



March 1, 2016

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**Via Electronic Mail and US Mail**

Debra A. Howland  
Executive Director  
New Hampshire Public Utilities Commission  
21 S. Fruit Street, Suite 10  
Concord, NH 03301-2429

**Re: DE 15-137 – Energy Efficiency Resource Standard**

Dear Director Howland:

Enclosed for filing in the above-captioned docket please find the joint rebuttal testimony on behalf of: Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities; New Hampshire Electric Cooperative, Inc.; Public Service Company of New Hampshire d/b/a Eversource Energy; Unitil Energy Systems, Inc.; Liberty Utilities (EnergyNorth Natural Gas) Corp d/b/a Liberty Utilities; and Northern Utilities, Inc. (collectively, “the Electric and Natural Gas Utilities”).

Thank you for your assistance with this matter. Please contact me if there are any questions about this filing. Thank you.

Very truly yours,



Matthew J. Fossum  
Senior Counsel, Eversource Energy  
o/b/o the Electric and Natural Gas Utilities

Enclosures  
cc: Service List

**NH SAVES**  
we all win



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

**Docket No. DE 15-137**

**Energy Efficiency Resource Standard**

**Joint Rebuttal Testimony of Karen M. Asbury, Cindy L. Carroll, Carol M. Woods, Eric M. Stanley, Heather M. Tebbetts, Rhonda J. Bisson, and Edward A. Davis**

**On Behalf of**

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities**

**New Hampshire Electric Cooperative, Inc.**

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

**Unitil Energy Systems, Inc.**

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities**

**Northern Utilities, Inc.**

**March 1, 2016**



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1   **I.     Introduction of Witnesses**

2   **Q.     Please state your names.**

3   A.     Karen M. Asbury and Cindy L. Carroll (Unitil), Carol M. Woods (NHEC), Eric M. Stanley  
4           and Heather M. Tebbetts (Liberty), Rhonda J. Bisson and Edward A. Davis (Eversource  
5           Energy).

6   **Q.     Have you previously filed direct testimony in this proceeding?**

7   A.     Cindy L. Carroll, Carol M. Woods, Eric M. Stanley, and Rhonda J. Bisson submitted joint  
8           testimony on behalf of the Utilities in this proceeding on December 9, 2015.

9   **Q.     For those of you who have not already filed testimony, by whom are you employed and  
10           in what capacity?**

11  A.     Karen M. Asbury: I am Director of Regulatory Services for Unitil Service Corp., an affiliate  
12           of Northern Utilities, Inc. and Unitil Energy Systems, Inc., which are all subsidiaries of  
13           Unitil Corporation. My primary responsibilities are directing rate and regulatory filings.

14       Edward A. Davis: I am Director of Rates for Eversource Energy. I am responsible for  
15           activities related to rate design, cost of service and other rate-related matters for the  
16           Eversource Energy operating companies.

17       Heather M. Tebbetts: I am a Utility Analyst for Liberty Utilities Service Corp. and in this  
18           capacity, am responsible for providing rate-related services for the Liberty Utilities  
19           operating companies.

1   **Q.     Please describe your business and educational backgrounds.**

2   A.     Karen M. Asbury: I received a Bachelor of Science Degree in Mathematics from the  
3     University of New Hampshire in 1987. I joined Unitil Service Corp. in January 1988 and  
4     have held various positions in the regulatory/rate department.

5     Edward A. Davis: I received a Bachelor of Science degree in Electrical Engineering from  
6     the University of Hartford in 1988, and a Master of Business Administration degree from  
7     the University of Connecticut in 1997. I joined Eversource Energy's predecessor, Northeast  
8     Utilities, in 1979 and have held positions with responsibilities in the areas of consumer  
9     economics, engineering, operations, wholesale and retail marketing, and rate design,  
10    regulation and administration.

11   Heather M. Tebbetts: I received a Bachelor of Science degree in Finance from Franklin  
12   Pierce University in 2004. I received a Master's of Business Administration from Southern  
13   New Hampshire University in 2007. I joined Liberty in October of 2014 as a Utility  
14   Analyst. Prior to my employment at Liberty, I was employed by Public Service Company  
15   of New Hampshire ("PSNH") as a Senior Analyst in NH Revenue Requirements from 2010  
16   to 2014. Prior to my position in NH Revenue Requirements, I was a Staff Accountant in  
17   PSNH's Property Tax group from 2007 to 2010, and a Customer Service Representative III  
18   in PSNH's Customer Service Department from 2004 to 2007.

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

20   A.     Karen M. Asbury: Yes, I have previously testified on numerous occasions before the  
21    Commission on rate related matters.

1 Edward A. Davis: Yes, I have previously testified before the Commission.

2 Heather M. Tebbetts: Yes, I have previously testified on numerous occasions before the  
3 Commission.

4 **Q. What is the purpose of this rebuttal testimony?**

5 **A.** The Utilities continue to aggressively support efficiency throughout New Hampshire. The  
6 Utilities propose the adoption of their testimony in full, as it provides a transparent and  
7 balanced solution for the development and implementation of an EERS in New Hampshire.  
8 It also allows for the amount of energy efficiency pursued on an annual basis to be tailored  
9 to the level at which the Commission deems appropriate. In response to the other proposals  
10 received in this docket, the following testimony addresses issues related to: comparisons of  
11 LRAM and decoupling; lost revenue recovery caps and adjustments; gas conversion  
12 customers; savings targets; uniform utility savings; and a clarification of the System  
13 Benefits Charge ("SBC") rate components.

14 **II. Lost Revenue Recovery – Comparing LRAM vs. Decoupling**

15 **Q. Testimony filed by parties other than the Utilities on December 9, 2015 propose an**  
16 **initial Lost Revenue Adjustment Mechanism ("LRAM") with a transition to full**  
17 **decoupling as soon as practicable. Do the Utilities agree with this approach?**

18 **A.** No. The Utilities believe that as part of an EERS, an LRAM is the most appropriate and  
19 efficient mechanism for compensating utilities for lost revenues resulting from energy  
20 efficiency measures. By definition, an EERS is focused only on energy efficiency. An  
21 LRAM addresses only lost revenues resulting from energy efficiency measures and no other



1 causes. Full decoupling, by contrast, encompasses all aspects of an individual distribution  
2 company's business, not just its energy efficiency programs. The LRAM proposed by the  
3 Utilities is administratively more efficient than decoupling because it can be implemented  
4 without a rate case, thereby allowing all utilities to have an LRAM in place  
5 contemporaneously with their EERS programs. In contrast, a decoupling mechanism can  
6 only properly be implemented following individual company full rate cases. As stated in  
7 Commission Order 24,934 in Docket No. DE 07-064, at page 22: "Regardless of the model  
8 used, it would be appropriate to propose revenue decoupling in the context of a rate case in  
9 order to avoid single-issue ratemaking." Additionally, the Study Committee established by  
10 Senate Bill 60 (N.H. Laws of 2015, Chapter 148) to investigate implementation of  
11 decoupling for New Hampshire utilities recommended in its final report that if decoupling is  
12 pursued in New Hampshire, it would be best achieved in the context of an individual  
13 utility's rate case proceeding. In view of the foregoing, decoupling is not a viable solution  
14 for recovering lost revenue resulting solely from energy efficiency measures.

15 **Q. Staff's Direct Testimony, at page 42, line 835 states that "unintended, windfall profits**  
16 **could result" from implementing an LRAM that is not carefully designed. Do the**  
17 **Utilities agree with this statement?**

18 **A.** No. A properly designed LRAM restores revenues of an individual distribution company to  
19 the level that would have been achieved without the implementation of energy efficiency  
20 measures. By definition, there is no profit under the LRAM that is beyond what the  
21 distribution company is allowed to achieve under rates that have been approved by the  
22 Commission, and which were designed without regard to such energy efficiency measures  
23 being implemented. With an LRAM, a utility is left in the financial position contemplated  
24 by its last rate case, *i.e.*, equal to where it would have been absent any energy efficiency

1 measures, no better or worse. Additionally, since an LRAM is calculated through a  
2 documented formula, and the energy efficiency savings are based upon current EM&V  
3 studies, the accuracy of the calculations of lost revenues claimed for recovery are verifiable  
4 and demonstrate that the recovery is justified, similar to how performance incentives are  
5 currently handled. Finally, the rates calculated under the LRAM are subject to the review  
6 and approval of the Commission on an annual basis through an adjudicatory proceeding  
7 which provides for full transparency.

8 **Q. Please describe the general methodology used to calculate lost revenues via an LRAM,**  
9 **as proposed by the Utilities.**

10 **A.** Under the Utilities' proposal, all measures installed after the initiation and implementation  
11 of an EERS will have 100% of their savings included in the lost revenue calculation until  
12 the measures expire. The expiration date of any individual measure will depend upon the  
13 measure life of the specific measure installed. Once a measure expires, 100% of those  
14 savings will be removed from the calculation, just as is done with reporting savings in ISO-  
15 NE's Forward Capacity Market. In Year One (on day one) of the EERS, lost revenues will  
16 begin at zero. Any forecasted savings resulting from energy efficiency programs for that  
17 year will be included in the lost revenue calculation, and will be the basis for the revenue to  
18 be collected through the LRAM. Once the actual amount of energy efficiency program  
19 savings achieved becomes known, the LRAM will be reconciled to ensure the proper  
20 amount of lost revenues are collected. The reconciled savings for those measures installed  
21 will be carried forward and included in subsequent LRAM calculations until they each  
22 expire. Year Two will include the reconciled Year One savings as well as the forecasted  
23 Year Two savings in the lost revenue calculation and will be reconciled in the same manner



1 as the Year One savings. For each distribution company this process will continue until a  
2 rate case for that company occurs, at which time the lost revenues specific to that utility will  
3 reset to zero and the calculation will start anew.

4 **Q. Staff's Direct Testimony, at page 37, line 744 indicates that LRAM should be included**  
5 **as a cost within the cost-effectiveness test for energy efficiency programs. Do the**  
6 **Utilities agree with this approach?**

7 A. No. The Utilities firmly believe that it is inappropriate to include LRAM as part of any  
8 cost-effectiveness test for energy efficiency measures. As NHSEA *et al* correctly noted in  
9 the attachment to their testimony at page 14 "lost revenue is *not* an additional cost of energy  
10 efficiency programs". It is also important to note that the Utilities are not aware of, and no  
11 party has identified, any jurisdictions in the United States that view lost revenues as a cost  
12 of energy efficiency and include it as part of a cost-effectiveness test. The Utilities' view is  
13 also supported by the Regulatory Assistance Project ("RAP") which has stated "...lost  
14 revenues are not a new or an incremental cost in the same way that the program  
15 administration costs are a new and incremental cost of implementing energy efficiency  
16 programs, and they should not be applied as such in screening a new energy efficiency  
17 resource."<sup>1</sup>.

18 While it is not entirely clear what would happen to energy efficiency programs in New  
19 Hampshire if lost revenues were to be considered as costs, what is clear is that the cost to  
20 achieve each saved kWh or therm would increase, and all energy efficiency programs would  
21 need to be re-evaluated each year. Programs that are currently cost-effective could become  
22 cost-ineffective, since benefits would remain constant but the cost side of the equation

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1 <http://www.raponline.org/document/download/id/6149>, page 16

1 would increase. Also, programs that are cost-effective and successful in other states (none  
2 of which include LBR in their cost effectiveness tests) might not be viable in New  
3 Hampshire because those programs could not be delivered cost effectively. This would  
4 result in New Hampshire utilities not being able to incent measures and offer programs that  
5 are similar to those of their peers in other jurisdictions, thereby making it difficult to meet  
6 enhanced savings goals under an EERS. For the foregoing reasons, Staff's inclusion of  
7 LRAM as a cost in the cost-effectiveness test is improper.

### 8 **III. Lost Revenue Recovery – Cap and Adjustments on Recovery**

9 **Q. At page 39, lines 774-776 and lines 784-786 of their Direct Testimony, Staff asserts that**  
10 **there should be a cap placed on the amount of lost revenues that are allowed to be**  
11 **collected. Do the Utilities agree with Staff's position?**

12 **A.** No, the Utilities do not believe there should be a cap on lost revenues. Lost revenues are a  
13 byproduct of energy efficiency savings. Therefore, as energy efficiency savings increase,  
14 the corresponding lost revenues would increase as well. Lost revenue recovery simply  
15 restores the assumed relationship between sales level and revenue requirements that were  
16 the basis for setting rates in each utility's rate case. A cap on lost revenue recovery would  
17 prevent a utility from recovering all of its lost revenues attributable to energy efficiency. In  
18 that instance, a revenue shortfall is created, the purpose of an LRAM is not fulfilled, and the  
19 result is confiscatory. For all of the foregoing reasons, a cap on lost revenue recovery is  
20 improper.

21 Additionally, having a cap in place that renders lost revenues above a certain level  
22 unrecoverable would create a disincentive for the Utilities to pursue energy efficiency  
23 beyond the cap. If the overall financial impact of installing measures beyond a cap is

1 negative (i.e. lost future sales, the revenue from which cannot be collected), it would  
2 discourage any investment beyond the cap. It would likewise discourage the pursuit of all  
3 cost-effective energy efficiency measures and could leave significant potential savings  
4 unrealized.

5 **Q. At page 40, lines 801-809 of their Direct Testimony, Staff asserts that there should be a**  
6 **retirement adjustment to reduce previously installed measures' savings by 50% when**  
7 **they retire. Do the Utilities agree with Staff?**

8 **A.** No. The backward looking retirement adjustment proposed by Staff should not be used. The  
9 Utilities understand the Staff adjustment to be based upon the assumption that when an  
10 installed energy efficiency measure is retired (for example, an energy efficient washing  
11 machine breaks down and is replaced), "the associated savings come to an end...the  
12 utilities' revenues will increase and LR will decrease" (Staff Testimony, Page 40, Lines  
13 803-805). Staff's adjustment then applies a discount of 50% to this theoretical increase in  
14 energy use. Given the advances in technologies, higher federal standards and energy codes,  
15 and consumer tastes, this assumption is not justified. A measure that qualified as "highly  
16 efficient" years ago is essentially the low-end version of a product now. Therefore, as those  
17 old measures expire, they will be replaced by measures that are at least as efficient as the old  
18 efficient measure, and, as a result, sales will either remain constant or decrease as those old  
19 measures expire and new measures are installed. Furthermore, Staff's backward looking  
20 retirement adjustment does not consider that utilities have filed rate cases. Staff's reduction  
21 of lost revenue based on 50% of an assumed increase in sales occurring upon the retirement  
22 of energy efficiency measures is unfounded and confiscatory.

1 **Q. Please further describe the changes in standards and codes that have occurred over**  
2 **time which supports the Utilities' position that delivered sales will either hold flat or**  
3 **further decline as measures expire.**

4 **A. The Federal Government established appliance and equipment efficiency standards starting**  
5 **with the Energy Policy and Conservation Act in 1975. Since that time, standards have been**  
6 **expanded and increased multiple times with amendments to the original act, the National**  
7 **Appliance Energy Conservation Act of 1987, the Energy Policy Act of 1992, the Energy**  
8 **Policy Act of 2005 and the Energy Independence and Security Act of 2007. To comply**  
9 **with these Acts, the Department of Energy (DOE) is required to regularly review and update**  
10 **all standards and test procedures for appliances manufactured and sold in the United States.**  
11 **State Building Codes are similarly reviewed and updated on a regular basis. The**  
12 **International Code Council develops model codes and standards on a 3-year cycle. The**  
13 **State Building Code Review Board is required by New Hampshire Statute to review and**  
14 **amend the state-adopted code. The State Building Code was adopted in 2002, revised in**  
15 **2010 and a new version is presently before the legislature for adoption in 2016.**

16 The effect of the updates to these federal requirements and building codes is that minimum  
17 efficiency standards have increased over time for appliances, equipment and building  
18 construction. Given the average lifetime of measures, it would be highly unlikely and  
19 uneconomical for customers to replace a program product with a product that uses more  
20 energy than an energy efficient model purchased years ago.

21 Refrigerators provide a useful example. For a customer who received an incentive for a new  
22 refrigerator in 2004, the Utilities would have calculated savings based on the difference

1 between an Energy Star unit (annual usage of 445kWh at that time) and a Federal Standard  
2 unit (524 kWh annually at that time). The incentive would be based upon the assumption  
3 that the Energy Star model would provide annual savings of 79 kWh over the standard  
4 model. When that refrigerator reached the end of its useful life (the Utilities assume a 12  
5 year life, so that would occur in 2016), the customer could then purchase a Federal Standard  
6 unit or another Energy Star unit. The 2016 federal standard unit uses 438 kWh a year. If  
7 half of customers purchase the baseline unit and half of customers purchase a new Energy  
8 Star unit (394 kWh annually), then the load 'growth' is actually negative—the load on the  
9 grid decreases by 29 kWh.

10 Lighting provides another example. A customer who replaced a 60W incandescent bulb  
11 with a 9W LED in 2011 would save 51 kWh annually. By 2020, well before that LED's  
12 2031 expiration date, federal standards will have increased such that incandescent and  
13 halogen bulbs can no longer be purchased, and conversations with manufacturers indicate  
14 that they no longer plan to produce CFLs either. The customer's new baseline option  
15 therefore would be an LED or another new technology. The new option in 2031 would be at  
16 least as efficient as the LED from 2010 and likely more efficient given the trend for  
17 improvements in technology. Therefore, a decrease in load is actually more likely in this  
18 scenario than load growth.

19 In addition, there are other measures for which a reversal to the original state would be  
20 completely impractical, such as with insulation. The Utilities assume a conservative 25 year  
21 life for this measure, to account for changes in usage, renovations, etc. However, for many  
22 homes, that insulation is still in place and in use at the end of the 25 years, and a homeowner



1 is unlikely to open their walls and replace it with a lesser amount of insulation.

2 **Q. How do the Utilities propose to handle retirement of measures installed before and**  
3 **after the implementation of an EERS?**

4 A. No measures installed prior to the implementation of an EERS will affect the calculation of  
5 lost revenues whatsoever. In the Utilities' proposal, measures installed prior to the  
6 implementation of an EERS are ineligible for lost revenue recovery. For energy efficiency  
7 measures installed as part of the EERS that expire based on their measure life or through a  
8 rate case, their savings would no longer be counted as described on page 7.

9 **Q. Should there be a reduction to the recovery of future lost distribution revenue for**  
10 **measures installed after the implementation of an EERS?**

11 A. No. While Staff has proposed a so-called "one-time" incremental adjustment to lost  
12 distribution revenue, that adjustment would result in a permanent, annual reduction to the  
13 total level of lost revenue recovery. At the time the proposed EERS would begin, sales and  
14 therefore distribution revenue for each utility will have already been lower due to  
15 cumulative EERS measures installed up to that point. Since the Utilities are seeking only to  
16 recover lost distribution revenue for measures installed after the implementation of an  
17 EERS, implementation of Staff's proposal for an incremental adjustment would deny the  
18 recovery of a significant level of actual lost distribution revenue for energy efficiency  
19 savings achieved each year once the EERS was implemented.



1 **IV. Lost Revenue Recovery – Gas Conversion Customers**

2 **Q. At page 41, lines 810-816 of Staff's Direct Testimony, Staff states: "In a significant**  
3 **number of gas heating and hot water installations, it appears that customers**  
4 **convert/switch from oil to gas; thus, gas sales volumes increase. This increase in gas**  
5 **sales volumes reduces the utilities' LR. Much of this conversion/switching is assumed**  
6 **to be associated with the installation of new high efficiency gas heating and hot water**  
7 **installations; thus, the Model reduces the calculated LR accordingly." Do the Utilities**  
8 **agree with Staff's assumptions?**

9 **A. No. Based on actual experience, the Utilities believe that Staff's assumptions are not**  
10 **correct.**

11 **Q. Please explain.**

12 **A. The natural gas utilities account for anticipated new customer growth in their respective**  
13 **planning processes and in rate cases. Although adding new customers increases sales, new**  
14 **customer additions also create new costs such as those associated with service lines, meters**  
15 **and in some cases natural gas main extensions. Thus, while adding a new gas customer may**  
16 **increase sales, it is incorrect to view these sales as compensating the utility for lost revenue**  
17 **attributable to energy efficiency.**

18 **Q. Staff also states in its proposal (see page 41, lines 810-816 of Staff proposal), "Much of**  
19 **this conversion/switching is assumed to be associated with the installation of new high**  
20 **efficiency gas heating and hot water installations; thus, the Model reduces the**  
21 **calculated LR accordingly." Are Staff's assumptions correct?**

22 **A. No, Staff's assumptions are not correct.**

1 **Q. Please explain.**

2 A. In 2015, Liberty Utilities provided 687 energy efficiency rebates for new high efficiency  
3 space heating system installations that qualified for its Residential ENERGY STAR  
4 Products program and Commercial & Industrial Small Business and Large Business  
5 programs, where both existing natural gas customers and new natural gas customers may be  
6 eligible to receive energy efficiency rebates. Of this total, 167 energy efficiency rebates  
7 were to new natural gas customers who were previously using heating oil, propane or  
8 electricity for space heating, or only 24% ( $24\% = 167/687$ ) of the total rebates provided for  
9 the programs aforementioned. Also for reference, Liberty Utilities added 681 new natural  
10 gas customers in 2015 that were previously using heating oil, propane or electricity for  
11 space heating. Therefore, only 25% ( $25\% = 167/681$ ) of new natural gas heating customers  
12 who were previously using heating oil, propane or electricity for space heating received  
13 energy efficiency heating system rebates as part of their conversion/switch. These  
14 conversion customers did not make a significant capital investment to switch from propane  
15 or oil heat to natural gas in order to receive an energy efficiency rebate. They switched to  
16 natural gas because of the long term financial benefit of natural gas. The energy efficiency  
17 rebates as designed incented them to install high efficiency natural gas equipment rather  
18 than a less expensive, and less efficient model.

19 **Q. What explains the low percentage of customer participants in Liberty Utilities energy**  
20 **efficiency programs who were previously using heating oil, propane or electricity for**  
21 **space heating?**

22 A. There are several reasons why new natural gas customers do not choose to participate in the  
23 company's energy efficiency programs. First, the cost premium of installing a high

1 efficiency boiler or furnace versus a standard efficiency boiler or furnace can be in the  
2 thousands of dollars and is an economic barrier to many customers. Second, there can be  
3 physical limitations in a building that prevent the installation of high efficiency equipment  
4 due to venting requirements. Lastly, for new customers who are switching from heating oil  
5 to natural gas, these customers may have the option of installing a natural gas conversion  
6 burner kit that allows them to convert to natural gas without having to invest a new heating  
7 system. Natural gas conversion burner kits are not an energy efficient option, but they can  
8 be an inexpensive option for customers who cannot afford, or do not want to pay, the cost  
9 premium of new high efficiency equipment.

10 Similarly, propane heating customers who convert to natural gas may have the option of  
11 using their existing heating system by only making minor modifications. This option also  
12 does not represent the most energy efficient option for customers, but many also choose it  
13 because it is less expensive than the cost of new high efficiency heating equipment.

14 **Q. Do you agree with Staff's proposal that the natural gas utilities LR calculation should**  
15 **be reduced based on new natural gas conversion customer additions?**

16 **A. No.**

17 **Q. Please explain the Utilities' position.**

18 **A.** Staff's proposal for reducing the natural gas utilities LR calculation appears to be based on  
19 the assumption that current incentives for high efficiency heating systems are primarily  
20 going to new gas conversion customers, therefore helping to compensate the natural gas  
21 utilities for lost revenue because without such programs they would be providing energy

1 efficiency incentives to significantly fewer participants. As described above, this is not the  
2 case. It is worth noting that Staff did not specifically recommend that the electric utilities  
3 LR calculation be reduced based on new electric customer additions that are achieved each  
4 year, which we believe supports our interpretation of the assumptions in their proposal.

5 Similarly, Staff's proposal also appears to assume that the natural gas energy efficiency  
6 programs are a driving factor in customer sales activities, without which the natural gas  
7 utilities would not be growing their customer bases to the same degree. While the natural  
8 gas utilities' new gas sales and marketing activities prioritize messaging about energy  
9 efficiency programs, as discussed above, only a relatively small percentage of new gas  
10 customers are currently participating in the programs.

11 **Q. What are the potential implications of Staff's recommendation that the natural gas**  
12 **utilities' LR calculation subtract new natural gas conversion customers?**

13 **A.** By removing new natural gas conversion customer additions from the LR calculation, Staff  
14 introduces an element that discourages the natural gas utilities from seeking to convert  
15 heating oil, propane and electricity customers to natural gas or promoting energy efficiency  
16 programs to new natural gas conversion customers. The utilities believe this is  
17 contradictory to the desired mission of establishing an EERS in New Hampshire, which is to  
18 achieve all cost effective energy efficiency. The most opportune time to motivate and incent  
19 a customer to install a high efficiency heating system is at the point in time when the  
20 customer is added to the natural gas utility. Once a customer installs a system it can be over  
21 a decade or longer before that customer may even consider installing a replacement.

1 **Q. Are you aware of any utilities in other jurisdictions that are required to subtract new**  
2 **customer additions from their lost revenue calculation?**

3 **A. No.**

4 **Q. Has Liberty Utilities previously provided information to Commission Staff regarding**  
5 **new customer additions and associated energy efficiency rebates?**

6 **A. Yes. In Docket No. DE 14-216, Liberty Utilities provided responses to Staff 3-009 and**  
7 **Staff 3-010 regarding the same issue. Please see Attachment 1 for the discovery responses.**

8 **V. Savings Targets**

9 **Q. Please explain why the Utilities' approach to setting savings targets is preferable to the**  
10 **approaches taken by other parties in this docket.**

11 **A. The Utilities believe, as stated in their testimony filed December 9, 2015, that savings goals**  
12 **should be developed in a manner where savings goals are established with an ultimate**  
13 **savings target of all achievable cost-effective energy efficiency over time, along with setting**  
14 **annual sales targets over at least a three-year period based upon demonstrated savings**  
15 **potential and the level of energy efficiency funding available to the electric and gas utilities.**

16 **This is more reasonable than using a single data point for establishing savings targets, as**  
17 **suggested in other proposals filed in this case, because it combines bottom-up planning**  
18 **(which focuses on the savings that are reasonable for each individual measure) with a top-**  
19 **down planning approach (which focuses on what savings are reasonable and achievable for**  
20 **the entire portfolio of energy efficiency programs and the state as a whole).**

21 **In contrast, other proposals recommend that the Commission should adopt EERS savings**  
22 **targets based solely on the single data point of achievement and/or goals set in other New**  
23 **England states and recommend solely on putting New Hampshire "in-line" with surrounding**



1 states. The length of time that the other states have had to ramp up to current goals, and the  
2 level of funding that such states have committed to energy efficiency were not demonstrated  
3 to have been taken into account.

4 In addition, the proposals are not taking into account the differences that exist between New  
5 Hampshire and other New England states such as the economic reality that more  
6 commercially and industrially populous neighboring states provide more opportunities for  
7 energy efficiency. For example, Massachusetts has 5.1 times the population of New  
8 Hampshire, but it has 6.5 times the gross domestic product (“GDP”) of New Hampshire, and  
9 Connecticut has 2.7 times the population of New Hampshire but 3.6 times the GDP<sup>2</sup>,  
10 providing for greater opportunities for energy efficiency.

11 Nevertheless, New Hampshire compares well with its neighbors in terms of low energy  
12 consumption per real dollar of state GDP<sup>3</sup>, according to the EIA, ranking 10th in the nation  
13 ahead of Vermont and Maine.

14 Similarly, Staff’s recommended savings targets rely heavily on “the EERS targets adopted  
15 by neighboring New England states and those who have adopted EERS in a more gradual  
16 fashion as exemplified by the Mid-Western States.” *Staff Direct Testimony*, pp. 46-47, lines  
17 924-926. For the reasons stated above, setting savings targets based solely on a comparison  
18 to other jurisdictions is flawed. In fact, Staff recognized this flaw in its testimony which

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2 GDP by State - [http://bea.gov/iTable/index\\_regional.cfm](http://bea.gov/iTable/index_regional.cfm)

State Population Estimates - <http://www.census.gov/popest/data/state/totals/2015/index.html>

3 [http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep\\_sum/html/rank\\_use\\_gdp.html&sid=US](http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_sum/html/rank_use_gdp.html&sid=US)



1 states that “comparison with neighboring states entails the risk that states do differ.” *Staff*  
2 *Direct Testimony*, p. 47, line 928.

3 **Q. In developing its savings targets, did Staff consider other sources of information?**

4 A. Yes. In addition to relying upon savings targets set in other states, Staff indicates that it  
5 relied on a review of “the market potential studies prepared by VEIC and GDS”. *Staff*  
6 *Direct Testimony*, p.46, lines 923-924.

7 **Q. Do the Utilities believe that the VEIC and GDS studies provide sufficient or reliable**  
8 **information for establishing gas savings targets for New Hampshire?**

9 A. No. The Utilities believe that those resources are also insufficient for establishing New  
10 Hampshire EERS savings targets for 2017-2019. In fact, Staff acknowledges the limitations  
11 of these sources in its testimony stating “Staff understands that potential studies, while  
12 providing a suitable road map, do assume targets based on all potential measures being  
13 deployed.” *Staff Direct Testimony*, p. 47, lines 926-927). In other words, although cost  
14 effective energy efficiency opportunities may be available, if they are not fully deployed,  
15 savings goals will not be realized. Therefore, the likelihood of customers’ willingness or  
16 ability to adopt measures must be taken into consideration when determining savings goals.

17 The GDS study entitled “*Additional Opportunities for Energy Efficiency in New*  
18 *Hampshire*” is dated. It was completed in 2009, relied upon data from 2008 (or earlier) and  
19 only projected potential savings out to 2018. Because the study was conducted so long ago  
20 it does not take into account currently available measures and technologies, federal or state

1 efficiency standards, avoided costs, evaluation studies, cost drivers, and state policy  
2 objectives as they have developed over time.

3 The other study that Staff reviewed was a study completed by VEIC in 2013, *"Increasing*  
4 *Energy Efficiency in New Hampshire, Realizing our Potential"*. Although this study is  
5 more recent than the GDS study, it also has limitations as a resource for setting New  
6 Hampshire EERS savings targets for 2017 and beyond. The estimated total amount of cost-  
7 effective energy efficiency in New Hampshire identified in the VEIC study was based on  
8 "the study team's review of the GDS 2009 NH Potential Study combined with a review of  
9 savings from energy efficiency programs currently offered in the state". *Increasing Energy*  
10 *Efficiency in New Hampshire, Realizing our Potential, Final Report, Vermont Energy*  
11 *Investment Corporation, 2013, p. 14, §2.3. Since the VEIC study relied upon the GDS*  
12 *Study from 2009 as well as program experience before 2013, this study does not incorporate*  
13 *the most recent past energy efficiency program experience or the most current forward-*  
14 *looking information available.*

15 **Q. How do the Utilities believe that the Commission should proceed with establishing**  
16 **savings goals under an EERS?**

17 **A.** For the reasons stated above, the Utilities strongly recommend that the Commission not  
18 adopt the savings goals recommended by the other parties as part of this proceeding.  
19 Instead, the Commission should adopt the goal setting approach outlined by the Utilities in  
20 their Direct Testimony, *i.e.*, energy savings targets should be developed through a  
21 comprehensive planning process that includes detailed energy efficiency program plans  
22 designed to achieve savings targets cost effectively over a three year planning horizon. The

savings targets and program budgets should be based on a specified level of funding available to the utilities. In this way, savings goals under an EERS in New Hampshire will be set based on a comprehensive analysis that considers demonstrated savings potential and the appropriate level of energy efficiency funding necessary to achieve the savings goals.

**Q. Please refer to Staff's direct testimony Page 116, line 2198. It appears that Staff is proposing a uniform level of energy efficiency savings for each utility. Should there be a uniform savings target for each utility?**

**A.** No. The Utilities recommend the current process be utilized where separate savings targets are defined for each utility. The individual utilities make up disproportionate segments of the target, and those results are then aggregated to reach the overall target set for the state. Since each utility has an unequal proportion of residential, small C&I, or large C&I customers, equal savings cannot realistically be expected from all utilities without negatively affecting the costs to achieve these savings. The current process allows the limited funding available to the Utilities to be put to best use, i.e. maximum savings at the lowest available cost.

**VI. SBC Rate Components**

**Q. Please clarify the Utilities' proposal for EERS funding and lost revenue recovery through the SBC.**

**A.** All electric distribution companies currently assess the same System Benefits Charge ("SBC") of \$0.00330 per kWh on all delivery kWh for all rate classes. The SBC includes two components: energy efficiency funding (currently \$0.00180 per kWh) and an amount set by statute (currently \$0.00150 per kWh) to fund the statewide Residential Electric

1 Assistance Program. Under the Utilities' proposal, these existing components would  
2 continue to be the same across all the distribution companies, recognizing the energy  
3 efficiency component may change as determined by the Commission. However, with the  
4 exception of the NHEC, a third component, the LRAM rate specific to each company,  
5 would be added to the SBC. The LRAM rate is specific to each utility since it depends both  
6 on savings measures implemented by each utility and on that utility's distribution rates.  
7 When these components are combined, each utility would thus have its own, specific SBC  
8 rate, which would be applied on a uniform basis, to all delivery kWh for all rate classes.

## 9 **Conclusion**

10 The Utilities continue to vigorously support and implement energy efficiency. Pursuing this  
11 lowest cost resource through cost effective measures enables customers to benefit, both in  
12 the short and long term. The proposal laid out by the Utilities allows for an EERS to be as  
13 successful as possible, while maintaining transparency, balance, and flexibility.

## ATTACHMENT 1

**Public Service Company of New Hampshire**  
**Docket No. DE 14-216**

**Date Request Received: 10/13/2015**

**Date of Response: 10/23/2015**

**Request No. STAFF 3-009**

**Page 1 of 1**

**Request from: New Hampshire Public Utilities Commission Staff**

**Witness: Eric Stanley**

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**Request:**

Reference Filing, page 27, 68. LU-gas proposes to serve 1,417 customers in its 2016 ENERGY STAR® Products Program.

- a. How many of these customers are expected to switch from oil and other fossil heating and hot water systems to natural gas heating and hot water systems?
- b. How many customers switched from oil and other fossil heating and hot water systems to natural gas heating and hot water systems in 2014 and are expected to switch in 2015?
- c. What are the estimated therm sales increases related to these customers in 2014, 2015 and 2016?

**Response:**

- a. In examining the ENERGY STAR Products Program participant mix in 2014, 106 of the rebates processed were for those who switched from oil and other fossil heating and hot water systems to natural gas. The Company expects a similar level of program activity in 2016 and estimates that approximately 111 of its planned participation in 2016 will be from those who switched from oil and other fossil heating and hot water systems to natural gas.
- b. LU-Gas added 468 residential customers who switched from oil and other fossil heating and hot water systems to natural gas heating and hot water systems in 2014. In 2015, through October 19<sup>th</sup>, 311 residential customers have switched from oil and other fossil heating and hot water systems to natural gas in 2015.
- c. The average annual usage for a residential heating customer is approximately 776 therms. This average annual usage amount can be applied to the number of new customer additions to determine estimated therm sales increases in 2014 through 2016. Please note that not all new customers are added at the same time during the year, so actual usage amounts will vary.

(Liberty Utilities Response)

**Public Service Company of New Hampshire**  
**Docket No. DE 14-216**

**Date Request Received: 10/13/2015**

**Date of Response: 10/23/2015**

**Request No. STAFF 3-010**

**Page 1 of 1**

**Request from: New Hampshire Public Utilities Commission Staff**

**Witness: Eric Stanley**

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**Request:**

Reference Filing, page 27, 69-70. LU-gas proposes to serve 828 customers in its 2016 Large & Small Business Energy Solutions Program.

- a. How many of these customers are expected to switch from oil and other fossil heating and hot water systems to natural gas heating and hot water systems?
- b. How many customers switched from oil and other fossil heating and hot water systems to natural gas heating and hot water systems in 2014 and are expected to switch in 2015?
- c. What are the estimated therm sales increases related to these customers in 2014, 2015 and 2016?

**Response:**

- a. In examining the Small and Large Business programs participant mix in 2014, less than 10 of the program participants were from those who switched from oil and other fossil heating and hot water systems to natural gas. The Company expects a similar rate of program activity in 2016.
- b. LU-Gas added 146 non-residential customers who switched from oil and other fossil heating and hot water systems to natural gas heating and hot water systems in 2014. In 2015, through October 19<sup>th</sup>, 70 non-residential customers have switched from oil and other fossil heating and hot water systems to natural gas.
- c. The average annual usage for a non-residential customer is approximately 4,176 therms. This average annual usage amount can be applied to the number of new customer additions to determine estimated therm sales increases in 2014 through 2016. Please note that not all new customers are added at the same time during the year, so actual usage amounts will vary.

(Liberty Utilities Response)