STATE OF NEW HAMPSHIRE

BEFORE THE

PUBLIC UTILITIES COMMISSION

DE 14-216

2015-2016 NH STATEWIDE CORE ENERGY EFFICIENCY PLAN

DIRECT TESTIMONY

OF

JAMES J. CUNNINGHAM, JR.

Date: November 10, 2014

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I. Introduction and Purpose of Testimony

Q. Please state your name, current position and business address.

A. My name is James J. Cunningham, Jr. and I am employed by the New Hampshire Public Utilities Commission (Commission). My business address is 21 S. Fruit Street, Suite 10, Concord New Hampshire, 03301.

Q. Please summarize your educational and professional background.

A. My educational and professional background is summarized in Appendix A.

Q. What is the purpose of your testimony?

A. My testimony provides comments and recommendations pertaining to the 2015-2016 NH Statewide Core Energy Efficiency Plan ("Plan") filed on September 12, 2014.

II. Summary of Joint Testimony

Q. Please provide a summary of your joint testimony.

A. My testimony reviews and provides comments on cost effectiveness, savings and cost to achieve savings of the proposed Core programs for 2015 and 2016. In addition, I review new initiatives and changes to existing programs. With respect to new initiatives, my testimony examines two new initiatives:

- Proposed third-party financing option for the electric utilities
- New Customer Engagement Platform (CEP) for PSNH customers

With respect to changes to existing programs, my testimony reviews and provides comments on the following changes:

- HEA allocation
- RGGI Funding changes due to 2014 legislation
- Other changes

Overall, my testimony indicates that the new initiatives and the changes to existing programs are incorporated in the Plan in a way that provides cost effective energy efficiency programs for both residential and C&I sectors. The third-party financing option provides customers the opportunity to install energy efficient measures with no up-front costs; and the new Customer Engagement Platform (CEP) provides customers the opportunity to expand their awareness and increase their participation in energy efficiency programs. These changes also dove-tail nicely with a possible Energy Efficiency Resource Standard (EERS) that could be considered by the Commission in the near future.

III. Comments

III. A. Cost Effectiveness, Savings and Costs to Achieve Savings

Q. Your summary indicates that you reviewed cost effectiveness, savings and cost to achieve savings. Please summarize your review and provide your comments.

A. My review shows that the 2015-2016 Plan provides cost effective energy efficiency programs for both residential and C&I sectors. Although gas residential programs are cost effective, the overall benefit/cost ratios for the gas residential programs are close to the threshold level of 1.0 for both 2015 and 2016 – i.e., Liberty gas is 1.1 and Unitil gas is 1.0.[1]

Table 1 summarizes the annual savings for the electric and gas utilities for actual 2013 results, the most recent year for which final information is available, and proposed years 2015 and 2016.[2]

[1] Reference Plan at pages 113-116 for Liberty gas and pages 149-152 for Unitil gas.
[2] For detail on savings assumptions by utility, by program, by measure, please refer to the Plan (p. 171-215).

Table 1

Annual Savings Based on Updated Savings Assumptions (1)
Electric and Gas Utilities
2013 - 2016

	Actual Year 2013 (2)	Plan Year 2015 (3)	Plan Year 2016 (3)
Electric Utilities:			
Annual kWh Savings	55,115,800	56,979,474	53,346,298
% to 2013 kWh Savings	100%	103%	97%
Gas Utilities:			
Annual MMBtu Savings	141,552	114,500	117,062
% to 2013 MMBtu Savings	100%	81%	83%

(1) Reference Plan at p. 218-220 for a summary of the updated savings assumptions.
(2) 2013 represents the most recent full year of reported savings.
(3) Plan at page 7.

With respect to electric utilities, the projected savings appear reasonable. For 2015, annual kWh savings are 103 percent of the savings levels achieved in 2013. For 2016, annual savings are 97 percent of 2013 levels. On average, 2015 and 2016 annual savings are 100 percent of the savings levels achieved in 2013.[3]

With respect to gas utilities, my analysis shows that projected savings appear conservative – i.e., low, relative to savings levels achieved in 2013. At the technical session on October 28, 2014, projected savings were discussed, with a focus on Liberty gas, rather than Unitil gas; and two specific Liberty-gas programs were illustrated – i.e., HPwES and Large Business

[3] The average annual electric savings for Year 2015 and 2016 are 55,162,886 kWh. This represents 100 percent of actual 2013 annual kWh savings (i.e., 55,162,886 kWh / 55,115,800 kWh).

C&I program.[4] Liberty gas was amenable to providing additional supporting information on these programs. This additional information was provided on November 5, 2014 and I provide comments on it below.

Q. Your opening summary indicates that you analyzed the cost to achieve planned savings. Please summarize the results of your analysis and provide your comments.

A. Table 2 provides a high level summary of the cost to achieve annual[5] savings for the electric and gas utilities for actual 2013 results, the most recent year for which final information is available, and proposed years 2015 and 2016.

Table 2

Cost to Achieve Annual Savings
Electric and Gas Utilities
2013 - 2016

	Actual Year 2013	Plan Year 2015	Plan Year 2016
Electric Utilities:			
Costs (1)	$25,360,212	$27,989,685	$25,636,250
Annual kWh Savings (2)	55,491,000	56,979,474	53,346,298
Cost Per Ann. kWh Saved (3)	$0.46	$0.49	$0.48
Gas Utilities:			
Costs (1)	$6,318,442	$7,267,040	$7,462,440
Annual MMBtu Savings (2)	141,552	114,500	117,062
Cost Per Ann. MMBtu Saved (4)	$44.64	$63.47	$63.75

(1) Costs include performance incentives (PI).
(2) Annual savings is from Table 1. 2013 is from PI filing; 2015-2016 is from Plan.
(3) For comparison purposes, cost per lifetime kWh saved for electric utilities is as follows:
2013 Actual is $ 0.0356 per kWh; 2015 is $0.0376 per kWh; 2016 is 0.0372 per kWh (Plan, p. 7).
(4) For comparison purposes, cost per lifetime MMBtu saved for gas utilities is as follows:
2013 Actual is $2.95 per MMBtu; 2015 is $3.57 per MMBtu; 2016 is $3.58 per MMBtu (Plan, p.7).

[4] These two programs were illustrated at the technical session; Staff is open to examining other programs as well.
[5] Per unit costs are based on annual savings (rather than lifetime savings) for simplicity; however, Table 2 provides unit cost based on lifetime savings for comparison purposes.

With respect to electric utilities, the cost per annual kWh saved for 2015 and 2016 are tracking consistently with actual cost per kWh reported for 2013. On average, 2015 and 2016 cost per annual kWh saved is approximately 5 percent higher than actual 2013 cost per annual kWh.[6]

With respect to gas utilities, clearly the projected cost per annual MMBtu saved is significantly higher. The annual cost per MMBtu saved in 2015 is $63.47 per MMBtu, or 42 percent higher than the cost per MMBtu actually experienced in 2013 (i.e., $63.47 per MMBtu/$44.64/MMBtu). Similarly, in 2016, the cost per annual MMBtu is $63.75 per MMBtu, or 43 percent higher than 2013 actual annual cost per MMBtu experienced in 2013 (i.e., $63.75 per MMBtu/$44.64 per MMBtu). These higher costs per annual MMBtu in 2015 and 2016 appear to be driven mostly by differences in actual and projected annual MMBtu savings (see Table 1) and appear to pertain primarily to Liberty gas. As noted above, gas MMBtu savings were discussed at the technical session and Liberty gas was amenable to providing additional information on two programs that were discussed – i.e., the HPwES residential program and the Large Business C&I program. On November 5, 2014, Liberty gas provided additional information pertaining to both programs.[7]

Q. On November 5, 2014, Liberty gas provided additional information pertaining to the HPwES program and the C&I programs. Did you have an opportunity to review this additional information?

A. Yes. I did. The information was helpful and I appreciate the company providing it in a timely manner. When coupled with information in the Plan, the additional information shows that spending per unit is increasing for the HPwES program; however, annual savings

[6] The average cost per kWh saved in Year 2015 and 2016 is $0.485 (i.e., average of $0.49 and $0.48). This represents a 3 percent increase over actual 2013 annual cost per kWh saved (i.e., $0.015/$0.46).
[7] Reference Staff 2-010-SP01. See Appendix B for a copy.

per unit is decreasing. For the Large Business C&I program, spending per unit is increasing significantly; however, annual savings per unit is increasing only slightly.[8]

Q. With respect to the HPwES program, please amplify on the additional information that was provided?

A. The additional information elaborates on the mix of HPwES multi-family and single-family units, noting that the quantity of multi-family units is five times larger than the single-family units; thus, a decline in the estimated average savings per multi-family unit has a more significant impact on the overall savings target than single family units. In this instant case, Liberty gas is projecting a decline in the estimated average savings per unit for multi-family units of 22.8 MMBtu per unit, from 37.8 MMBtu per unit in 2013 to 15.0 MMBtu per unit in 2015. The reduction in average per unit savings represents a 60 percent reduction (22.8 MMBtu per unit / 37.8 MMBtu per unit). Although Liberty gas recognizes that this is a significant change, the company appears to support the reduction by noting that it is reflective of the actual savings identified in multi-family unit projects in 2014.[9] Also, in this instant case, in addition to the reduction in average per unit savings, Liberty gas is projecting a reduction in the number of multi-family units of 243 units, from 571 units in 2013 to 328 units in 2015.[10] The reduction in number of units represents a 43 percent reduction. According to Liberty gas, this reduction is reflective of the lower number of multi-family units projected for 2014; and, because the company secured one large multi-family unit project containing 482 units in 2013, this skews the company's results for 2013 and makes it difficult to compare against other years.[11]

Q. With respect to the Large Business C&I program, what additional information was provided?

[8] Reference Table 3 and Table 4, explained below.
[9] Reference Staff 2-010-SP01, page 3.
[10] Reference Plan at page 180.
[11] Reference Staff 22-010-SP01, p. 3 for additional information from Liberty gas. See Appendix B for a copy.

A. The additional information indicates that the Large Business program (also referred to as the Large Business Energy Solutions program) represents the majority of C&I gas program savings; and, within the Large Business program, the preponderance of savings comes from the large-scale custom new equipment and construction, and custom retrofit projects. Liberty gas elaborates on the mix of measures, noting that it expects a larger volume of smaller projects with its Large Business customers, which is why it has reduced its Large Business program savings target.

In this instant case, Liberty gas is projecting a decline in the number of large new equipment custom projects in its Large Business program, from 35 in 2013 to 21 in 201. This reduction of 14 projects represents a 40 percent reduction (i.e., 14 projects/35 projects). Further, Liberty gas is projecting a reduction in the average annual MMBtu savings per project, from 1,171 MMBtu per project in 2013 to 648 MMBtu per project in 2015. This reduction of 523 average annual MMBtu savings per project represents a 45 percent reduction (i.e., 523 MMBtu/1,171 MMBtu). According to Liberty gas, these reductions are partially offset by an increase in the projected annual savings per project for the company's Large Business retrofit custom projects.

Overall, the additional information provided by Liberty gas, coupled with the information contained in the Plan, indicates that Liberty gas is projecting a combined decrease in annual MMBtu savings for both new equipment and retrofit projects of 20,874 MMBtu, from 46,165 annual MMBtu savings in 2013 to 25,291 annual MMBtu savings in 2015. This reduction in annual MMBtu saving for both new equipment and retrofit projects represents a 45 percent reduction (i.e., 29,874 MMBtu to 46,165 MMBtu).[12]

Q. Based on your review of the additional information, do you believe that the annual MMBtu savings targets for HPwES appear conservative – i.e., low, relative to savings levels achieved in 2013?

[12] Reference Plan at page 183.

A. Yes. With respect to the HPwES program, Table 3 shows that, after reflecting additional information provided by Liberty gas, spending per unit is increasing; but, average annual MMBtu savings per unit is decreasing.

Table 3

Liberty Gas
HPwES – Spending Per Unit and Annual Savings per Unit
2013 Actual vs. 2015 Projected

	Actual Year 2013 (1)	Plan Year 2015 (2)	Variance	Percent (3)
Spending Per Unit (1)	$936	$1,456	$520	56%
Avg. Ann. MMBtu Sav./Unit (2)	34.9	17.8	(17.1)	(49%)

(1) Spending: Reference 2013 Finals, 10/15/2014, for 2013 and Plan at page 111 for 2015.
(2) Savings: Reference Plan at page 180. Annual savings per unit represents a composite of both Single Family (1-4 units) and Multi-Family (5+ units).

This Table shows that overall HPwES spending per unit in 2015 is increasing 56 percent from actual 2013 levels, while overall savings per unit are decreasing 49 percent from actual 2013 levels.

Q. Based on your review of the additional information, do you believe that the annual MMBtu savings targets for the Large Business C&I program appear conservative – i.e., low, relative to savings levels achieved in 2013?

A. Yes. Table 4 shows that, after reflecting additional information provided by Liberty gas, spending per unit is more than doubling; but, savings per unit is increasing by only 12 percent.

Table 4

Liberty Gas
Large C&I – Spending Per Unit and Annual Savings per Unit
2013 Actual vs. 2015 Projected

	Actual Year 2013 (1)	Plan Year 2015 (2)	Variance	Percent (3)
Spending Per Unit (1)	$25,736	$53,518	$27,782	108%
Ann. MMBtu Sav. Per Unit (2)	839.4	936.7	97.3	12%

(1) Spending: For 2013, ref. 2013 PI Finals and Plan at p. 183; for 2015, ref. Plan at p. 111/183.
(2) Savings: Reference Plan at page 183. Annual savings per unit represent a composite of both Single Family (1-4 units) and Multi-Family (5+ units).

Table 3 and Table 4 show projections for year 2015; but, Plan participation, savings and spending assumptions are similar for year 2016; therefore, I believe that savings projections for both Plan year 2015 and 2016 for the HPwES and Large Business C&I programs are conservative – i.e., low relative to actual savings achieved in 2013.

Q. If you believe savings projections appear conservative, what suggestions can you offer to modify the Plan?

A. I'd suggest that Liberty gas revisit its projections pertaining to HPwES participation, savings and spending for 2015 and 2016. The Plan shows that participation in the Single Family and Multi-Family projects is reduced significantly, from 671 units in 2013 to only 388 units in 2015 and 397 in 2016.[13]

Also, I'd suggest that Liberty gas revisit its projected costs per unit and savings per unit for 2015 and 2016. As noted in Table 3, the Plan shows that HPwES average spending per unit

[13] Reference Plan at p. 180.

is increasing 56 percent above 2013 levels, while average annual MMBtu savings per unit is decreasing 49 percent from 2013 levels. This is counter to the typical HPwES scenario which generally shows that, as costs per unit increase, savings per unit increase. This scenario was illustrated in the additional information provided by Liberty gas which noted that additional HPwES investments generate additional savings.[14]

With respect to the Large Business C&I program I have similar suggestions for Liberty gas – i.e., I suggest the company revisit its projections pertaining to participation, savings and spending for 2015 and 2016. The Plan shows that participation is reduced significantly, from 55 retrofit and new equipment projects in 2013 to only 27 projects in 2015 and 28 in 2016.[15] Also, I'd suggest that Liberty gas revisit its projected spending per unit and savings per unit for 2015 and 2016. Savings are not keeping pace with spending, with savings per project increasing by only 12 percent, while spending per project is more than doubling – i.e., increasing by 108 percent as shown in Table 4.

III. B. New Initiatives

III. B. 1. Third Party Financing Option for Electric Utilities

Q. Your summary notes that the electric utilities are proposing a new financing initiative – i.e., a third-party financing option. Please describe this financing option and provide your comments.

A. According to the Plan, the electric and gas utilities are proposing to implement a third-party financing option similar to the pilot approved for the gas utilities for 2014.[16] At the technical session on October 28, 2014, both financing options were discussed. The discussion centered on the importance of standardizing the financing option for electric

[14] Reference Staff2-010-SP01, p. 2.
[15] Reference Plan at page183.
[16] The components of the proposed third-party financing are summarized in the Plan at page 33. Additional information was provided in response to Staff 2-002 which will be incorporated, in part, in a white paper that is currently being prepared.

and gas utilities. Standardization could make third-party financing easier to market by providing consistent loan amounts, repayment years, interest rates, etc. Also, standardization could help to avoid customer confusion by allowing for consistent terms for both gas and electric utility customers. Our discussion indicated that there were, indeed, some similarities between the 2014 gas pilot option and the proposed 2015-2016 electric/gas third-party financing option such as the loan is unsecured, the monthly payments are made directly to the bank and the risk of default rests with the banks; but, there were also a number of perceived differences that needed to be clarified such as whether or not a survey to measure success would be performed, whether or not there would be an annual negotiation with the banks to set a maximum bank interest rate and how the utilities would respond to unexpected market interest rates increases would impact ratepayers and SBC funding. The utilities indicated they would be amenable to providing a white-paper to clarify these and other terms/features of the proposed 2015-2016 third-party financing option; however, at the time of preparation of this testimony, the white paper was not yet finalized. Table 5 provides a preliminary summary of the loan terms/features for both gas and electric utilities that are currently under discussion

Table 5

Preliminary Components/Features of Proposed Third-Party Financing Option 2015-2016

Loan Terms/Features	Preliminary Selection
1. Pilot or Full-Scale	Full-Scale
2. Applicable Programs	HPwES & ES Products
3. Loan Limit	$15,000
4. Loan Buy-Down Percentage	2%
5. No. of Customers Participating in 2015	268
6. Approximate Average Interest Buy-Down Amount	$200-$1,200
7. Survey to Assess Success	Likely
8. Loan Term	7 Years
9. EERS Impact	Favorable
10. Maximum Bank Interest Rate	8% with annual re-set
11. Financial Institutions Participating	3
12. Segregate or combine different financing options	Segregate

Notes:

1. Considering full-scale for gas and electric utilities given the response to other financing options in NH and MA.
2. HPwES and ENERGYSTAR® Products; and, exploration of C&I option in 2015.
3. At the 10/28 technical session, the gas and electric utilities suggested a consistent loan cap of $15,000.
4. 2 percent buy-down rate might increase if market rate exceeds 8 percent.
5. The Plan provides for 196 loans for electric utilities and 72 loans for gas utilities.
6. Depends on loan amount and bank interest rate. Amount is included in SBC and PI calc.
7. Considering electric/gas surveys (type not finalized) and discussion of results at quarterly meetings.
8. Currently considering a longer loan term than gas pilot (gas pilot uses 5 years for $10,000 loan).
9. Financing fosters EERS by fostering greater participation by reducing up-front costs.
10. Currently considering a cap of 8 percent, with annual negotiations to re-set cap if interest rates increase.
11. Merrimack County Savings Bank, Meredith Village Savings Bank and Northeast Credit Union in gas pilot.
12. Smart Start, Zero Percent On-Bill and Third-Party Off-Bill financing options would remain separate.

Q. Although the white paper is under consideration, are you generally supportive of a third-party financing option?

A. Yes. I am generally supportive of a third-party financing option for a number of reasons as follows:

Policy Perspective: It could extend the third-party financing option from gas utility customers to gas and electric utility customers; thus, it could enhance the objective of delivering state-wide Core programs. Also, the third-party option is scalable such that funds would be available to meet an increase in demand should the level of energy efficiency services increase in the future. These potential impacts could be an important component of an Energy Efficiency Resource Standard (EERS).

Banking Perspective: If the third-party loan could be standardized, it could augment the loan business for participating banks.

Customer Perspective: One benefit that the proposed third-party financing option provides is that it is an unsecured loan. Also, this financing option allows customers to receive up-front cash to encourage participation in the HPwES program and the Energy Star Products program. In addition, loans can be paid off over time at a low 2 percent interest rate.

Utility Perspective: The utility bears no risk of default on loans. This risk is borne by the third party financial institutions.

Contractor Perspective: As the third-party option gains traction, additional weatherization projects outside the context of Core programs, could be stimulated; thereby increasing labor hours for contractors who provide energy audits, weatherization and heating installation services.

Q. With respect to additional private capital provided by the third-party financing option, what amount of private capital is estimated to be provided in 2015 and 2016 for electric utilities?

A. Based on information in the Plan and information exchanged at the technical session on October 28, 2014, the amount of private capital can be estimated. In 2015 and 2016, the electric companies estimate that the number of participants will be 196 and 190 respectively.[17] On average, according to the Plan, customer cost per project is approximately $3,000 per participant.[18] Thus, the estimated amount of private capital that would be needed by third-party financing is $588,000 in 2015 (196 x $3,000 per participant) and $570,000 in 2016 (190 x $3,000 participants). Over the two year period, almost $1.2 million would be needed from the proposed third-party financing option.

III. B. 2. Customer Engagement Platform (CEP)

Q. You indicate in your opening summary that PSNH is proposing a new initiative called the customer engagement platform (CEP). Please describe the CEP and provide your comments.

A. The CEP provides on-going and consistent feedback to and from customers with the objective of generating more awareness of energy efficiency and the value it brings to customers. It will provide significant benefits to PSNH's customers directly and to the cost-effective delivery of energy efficiency programs into the future.[19]

Q. What is the budgeted cost for the CEP?

A. The budgeted cost for CEP in 2015 is $550,200; and, in 2016, it is $218,300. These costs represent the estimated total project cost including software and implementation in 2015

[17] For more information about the Third-Party Financing, please refer to the Plan at page 33.
[18] Based on average customer cost for a PSNH customer of $3,007 for the HPwES program as follows: $1,618,100 / 538 = $3,007). Note: this estimate does not include any additional Energy Star Products for which the participant might qualify.
[19] For more information about CEP, please refer to the Plan at page 66.

and software costs in 2016. PSNH proposes to transfer $591,540 from the SBC funds set aside in compliance with RSA 125-O:5 for energy efficiency projects at PSNH's facilities to the 2015 program year budget for the distinct purpose of implementing a CEP as described in this Plan.

Q. Is PSNH proposing CEP in other jurisdictions or is New Hampshire the only state that will be offering this CEP initiative?

A. PSNH will be joining with Massachusetts and Connecticut in offering a CEP initiative. The CEP is targeted for implementation in early 2015 in Massachusetts and Connecticut.[20]

Q. What are the benefits of CEP and how will these benefits be measured?

A. The proposed CEP will provide energy efficiency solutions to customers at the time when they are actively thinking about energy by delivering information in the channel of their choice, via laptop, tablet or mobile devices. In addition, the proposed CEP will provide easy, intuitive and accessible resources and tools for customers to engage in transactional activities, informational searches on efficiency measures and will allow PSNH to develop a better understanding of customers, leading to improved targeting of products and services and increased customer satisfaction. Also, targeted messaging is expected to drive deeper and broader participation in energy efficiency programs, which is expected to stimulate additional savings over the long term.

With respect to measuring the success of the CEP, PSNH will utilize and track a number of metrics during 2015 and 2016 including: number of registered CEP customers by segment, number of repeat visits to the CEP by registered users by segment.[21]

Q. Will the CEP help to increase the operational efficiency within PSNH?

[20] Reference Staff 1-009. See Appendix B for a copy.
[21] Reference Staff 2-007. See Appendix B for a copy.

A. Yes, the CEP is expected to increase operational efficiency within PSNH. The platform will feature automated performance monitoring and evaluation, measurement, and verification reporting, so that metrics and analytics used to evaluate program reach and effectiveness will be readily available. PSNH's call center will be able to refer customers to the CEP for self-service. Set-up of these features will begin in January of 2015.

Q. What accounting classification will be used to record the expenses for CEP?

A. The majority of the costs associated with the CEP will be charged to *Customer Rebates & Services*. These expenses represent the software and IT costs of this new service available to customers. Some expenses will be charged to *Internal Implementation Services* and *Marketing*. These expenses represent the costs associated with implementing the platform and informing customers of this new platform/service.

Q. What is the timeline for implementation of CEP?

A. Implementation of the CEP in NH will begin in January 2015 with a target go-live date in July 2015. This schedule is based on similar CEP implementations currently underway in Massachusetts and Connecticut.

Q. Do you support the proposed CEP initiative?

A. Yes, I support the CEP for a number of reasons.

Policy Perspective: The CEP could dove-tail nicely into an EERS that the Commission is contemplating adopting. The CEP could stimulate savings and participation in other Core programs. The CEP could be offered to other utilities in the future. In some instances, a new program is first implemented by one utility before it is offered by other utilities. This approach allows for innovation by each individual utility and a sharing of information,

lessons learned and best practices before a program is fully implemented at a utility or offered statewide.[22]

Evaluation Perspective: During the 2015-2016 phase of the CEP, one of PSNH's primary objectives is to build customer traffic to the CEP and increase participation in energy efficiency programs. To measure the effectiveness of the CEP, PSNH will track the number of repeat visits to the CEP by the registered users by segment, average length of time spent on the CEP, etc. during this 2015-2016 phase.

Funding Perspective: From a funding perspective, twenty percent of Northeast Utilities (NU) overall total software and implementation costs have been allocated to NU's non-energy efficiency programs and services and are not recovered through the energy efficiency programs.[23] Budget savings from this allocation are estimated to be approximately $138,000 in 2015 and $66,000 in 2016.[24]

III. C. Changes to Existing Programs

III. C. 1. HEA Allocation

Q. Your opening summary indicates that the HEA allocation is increasing from 15.0% to 15.5%. Please provide the support for this increment.

A. In prior dockets, the Commission approved a Home Energy Assistance (HEA) program allocation of 15.0 percent of total program spending. The Plan provides for an increase of 0.5% to this baseline, from 15.0 percent to 15.5 percent of program spending.[25] I believe the increment of 0.5 percent is reasonable based on my review of recent US

[22] Reference Staff 1-008. See Appendix B for a copy.
[23] Staff notes that this 20 percent allocation is based on a methodology that needs to be flushed out more fully. Also, Staff believes that the allocation might need to be updated periodically.
[24] Reference Staff 1-009. See Appendix B for a copy.
[25] Reference Plan at pages 153 and 157. HEA spending, as a percentage of overall electric and gas utility spending is 15.2 percent in 2015 ($4,980,042 divided by $32,769,633) and 15.8 percent in 2016 ($4,866,420 divided by $30,761,317). The two-year spending percentage is 15.5 percent ($9,846,462/$63,530,950).

Census Bureau data for New Hampshire.[26] This data shows that, based on a five-year rolling average, the percentage of people with incomes below the poverty level has increased by 0.5 percent, based on a 5-year rolling average. For the five-year period, 2007-2011, the average percentage of people with incomes below the poverty level was 8.1 percent. For the subsequent five-year period, 2008-2012, the average percentage of people with incomes below the poverty level was 8.6 percent.

Q. With respect to poverty levels and the allocation of energy efficiency budgets to the residential low-income program, how does New Hampshire compare to other New England states?

A. New Hampshire compares favorably to other states. Table 6 summarizes the poverty levels in the six New England states and shows how these poverty levels compare the allocation of HEA program funds in each jurisdiction.

[26] United States Census Bureau, Poverty: 2000 to 2012, American Community Survey Briefs, Appendix Table 1, Percentage of People with Income Below Poverty Level in the Past 12 Months by State: 2000 to 2012.

Table 6

% People with Income Below Poverty Level in the Past 12 Months (1)
and
% Energy Efficiency Budgets Allocated to Residential Low-Income Programs

	% Below Poverty (2)	% Allocated to Res. EE Programs (3)
RI	12.8%	13.3%
ME	12.7%	8.3%
VT	11.3%	not reported
MA	10.6%	13.6%
CT	9.5%	13.7%
NH	8.6%	15.5%

(1) US Census Bureau, 2000-2012, American Community Survey Briefs, Appendix Table 1
(2) Five-year average (2008-2012)
(3) References are as follows:
RI: Docket No. 4451 & 4453, Order No. 21,298, December 20, 2013.
ME: Triennial Plan, 2014-2016, October 2012.
VT: 2014 Budget for EVT does not show low income programs as a separate line item.
MA: Docket DPU 12-100-104 January 31, 2013, p. 174-175.
CT: Docket No. 13-03-02, Compliance Filing, Year 2014 February 28, 2014.
NH: Docket No. DE 14-216, 2015-2016 Plan.

Although New Hampshire has the lowest poverty level, it has the highest allocation for low income programs. However, it is important to note that our testimony does not address the total allocation; rather, we address only the increment of 0.5 percent, along with the recommended methodology to derive the increment.

III. C. 2. RGGI Changes

Q. Your opening summary mentions that RGGI changes are incorporated in the filing. Please describe these changes and provide your comments.

A. In 2014, Senate Bill 268 was enacted which pertains to funding certain energy efficiency programs.[27] It refers to certain proceeds that remain after amounts in excess of the threshold price of $1 per allowance are rebated to all retail electric customers. The funds derived from the $1 per allowance are allocated as follows:

- At least 15 percent to the low-income Core energy efficiency program
- Up to $2,000,000 annually to utility Core programs for municipal and local government energy efficiency projects, including projects by local governments that have their own municipal utilities.
- The remainder to all-fuels, comprehensive energy efficiency programs administered by qualified parties which may include electric distribution companies as selected through a competitive bid process.

Based on my review, the Plan accurately captures the above legislative changes. The Plan allocates 15.5 percent to the low-income HEA program, or, $457,000 in 2015 and $440,000 in 2016.[28] Further, the Plan allocates $2,000,000 annually to the Municipal program.[29] Finally, with respect to the all-fuels, comprehensive energy efficiency program, funds pertaining to this program are not included in the Plan; rather, they are allocated to the all-fuels, comprehensive energy efficiency program. Although this funding is separate from utility Core program funding, the legislation provides an opportunity for the electric utilities to respond to the solicitation for bids that will be issued by the Commission.[30]

III. C. 3. Other Changes

Q. Your opening summary indicates that a number of other changes are included in the Plan. Please summarize these changes and provide your comments.

[27] SB 268, signed on August 4, 2014, refers to certain proceeds that remain after all amounts in excess of the threshold price of $1 per allowance are rebated to all retail electric customers.
[28] Reference Plan at page 162 and 167.
[29] Ibid.
[30] Estimated funding for the all-fuels comprehensive energy efficiency program is approximately $475,000, on average, for year 2015 and 2016.

A. The Plan, at pages 216-220, summarizes a number of proposed changes, categorized as follows:

- Program Design, Evolution, Measure and Incentive changes (p. 216-218)
- Changes in Savings assumptions (p. 218-220)
- Changes in Funding Sources

I have not reviewed in detail each proposed change but, in general, I find the changes to be reasonable. Some are made to be compliant with Legislative changes such as SB 268 which transferred certain RGGI funds from Core programs to a new comprehensive all-fuels program;[31] while others are made to reflect later data pertaining to measure lives and savings assumptions; and still other changes are made to rebates, such as rebates for lighting measures that reflect a transition from lighting incentives on CFLs to primarily LEDs and a change made to PSNH's Home Energy Report (HER) program to focus on high energy use. Other changes pertain to modifications that streamline the programs, including folding in NHEC's High Energy Heat Pump Program and PSNH's Geothermal and Air Source Heat pump Option into the Energy Star Homes Programs. Also, the Plan explores opportunities for collaboration with the Sustainable Energy Division of the NHPUC, including opportunities to assist builders to construct New Zero Homes, with solar hot water / photovoltaic vendors and installers to help expand the market for renewable energy systems in New Hampshire.[32]

These modifications, in addition to the new initiatives for third-party financing for the electric utilities and the CEP for PSNH, could dove-tail with an EERS.

[31] Due to the loss of RGGI funds, incentives for end-of-life high efficiency fossil fuel space and water heating systems will be limited (ref. Plan at page 216-217).

[32] Although the proposed Plan explores the collaboration with the Sustainable Energy Division with photovoltaic vendors, there is no specific funding included in the Plan. Ref. Plan at page 33.

III. Conclusions and Recommendations

Q. Please summarize your conclusions and recommendations.

A. Following is a summary of my conclusions and recommendations.

Projected Annual Savings and Projected Cost to Achieve Annual Savings:

The projected annual kWh savings for electric utilities for 2015 and 2016 appear reasonable; however, the projected annual MMBtu savings for gas utilities, specifically Liberty gas, appear conservative. That is, the annual savings for two programs, the HPwES and Large Business C&I programs, appear to be low, when compared to actual annual MMBtu savings achieved in 2013, the most recent full year of actual program activity. I'd suggest Liberty gas revisit its projections pertaining to HPwES participation, savings per unit and spending per unit for 2015 and 2016. The Plan shows that participation is reduced significantly, from 671 units in 2013 to only 388 units in 2015 and remains at essentially the same level in 2016. Also, the Plan shows that HPwES spending per unit is increasing 56 percent above 2013 levels, while savings per unit are decreasing 49 percent from 2013 levels.

With respect to the Large Business C&I program, I have a similar suggestion for Liberty gas – i.e., I suggest the company revisit its projections pertaining to participation, savings per project and spending per project for 2015 and 2016. The Plan shows that participation is reduced significantly, from 55 retrofit and new equipment projects in 2013 to only 27 projects in 2015 and remains at essentially the same level in 2016. Also, savings per project do not appear to be aligned with spending. That is, savings per project are increasing by only 12 percent, while spending per project is increasing by 108 percent.

Cost effectiveness:

My review shows that the Plan provides cost effective energy efficiency programs for both residential and C&I sectors. Although gas residential programs appear cost effective, the overall benefit/cost ratios for the gas residential programs are close to threshold level of 1.0. For Liberty gas, the benefit/cost ratio is 1.1 for both 2015 and 2016. For Unitil gas, the benefit/cost ration is 1.0 for both 2015 and 2016.

Electric Utility Third Party Financing Option:

This new initiative expands customer financing through a third-party financing option that provides customers the opportunity to install energy efficient measures with no up-front costs. I am supportive of a third-party financing option that provides standardized components for gas and electric utilities (as noted above). At the technical session on October 28, 2014, the electric utilities were amenable to consider modifications to the proposed financing option and to provide a white paper summarizing any modifications. At the time of preparation of this testimony, the white paper was not finalized and additional discussions are needed to clarify some issues such as the survey to measure success, increases to maximum bank interest rates and related increases in Core costs if market interest rates increase unexpectedly.

PSNH's Customer Engagement Platform (CEP):

The new CEP is expected to expand customer awareness and increase the breadth of energy efficiency program participation. I believe that the CEP has merit from a number of perspectives (as noted above).

Impact on EERS:

I believe that the two new initiatives – i.e., third-party financing and the CEP – could work well with an EERS. The third-party option is scalable such that funds would be

available to meet an increase in demand should the level of energy efficiency services increase in the future. By comparison, under the existing financing options, Smart Start and on-bill financing, availability of funding is limited to the amount of loan repayments that are received.

The CEP could stimulate savings and participation in other Core programs. Assuming an EERS is adopted by the Commission at some point in the future, I'd recommend that the Core Team discuss these initiatives at quarterly Core team meetings, and if necessary, establish a working group to ensure that third-party financing and the CEP initiatives are effectively utilized to scale up the level of energy efficiency participation and energy savings, consistent with increased savings goals of an EERS.

HEA allocation:

I support the proposed incremental increase of 0.5% for the low-income allocation – i.e., from 15.0 percent to 15.5 percent. Further, I recommend the use of the US Census Bureau data described in my testimony to calculate the increment. During the course of my review, I learned that Liberty gas is proposing an allocation of 17.3 percent for 2015 and 2016.[33] I discussed this with Liberty gas and was advised that the 2014 percentage was 17.9 percent; thus, the allocation of 17.3 percent for 2015 represents a tapering.[34] I believe the tapering should continue as proposed for 2015; but, I recommend a continued tapering to 15.5 percent for 2016 HEA programs in order to align Liberty gas with all other electric and gas utilities.

SB 268 – All Fuels, Comprehensive Energy Efficiency Program:

[33] Reference Plan at page 111 and 114.

[34] Although, the allocation for Liberty gas was 17.9 percent, the overall HEA allocation for all companies combined for 2014 Core programs was 15 percent.

I believe that the electric utilities should consider bidding on the NHPUC solicitation for an all fuels, comprehensive energy efficiency program. The Plan notes that the utilities will explore collaboration opportunities, including solar hot water / photovoltaic vendors to help expand the market of renewable energy systems in New Hampshire. Further, according to SB 268, the electric utilities meet the criteria established by the legislation including the demonstrated ability to provide a comprehensive, fuel neutral program and the demonstrated infrastructure to effectively deliver such a program. Therefore, I believe the utilities are eligible to bid on any NHPUC solicitation.

Administrative Expense:

As noted above, the majority of the expenses associated with the CEP will be charged to *Customer Rebates & Services*, not administrative expense. The rationale for charging CEP to *Customer Rebates & Service* is that these expenses represent service to customers. I believe that other Core expenses pertaining to service to customers should be consistently charged to *Customer Rebates & Services.* However, I note that some Core expenses pertaining to service to customers are charged to administrative expenses, such as *Internal Implementation Service* (ref. Plan at page 78*),* thereby overstating administrative expenses. To ensure accurate reporting of administrative expenses, I recommend the Core Team review this issue at our quarterly Core team meetings and, if necessary, establish a working group. Our discussions could also consider the recent report by the Consortium for Energy Efficiency 2012;[35] and, the recent NEEP REED Database report.[36]

Smart Start Reporting Requirements:

[35] Reference: CEE 2013 State of the Efficiency Program Industry report, Report at page 26.
[36] Reference: NEEP Regional Energy Efficiency Database, 2012 results, Expenditures as Percent of Total Cost at page 34.

PSNH currently files a quarterly report on the Smart Start program. In 2014, the Paperwork Reduction Working Group suggested that this reporting requirement be incorporated into the quarterly report on the Core programs. I believe this suggestion would reduce administrative expense. Therefore, I recommend that, our quarterly Core report include a new page that provides information currently provided in this separate Smart Start Report. Another report that is a candidate for inclusion in the quarterly report on Core programs is the C&I RFP quarterly report. The format of this report is currently under consideration by the Paperwork Reduction Working Group and I am supportive of including it in the quarterly report on Core programs, thereby savings additional time and administrative expense.

Q. Do you have any other comments?

A. Yes. I want to thank each of the utilities for all their efforts in compiling the 2015-2016 NH Statewide Core Energy Efficiency Plan. The Plan is a major project, requiring many hours devoted to preparing fresh narrative, updating schedules and graphics, assembling detailed appendices, all of which has to be organized and coordinated across six utilities.

Q. Does that complete your testimony?

A. Yes.