

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

DE 14-216

2016 NH STATEWIDE CORE ENERGY EFFICIENCY PLAN

DIRECT TESTIMONY
OF
JAMES J. CUNNINGHAM, JR.

Date: November 12, 2015

I. Introduction and Purpose of Testimony

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

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

5 **Q. Please summarize your educational and professional background.**

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

7 **Q. What is the purpose of your testimony?**

8 A. My testimony provides comments and recommendations pertaining to the 2016 Statewide Core
9 Energy Efficiency Plan (“Plan”) filed on September 30, 2015.

10 **Q. How is your testimony organized?**

11 A. My testimony is organized in four sections: Section I provides the introduction and purpose of
12 my testimony, Section II provides a summary of my testimony, Section III provides my
13 comments on the proposed changes and Section IV provides my recommendations.

14

II. Summary of Testimony

15 **Q. Please provide a summary of your testimony.**

16 A. In Order No. 25,747 dated December 31, 2014, the Commission approved a two-year filing for
17 2015 and 2016 Core programs. At the midpoint of the two-year cycle, there are usually some

18 changes proposed for the second year and this instant filing provides several changes for year
19 2016. My testimony provides comments on these proposed changes.
20 These proposed changes include design changes, changes to savings assumptions and certain
21 funding changes. The changes are incorporated in the 2016 Plan in a way that provides cost
22 effective energy efficiency programs in both residential and C&I sectors for both electric and gas
23 utilities. Proposed savings in the updated 2016 Plan are higher than the previously approved plan
24 for both electric and gas utilities while the proposed costs to achieve these savings are lower than
25 the previously approved plan. I believe the Plan provides a reasonable starting point that the
26 Commission could use to evaluate savings targets in the context of an Energy Efficiency
27 Resource Standard (EERS), consideration of which is the subject of a recent docket opened by the
28 Commission.¹ Based on my review, I support the proposed changes and I recommend that the
29 Commission approve them.
30 In addition, I recommend that our Core Quarterly Report incorporate a new 2-page insert. option.²
31 Also, I recommend that our Core Quarterly Report incorporate additional information about the
32 customer engagement platform (CEP).³ This insert will provide information pertaining to our
33 third-party buy-down financing

34 **III. Comments on Proposed Changes for 2016**

35 **Q. Please provide your comments on the proposed changes for 2016.**

36 A. The changes for 2016 pertain to three categories:⁴

- 37
- Design Changes
 - Savings Assumptions
- 38

¹ Reference: Docket DE 15-137.

² An illustration of the 2-page insert was provided by the utilities and a copy is included in Appendix B, Staff 3-26.

³ This information will be added to the existing page in a footnote.

⁴ Reference: Plan at Tab M, page 102, *Material Changes*, for additional information on changes.

- 39 • Funding Changes

40 Design Changes:

41 The Plan reflects changes pertaining to rebates and avoided costs. Proposed rebate changes are as
42 follows:

- 43 • Rebate on the ENERGY STAR® Refrigerator is reduced from \$30 to \$20; and, the rebate
44 for the Advanced Power Strip is eliminated.
- 45 • With respect to the Lighting Program, markdowns will be expanded. Markdown
46 arrangements will be made with retail stores, in advance, for a particular 30-day period;
47 thus, costs and customer participation can be more easily determined.
- 48 • The HPwES program is changing to increase customer costs from 50 percent to 100
49 percent for certain measures that are no longer cost-effective such as certain
50 types/applications of insulation.
- 51 • ENERGY STAR® Dishwasher rebate is eliminated since it has become standard practice
52 in new homes.

53 In addition, the 2016 Update incorporates the new avoided energy supply cost (AESC) Report
54 that was prepared by Tabors Caramanis Rudkevich (TCR), *Avoided Energy Supply Costs in New*
55 *England: 2015 Report*, March 27, 2015, Revised April 3, 2015.

56 Also, the NH Core Utilities will continue to make enhancements to NHSaves.com to increase
57 customer usage of the site, raise customer awareness of energy efficiency programs and improve
58 education and marketing to customers and energy efficiency stakeholders. A brief video may be
59 incorporated in the site to provide more accessible information about the weatherization process,
60 or to provide an overview of C&I efficiency projects.⁵

⁵ Reference: Plan, page 7.

61 **Q. Do you support these changes?**

62 A. Yes, I support these changes.

63 The changes pertaining to rebates mirror the changing marketplace for our Core energy efficiency
64 programs. The changes to focus on markdowns (versus coupons) allows for better monitoring of
65 spending and improved tracking of program participation. Under the coupon arrangement, costs
66 and customer participation was not known until later when customers mailed in their coupons.

67 The change to incorporate the new avoided cost study provides updated cost effectiveness for our
68 2016 programs. The new avoided costs are slightly lower than the previous study, contributing to
69 a lower cost effectiveness (all other variables unchanged) than was reflected in the initial 2016
70 filing previously approved by the Commission. Table 1 shows a comparison of cost effectiveness
71 of the initial filing and the Plan. This table provides a sector-level comparison (i.e., Residential
72 and C&I sectors) for our electric and gas utilities.

Table 1
Comparison of Cost Effectiveness for Initial and Updated Plan
Electric and Gas Utilities
Residential and C&I Sectors
Year 2016

	<u>Benefit/Cost Ratios</u>	
	<u>Initial Filing (1)</u>	<u>Updated Plan (2)</u>
<u>Residential Sector:</u>		
Liberty-Electric	2.28	2.07
Liberty-Gas	1.34	1.47
NHEC	1.95	1.79
Eversource	1.92	2.07
Unitil-Electric	1.80	1.90
Unitil-Gas	1.04	1.16
<u>C&I Sector:</u>		
Liberty-Electric	1.28	1.31
Liberty-Gas	1.56	1.51
NHEC	1.44	1.71
Eversource	1.90	2.17
Unitil-Electric	1.50	1.70
Unitil-Gas	2.39	1.71

(1) Source: DE 14-216 Filing (revised December, 2014): pages 109, 116, 124, 134, 145 and 152.

(2) Source: Plan, pages 25, 29, 33, 38, 43 and 47.

73 This table shows that, although avoided costs reflected in the 2016 Plan are lower, the
74 benefit-to-cost ratios are improving in the majority of instances. This is, in part, due to the
75 design changes incorporated in the Plan, as noted above.

76 This table also shows that the cost effectiveness of our electric and gas energy efficiency
77 programs, both residential and C&I programs, are well above the 1.0 benefit-to-cost ratio. A
78 similar table could be prepared by individual program that would show benefit-to-cost ratios
79 well above 1.0.

80 Changes in Savings Assumptions:

81 Savings assumptions are changing for certain residential and C&I Programs:

- 82 • Home Energy Assistance Program (HEA) is updated to reflect current project
83 modeling by the Community Action Agencies (CAA), including updated measure
84 lives and updated project costs.
- 85 • ENERGY STAR® Products incorporates new baselines which reflect updated
86 federal guidelines.
- 87 • Small and Large C&I programs incorporate updated savings from actual
88 performance on 2014 and 2015 projects. Also, one Large C&I program in
89 particular, the Large Business Energy Solutions, incorporates updated savings
90 assumptions from a recent Evaluation Monitoring and Verification (EM&V)
91 impact study.⁶ The study was performed by DNV-GL.

92

93

⁶ Study performed by [DNV-GL](#) and is posted to the Commission's Electric Division webpage.

94 These updated savings assumptions, coupled with all other savings assumptions⁷
95 incorporated in the 2016 Plan show that overall savings targets for the Plan are higher
96 than targets approved by the Commission for the initial 2016 filing. Table 2 summarizes
97 these changes.

<u>Table 2</u>			
<u>Comparison of Lifetime Savings for Initial and Updated Plan</u>			
<u>Electric and Gas Utilities</u>			
<u>Year 2016</u>			
	<u>Year 2016</u>		
	<u>Initial</u>	<u>Updated</u>	<u>Percent</u>
	<u>Filing (1)</u>	<u>Plan (2)</u>	<u>Change</u>
<u>Electric Utilities:</u>			
Lifetime kWh Savings	688,239,859	726,931,054	5.6%
Lifetime MMBtu Savings	697,900	955,814	37.0%
<u>Gas Utilities:</u>			
Lifetime MMBtu Savings	2,292,144	2,372,949	3.5%
(1) Reference: Initial Filing as revised on December 11, 2014, p. 224.			
(2) Reference: Plan, p. 105.			

98 This table shows improvements in savings in the Plan for our electric and gas programs.
99 Electric programs show lifetime kWh savings for the Plan are 5.6 percent higher than the

⁷ These savings assumptions by utility, by program, by measure are shown in the 2016 update Plan (p. 57-101).

100 initial filing; and, lifetime fossil MMBtu savings for the Plan are 37.0 percent higher than
101 the initial filing. The significant increase in fossil savings appears to be due, in part, to
102 the higher Plan savings for the Municipal program and ENERGY STAR® Products.
103 With respect to Gas programs, lifetime MMBtu savings are 3.5 percent higher than the
104 initial filing.

105 Changes to Funding:

106 Funding changes are primarily related to third-party financing, transfers and carryovers:

- 107 • In 2016, third-party loan buy-down options have been enhanced for our electric
108 and gas utilities by an agreement with the New Hampshire Community
109 Development Financing Authority (CDFA) which provides up to \$150,000
110 statewide per year in 2015 and 2016.⁸ These funds are not considered part of
111 Core programs and are therefore not budgeted in this filing. Core program
112 funding may be utilized for loan buy-downs if an energy efficiency project does
113 not meet the federal Better Buildings Program guidelines or if the CDFFA funds
114 are fully expended. Any unused Core funds budgeted for interest rate buy-downs
115 will be utilized within the Home Performance with ENERGY STAR® program.
- 116 • In addition, Until-Electric will transfer \$65,000 in funds from unspent on-bill
117 financing monies from 2014 to its Residential Home Performance with ENERGY
118 STAR® Program.
- 119 •
- 120 •

⁸ CDFFA funds are available due to its participation in the federal Better Buildings Program. A copy of the agreement is provided in Appendix B.

- 121 • Also, approximately \$463,000 in carryover funds is projected to be available for
122 the distinct purpose of implementing Eversource's Customer Engagement
123 Platform (CEP).

124 I support these funding changes. The third-party financing option will continue to
125 facilitate customers' access to capital for energy efficiency investments. Participating
126 customers have access to a 2 percent loan for up to 7 years with a maximum loan amount
127 of \$15,000 for weatherization and ENERGY STAR® heating system replacements, if
128 recommended by the program's energy auditor. The CDFA enhancement augments
129 customer access to capital.

130 With respect to Unitil-Electric's transfer of \$65,000 from unspent on-bill financing
131 monies from 2014, there is no impact to the balance of funds available from the grant
132 award from the Greenhouse Gas Emissions Reduction Fund.

133 The carryover of \$463,000 for the CEP programs represents a portion of the monies that
134 were set aside by Eversource in 2015 in compliance with RSA 125-O:5 for energy
135 efficiency projects at Eversource's facilities. These funds were originally authorized as
136 part of the 2015-2016 Core Settlement Agreement approved by the Commission.⁹

137 **Q. You mentioned in your opening summary that your testimony provides comments**
138 **on the cost to achieve savings. Please provide your comments.**

139 **A. Table 3 provides a comparison of the cost to achieve lifetime savings for the electric and**
140 **gas utilities for the initial 2016 filing and the Plan.**

⁹ Order No. 25,747, December 31, 2014.

Table 3

Comparison of Cost to Achieve Savings for Initial and Updated Plan

Electric and Gas Utilities

Year 2016

	<u>Year 2016</u>		<u>Percent</u>
	<u>Initial Filing</u>	<u>Updated Plan</u>	
<u>Electric Utilities:</u>			
Costs (1)	\$25,636,249	\$26,015,835	
Lifetime kWh Savings (2)	688,239,859	726,931,054	
Cost Per Lifetime kWh	\$0.037	\$0.036	-2.7%
<u>Gas Utilities:</u>			
Costs (3)	\$7,462,440	\$7,527,019	
Lifetime MMBtu Savings (4)	2,292,144	2,372,949	
Cost Per Life MMBtu Saved	\$3.256	\$3.172	-2.6%

(1) Source: Initial plan, p. 166; Plan, p. 52. Costs include performance incentives (PI).

(2) Source: Initial plan, p. 224; Plan, p. 105. Savings are “Pure” lifetime kWh savings.

(3) Source: Initial plan, p. 170; Plan, p. 56.

(4) Source: Initial plan, p. 224; Plan, p. 105.

141 This table shows that, for electric utilities, the cost to achieve lifetime kWh savings for
142 the Plan is 2.7 percent lower than the initial filing. For gas utilities, the cost to achieve
143 lifetime MMBtu savings in the Plan is 2.6 percent lower than the initial filing.¹⁰

¹⁰ Lower cost to achieve savings reflect a number of changes incorporated in the 2016 update including: favorable 2014 and 2015 performance, revised annual electric and MMBtu savings to reflect more current projects modeled by the Community Action Agencies and TREAT software, measure lives to reflect updated project measure mix, etc.

144 **Q. Do you have any other comments on the 2016 Plan?**

145 **A.** Yes. I have two comments; the first pertains to reporting requirements and the second
146 pertains to customer bill impacts.

147 Reporting:

148 At the technical session on October 29, 2015, the parties discussed the idea of adding a 2-
149 page insert to our Quarterly Core Report. The insert pertains to residential third-party
150 buy-down financing funded through (1) Core programs or (2) Better Buildings Program
151 OEP/CDFR Collaboration.

152 An illustrative draft of this 2-page insert was provided by the utilities as part of discovery
153 and a copy is provided in Appendix B.¹¹ The insert provides additional salient
154 information including the amount of available funding, number of projects financed,
155 average project costs, average loan amount and other relevant information. The utilities
156 indicated that this new report could be included in the next quarterly report which is due
157 to be published at the end of November. This additional 2-page report will be very
158 helpful in reporting the progress of our third-party buy-down financing option.

159 In addition, at the October 29, 2015 technical session, the parties discussed the idea of
160 adding additional information pertaining to Eversource's CEP program. Funds for the
161 CEP program were authorized as part of the 2015-2016 Core Settlement Agreement
162 approved by the Commission.¹² Currently, the program is reported in the Core Quarterly
163 Report (page 16). This page provides information pertaining to spending, participation
164 and savings.

¹¹ Reference: Response to Staff 3-26.

¹² Order No. 25,747, December 31, 2014.

165 The parties suggested that additional information could be included in the next Quarterly
166 Core Report including: launch dates for planned marketing activities, interface with
167 EPA's Portfolio Manager and other information.

168 Average Monthly Bill Impacts:¹³

169 Electric Utilities:

170 Table IV illustrates the SBC monthly bill amounts for energy efficiency based on a
171 residential customer utilizing 625 kWh watt-hours per month, a small business customer
172 using 10,000 kilowatt-hours per month and a large business customer using 200,000
173 kilowatt-hours per month.

174 Gas Utilities:

175 Table IV illustrates the LDAC bill amounts for energy efficiency based on a residential
176 customer utilizing 65 therms per month, a small business customer utilizing 298 therms
177 per month and a large business customer utilizing 18,309 therms per month.

¹³ These amounts are based on discovery responses provided by the utilities. Copies are provided in Appendix B, Staff 3-27 and Staff 3-28.

Table 4

Estimated Monthly Bill Amounts for Energy Efficiency (1)

Based on Current SBC/LDAC Charges

Year 2016

	<u>Year 2016</u>		
	<u>Residential</u>	<u>Small Business</u>	<u>Large Business</u>
<u>Electric Utilities:</u>			
Monthly Usage (kWh)	625	10,000	200,000
SBC (Rate/kWh)	\$0.0018	\$0.0018	\$0.0018
Monthly Bill	\$1.13	\$18.00	\$360.00
<u>Gas Utilities:</u>			
<u>Liberty-Gas:</u>			
Monthly Usage (kWh)	65	298	18,309
LDAC-EE (Rate/Therm)	\$0.0585	\$0.0256	\$0.0256
Monthly Bill	\$3.80	\$7.63	\$468.71
<u>Unitil-Gas:</u>			
Monthly Usage (kWh)	65	298	18,309
LDAC-EE (Rate/Therm)	\$0.0297	\$0.0146	\$0.0146
Monthly Bill	\$1.93	\$4.35	\$267.31

(1) Source: Appendix B, Staff 3-27 (Electric) and 3-28 (Gas).

178 This table shows that that SBC utilizes a fixed non-by passable rate of \$0.0018 per
179 kWh;¹⁴ however, the LDAC rate utilizes a variable rate per MMBtu – i.e. LDAC rates (1)
180 change annually as part of each utility’s Winter Cost of Gas proceeding, (2) LDAC rates
181 are different for Liberty-gas and Unitil-gas and (3) rates are different for the residential
182 and non-residential class.

183 **IV. Recommendations**

184 **Q. What are your recommendations?**

185 A. The Plan incorporates certain design changes, changes to savings assumptions and
186 changes in funding. The changes are incorporated in the 2016 Plan in a way that provide
187 cost effective energy efficiency programs in both residential and C&I sectors for both
188 electric and gas utilities (Table 1). When compared to the initial filing for 2016, the
189 proposed lifetime savings in the Plan are higher for our electric utilities and gas utilities
190 (Table 2) while the costs to achieve lifetime savings in the 2016 Plan are lower than the
191 costs in the initial 2016 filing (Table 3).

192 Further, as a result of discussions at the October technical session, the utilities will
193 incorporate improvements in reporting – i.e., a new 2-page insert in our Quarterly Core
194 Report that will provide more information on our new third-party buy-down financing
195 option and additional information on Eversources’ CEP program.

¹⁴ The non-by passable SBC rate of \$0.018 per kWh does not include other funding sources from RGGI auction proceeds and ISO-NE FCM revenues and CDFA funding. Also, the LDAC rate does not include CDFA funding.

196 Also, the funding levels for our electric programs remain unchanged from the initial 2016
197 filing; thus, monthly bill impacts for residential and C&I customers remain essentially
198 unchanged from the initial 2016 filing (Table 4).

199 In addition, I believe the 2016 Plan provides a reasonable starting point for the
200 Commission for purposes of evaluating savings targets in the context of an Energy
201 Efficiency Resource Standard (EERS), consideration of which is the subject of recent
202 docket opened by the Commission.

203 Based on my review, I support the proposed changes and I recommend that the
204 Commission approve them.

205 **Q. Does that complete your testimony?**

206 A. Yes, thank you.