EESE Board to  
14 investigate a new formula to take effect in 2020 also seems reasonable.

15 **IV. Other models for delivering efficiency to New Hampshire consumers.**

16 **Q: The settlement agreement provides that the New Hampshire utilities will**  
17 **continue to deliver efficiency programs through 2020, based on this three-**  
18 **year plan. What options are there for program delivery models after 2020?**

19 A: Generally speaking, models for delivering efficiency programs fall into three  
20 major categories: delivery by distribution utilities (or LSEs), delivery by either a  
21 state or local government or an entity acting on their behalf/contracted by them, or  
22 delivery through private enterprise/market forces.

---

<sup>9</sup> RI Public Utilities Commission, Docket No. 4654, Energy Efficiency Program Plan For 2017, Settlement of the Parties, 17 October 2016.

1 **Q: Are there any advantages to models other than delivery by distribution**  
2 **utilities that are relevant to the current model in New Hampshire?**

3 A: There are always advantages and disadvantages to various models in any  
4 particularly jurisdiction. With respect to the issues I have discussed so far, there  
5 may be some advantages to a third-party delivery model in New Hampshire. The  
6 issue of lost revenue recovery and the disincentive that it can be for a distribution  
7 utility is removed when efficiency is delivered by a third-party administrator that  
8 does not have selling electricity or natural gas as its primary business. Depending  
9 on the nature of the third-party entity, performance incentives can be structured  
10 differently, and perhaps at a lower total amount, than for an investor-owned utility  
11 able to earn a potentially higher return on supply-side investments. On the other  
12 hand, the fact that many of the distribution utilities in New Hampshire are also  
13 delivering efficiency in Massachusetts, and very successfully, may mean that that  
14 shifting to a third-party administrator would risk losing institutional capabilities  
15 and knowledge from those organizations.

16 **Q: How could New Hampshire decide whether or not to pursue a different**  
17 **delivery model?**

18 A: I am aware that shifts from one model to another have occurred in other  
19 jurisdictions, including in Vermont, where a third-party administrator was  
20 implemented beginning in 2000, and New Jersey, where a third-party  
21 administrator was created but utilities later recovered responsibility for various  
22 programs. Regardless of how such a process plays out in New Hampshire, it  
23 would have to start well in advance of the end of the three-year planning period in

1           order for any changes to be well-planned to ensure continuous provision of  
2           efficiency programs and services to New Hampshire consumers. This could be as  
3           early as the beginning of the second year of the three-year Plan.

4   **V. Conclusion**

5   **Q:   Please summarize your testimony.**

6   A:   In my testimony I have addressed an number of issues related to the three-year  
7       efficiency plan filed by the New Hampshire Utilities, including the design of the  
8       programs, the cost-effectiveness of these programs, and the utilities' proposals for  
9       cost-recovery and performance incentives. In doing so, I have made several  
10      comments and recommendations for the Commission's consideration, with the  
11      central conclusion that the Plan represents a reasonable and appropriate use of  
12      ratepayer funds to advance cost-effective energy efficiency in New Hampshire,  
13      and therefore that it should be approved by the Commission.

14   **Q:   Does this conclude your testimony?**

15   A:   Yes.