

<b>ORIGINAL</b>	
N.H.P.U.C. Case No.	DE 10-188
Exhibit No.	55
Witness	Panel 5
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**STATE OF NEW HAMPSHIRE**  
**BEFORE THE**  
**PUBLIC UTILITIES COMMISSION**

**DE 10-188**

**2011-2012 CORE Electric Energy Efficiency Programs  
and  
Natural Gas Energy Efficiency Programs  
Home Performance with Energy Star Program (HPwES)**

**REBUTTAL TESTIMONY**  
**OF**  
**JAMES J. CUNNINGHAM, JR. AND AL-AZAD IQBAL**

**Date: May 4, 2012**

1 **Q. Please state your names, current positions and business address.**

2 A. Our names are James J. Cunningham, Jr. and Al-Azad Iqbal and we are employed by the  
3 New Hampshire Public Utilities Commission (Commission) as Utility Analysts. Our  
4 business address is 21 S. Fruit Street, Suite 10, Concord New Hampshire.

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

6 A. Our educational and professional backgrounds are summarized in Appendix A of our  
7 testimony.

8 **Q. What is the purpose of your rebuttal testimony?**

9 A. Our rebuttal testimony addresses the testimonies of the Office of Consumer Advocate  
10 (OCA) and the Office of Energy Planning (OEP)<sup>1</sup> with respect to the issue of fairness –  
11 i.e., whether it is fair that electric and natural gas heating ratepayers (“Group 1”) who pay  
12 energy efficiency (EE) charges on 100 percent of their household energy usage and  
13 receive the same benefits/programs as the oil, liquid propane, kerosene and wood heating  
14 ratepayers (“Group 2”) who pay EE charges on only 25 percent of their household energy  
15 use.

16 **Q. Have OCA and OEP offered an opinion on the fairness issue?**

17 A. Although OCA testimony supports the implementation of the proposed HPwES program,  
18 its testimony does not address the fairness issue. However, in discovery, Mr. Eckberg, on  
19 behalf of OCA states:

20 *“I believe that the full implementation of the fuel blind HPwES is consistent with*  
21 *RSA 374-F:3, VI, because it would benefit all customers equitably; it would not*  
22 *benefit one customer class to the detriment of others; and it would not shift costs*  
23 *unfairly among customers.”<sup>2</sup>*

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<sup>1</sup> Reference: Direct Prefiled Testimony of Stephen R. Eckberg, on behalf of the Office of Consumer Advocate, dated March 23, 2012; and, Direct Prefiled Testimony of Eric Steltzer, on behalf of the Office of Energy and Planning, dated March 23, 2012.

<sup>2</sup> Source: OCA response to Staff 5-4 (b), dated April 18, 2012 (copy provided as Attachment 1).

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OEP testimony supports the continuation of the proposed HPwES program funded with SBC funds. With respect to the fairness issue, Mr. Steltzer, on behalf of OEP, states:

*“The vast majority of homes heated by oil, propane, kerosene or wood are also electric utility customers. Participants receiving electric and non-electric thermal savings from the fuel neutral HPwES program are the same customers that are contributing to the SBC. It has been widely accepted that it is fair for all ratepayers to contribute to the SBC, even though there is not enough funding for all ratepayers to receive a direct benefit by participating in the Core programs. If it has been determined that the above is fair, I would suggest that it is certainly fair for an SBC paying electric ratepayers to receive direct energy savings, no matter what form, under a fuel neutral HPwES program because they are the very ones who have contributed to the fund.”<sup>3</sup>*

Based on the above, OCA and OEP conclude that costs are not being shifted unfairly; and, both OCA and OEP support the use of the System Benefits Charge (SBC) to fund the proposed HPwES program.

**Q. What is your opinion on OEP’s and OCA’s analyses and conclusions with respect to the fairness of the HPwES program?**

A. OCA’s and OEP’s analyses are limited. Their analyses focus on the distribution of costs and benefits between general customer classes (i.e., an “inter-class” analysis). They appear to define the classes as simply residential and commercial and industrial (C&I);<sup>4</sup> however, the analysis of the fairness issue also needs to be done within the residential class, to reflect an “intra-class” analysis and examination of the distribution of the costs and benefits among the members of the residential class who use a variety of heating sources: electricity, natural gas, fuel oil, liquid propane, kerosene and wood fuels. . Overall, the funding for the HPwES program comes from the residential customer class. Given that OCA and OEP’s class definitions are generalized, their analyses did not go far

<sup>3</sup> Source: OEP’s Testimony, page 5, lines 10-20.  
<sup>4</sup> OCA response to Staff 5-5 (b), dated April 18, 2012 (copy provided as Attachment 2). OCA defines customer class to mean “Residential Class” and “Commercial and Industrial Class”.

1 enough and are not complete in our view. We believe an “intra-class” (i.e., within the  
2 class) and “program-by-program” (i.e., within an individual program) analysis should be  
3 performed to properly analyze the fairness issue as Staff performed in its direct testimony  
4 and that such an analysis is essential to address the fairness issue raised in this  
5 proceeding.

6 While Staff’s direct testimony addresses all three analyses, the latter two analyses are  
7 missing from OCA and OEP’s argument.

8 **Q. Please explain why analyzing fairness according to an “inter-class”, “intra-class,”**  
9 **and “program-by-program” analysis is more appropriate.**

10  
11 A. The inter-class analysis used by OCA and OEP only addresses fairness in terms of the  
12 “residential class” and the “C&I class”— i.e., that EE benefits should be generally  
13 consistent with the EE charges by class. However, such inter-class analysis overlooks the  
14 full level of inequities that may exist. As we pointed out in Staff direct testimony, the  
15 analysis also involves an examination of the proportionate sharing of benefits and charges  
16 by various groups within each class (i.e., intra-class analysis).<sup>5</sup> Also, the analysis of  
17 fairness involves an examination of the various program components such as rebates  
18 within each program (i.e., program-by-program analysis), consistent with past  
19 Commission practice.

20 **Q. Please provide an illustration of the “intra-class” analysis.**

21  
22 A. Our direct testimony provided an illustration based on the statute and data from PSNH’s  
23 proposed HPwES program.<sup>6</sup> The statute states:

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<sup>5</sup> Source: Staff Direct Testimony, page 12, Table 12,

<sup>6</sup> Source: Staff Direct Testimony, page 33, Schedule 1. Although PSNH data was used for purposes of this illustration, the intra-class issue applies equally to Unitil Energy Systems.

1                   *“Restructuring of the electric utility industry should be implemented in a manner*  
2                   *that benefits all consumers equitably (emphasis added) and does not benefit one*  
3                   *customer class to the detriment of another.”*<sup>7</sup>  
4

5                   Residential electric customers of PSNH who heat with electricity and natural gas (i.e.,  
6                   Group 1) receive approximately 5 percent of the savings, but the SBC and Local  
7                   Distribution Adjustment Clause mechanism (LDAC) collect an estimated 58 percent of  
8                   the EE costs from these residential customers. The other residential electric customers,  
9                   who heat with oil, liquid propane, kerosene and wood (i.e., Group 2) receive 95 percent  
10                  of the savings associated with this participation in HPwES, but the SBC collects an  
11                  estimated 42 percent of the EE costs from these customers.<sup>8</sup>

12                  This intra-class analysis illustrates that there is an issue of fairness pertaining to the  
13                  disproportionate sharing of costs and benefits within the residential class. Since neither  
14                  OCA nor OEP performed an “intra-class” analysis, this issue would not show up in their  
15                  analyses; thus, we believe their analyses did not go far enough.

16                  **Q. By not reviewing fairness within the residential class, have OCA and OEP**  
17                  **overlooked any cost shifting?**

18                  A. Yes. Based on our “intra-class” analysis, we estimate that costs amounting to \$879,853  
19                  are shifted from PSNH residential customers who heat with oil, liquid propane, kerosene  
20                  and wood (Group 2) to PSNH residential customers who heat with electricity and natural  
21                  gas (Group 1).<sup>9</sup> Based on this intra-class analysis, the proposed HPwES program does  
22                  not benefit all consumers equitably, pursuant to the restructuring statute noted above.  
23  
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<sup>7</sup> Source: Restructuring Statute, Section 374-F:3, VI, *Benefits for All Consumers*.

<sup>8</sup> Source: Staff Direct Testimony, March 22, 2012, page 12, Table 2.

<sup>9</sup> Ibid..

1 **Q. Have OCA and OEP overlooked any equity issues within the residential class at the**  
2 **program level?**

3  
4 A. Yes. Although OCA’s and OEP’s analysis concludes that the proposed HPwES program  
5 benefits all consumers equitably, they fail to recognize that PSNH’s residential customers  
6 who heat with natural gas pay more than other PSNH residential customers. PSNH  
7 residential customers who heat with natural gas pay both the SBC and LDAC charges.  
8 These customers, however, can only participate in one program – either the electric  
9 program or the natural gas program. This results in PSNH’s residential electric  
10 customers who heats with natural gas paying twice but benefiting only once as compared  
11 to PSNH residential electric customers who don’t heat with natural gas. We estimate that  
12 SBC/LDAC charges collected from such PSNH customers that heat with natural gas are  
13 58 percent of the SBC and LDAC charges, while these customers receive only 4.8  
14 percent of the savings from the HPwES program (ref. Attachment 2).<sup>10</sup>

15 **Q. With respect to PSNH residential customers who heat with natural gas, does the**  
16 **OCA testimony explain whether the electric customers or the natural gas customers**  
17 **should fund the program?**

18  
19 A. Although OCA supports funding the proposed HPwES weatherization program with SBC  
20 monies,<sup>11</sup> OCA’s testimony is not consistent as to what fund should be used to pay for the  
21 weatherization for a natural gas customer – i.e. SBC or LDAC. OCA’s understanding is  
22 that the primary deciding factor about which utility should pay for energy efficiency  
23 improvements is generally determined by the customer’s primary heating fuel. That is, if  
24 the customer heats with natural gas, the natural gas utility would pay for weatherization  
25 services through its program.<sup>12</sup> If the OCA applies this principle to customers that heat

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<sup>10</sup> Source: Reference Staff Direct Testimony, page 33, Schedule 1.

<sup>11</sup> Source: Direct Prefiled Testimony of Mr. Eckberg, page 1, line 16.

<sup>12</sup> Source: Direct Prefiled Testimony of Mr. Eckberg, page 4, lines 10-13.

1 with oil, then the customer who heats with oil should pay for weatherization services  
2 through its oil program. Of course, no EE oil program doesn't exist, but the idea that  
3 electric SBC monies should fund oil heat customers by opening up the HES program  
4 displays inconsistent logic.

5 **Q. Did OCA and OEP overlook the reduction of indirect system benefits to residential**  
6 **customers who heat with electricity?**

7  
8 A. Yes. Because OCA and OEP utilized only an inter-class analysis, they believe the  
9 proposed HPwES is fair and does not benefit one customer class to the detriment of  
10 others. However, had they performed an intra-class analysis, they would have seen that  
11 98.5 percent of the savings are transferred from residential customers who heat with  
12 electricity to residential customers who heat with natural gas, oil, liquid propane,  
13 kerosene and wood; while only 1.5 percent of the savings remains in the electric system.<sup>13</sup>  
14 This transfer of electricity savings from the electric industry, in turn, reduces the “double  
15 benefits” that electric EE programs provide.<sup>14</sup> Commission Order No. 20,186 addressed  
16 double benefits as follows:

17 *“There are two benefits to cost-effective C&LM programs. One benefit is the*  
18 *benefit to all ratepayers of meeting resource needs at a lower cost. All ratepayers*  
19 *benefit, including residential ratepayers, even where the C&LM programs happen*  
20 *to be offered to C&I customers (emphasis added). The second benefit of C&LM*  
21 *programs is the direct benefit to the customers who participate in the programs*  
22 *and, therefore, have lower bills.”<sup>15</sup>*

23  
24 This order notes that the first benefit of EE (formerly referred to as conservation and load  
25 management or C&LM programs) is an indirect system benefit in that “all ratepayers  
26 benefit, including residential ratepayers, even where the C&LM programs happen to be  
27 offered to C&I customers.” This is an important point because, with limited EE funds, as

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<sup>13</sup> Source: Staff Direct Testimony, page 14, line 13. Reference 2012 Update Filing, page 63.

<sup>14</sup> Source: Staff Direct Testimony, page 15, line 9.

<sup>15</sup> Source: *Granite State Electric Company*, Order No. 20,186, 76 NH PUC 501 (1991).

1 noted by OEP,<sup>16</sup> the implementation of the proposed HPwES program will significantly  
2 reduce these indirect system benefits due to the loss of electric savings from electric  
3 system benefits to non-electric benefits. As noted in Staff's direct testimony,  
4 approximately 98.5 percent of electric benefits are transferred.<sup>17</sup> Although OCA and  
5 OEP support SBC funding of the HPwES program, given the significant reduction in  
6 electric system benefits, Staff believes this creates an opportunity for the Commission to  
7 review the fairness issue.

8 **Q. Has the past Commission practice been to analyze fairness at an "intra-class" level?**

9  
10 A. Yes. In the past, the Commission has performed an intra-class analysis when it has  
11 authorized EE programs. For instance, when the Commission approved the predecessor  
12 of the HPwES, the residential Home Energy Solutions (HES) program, it created an  
13 exclusive program for those customers who utilized electric heating. When the  
14 Commission continued to authorize the HES program, it did so in order to provide  
15 benefits to customers who paid the SBC on their heating-related usage; at the same time,  
16 the Commission did not allow participation from customers who were not using  
17 electricity for their heating usage and thus were not paying the SBC for usage related to  
18 heating usage.

19 Further, when the Commission approved lighting and appliance programs, it created  
20 programs for all residential customers. Lighting and appliance programs were consistent  
21 with the idea that residential customers who were paying the SBC for usage related to  
22 lighting and appliances should have an opportunity to directly benefit from such EE  
23 programs.

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<sup>16</sup> Source: OEP Direct Prefiled Testimony of Mr. Steltzer, page 5, line 16.

<sup>17</sup> Source: Staff Direct Testimony, page 14, line 13.

1 **Q. Has past Commission’s practice been to also review fairness at a “program-by-**  
2 **program” level?**

3  
4 A. Yes. In the past, the Commission addressed “program-by-program” equity issues by  
5 approving caps on rebates in order to help achieve a fair distribution of benefits on a  
6 “program-by-program” basis. If the Commission were indifferent about “program-by-  
7 program” equity issues, it would not have required caps since benefits would remain in  
8 the residential programs or the C&I programs no matter how unfair and skewed the  
9 distribution of rebates might be.

10 In the proposed fuel neutral HPwES program, the benefits to PSNH residential customers  
11 are unfairly skewed in favor of customers that heat with oil, liquid propane, kerosene, and  
12 wood fuels (i.e., 95 percent),<sup>18</sup> while these customers are not paying the EE surcharge on  
13 usage related to heating. Staff has demonstrated this results in a program that is lopsided  
14 in the distribution of costs versus benefits.<sup>19</sup>

15 **Q. Do the *NH Climate Action Plan* and *Better Buildings Program* support OCA and**  
16 **OEP’s position?**

17  
18 A. OCA’s testimony mentioned that implementing cost effective fuel blind programs is  
19 consistent with several state policies, including the *NH Climate Action Plan*. OEP’s  
20 testimony mentioned that the proposed HPwES program would assist the state in  
21 accomplishing the goals for the *25x25 Initiative* and the *Better Buildings Program*. We  
22 believe that OCA and EOP appear to have ignored the importance of electric savings  
23 stated in these policies. For instance, the *NH Climate Action Plan* report noted that the  
24 second largest contributing factor to the projected increase in greenhouse gas emissions

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<sup>18</sup> Source: Staff Direct Testimony, page 33, Schedule 1.

<sup>19</sup> Source: Staff Direct Testimony, page 24 “determination of program design”.

1 (after transportation) is the expected annual load growth in the electricity sector.<sup>20</sup> With  
2 respect to the *25x25 Initiative*, we believe that that the cost effective energy efficiency  
3 programs will reduce the demand for electricity and will reduce greenhouse gas  
4 emissions. In fact, information on the OEP's website confirms this point stating: "It will  
5 be easier to meet the overall goal for renewable energy if demand for energy is reduced  
6 by means of energy efficiency and conservation."<sup>21</sup> It's our understanding that the *Better*  
7 *Buildings Program* is primarily a weatherization program, somewhat similar to the  
8 proposed HPwES program; however, since the proposed HPwES program has not yet  
9 been approved by the Commission, the *Better Buildings Program* is not ripe for  
10 consideration at this time. We believe it is more accurate to describe these reports,  
11 initiatives and programs as goals rather than official state policies.

12 OCA and OEP support funding the proposed HPwES program with SBC monies,  
13 however, we believe this position is contrary to Commission Order No. 24,930 since the  
14 proposed program does not appear to provide ancillary savings that are consistent with  
15 the ancillary savings as stated in the order as follows:

16 *"Although energy efficiency measures such as improved insulation and air*  
17 *sealing may primarily save non-electric fuels in non-electrically heated buildings,*  
18 *there can often be significant electric savings from such measures as well."*<sup>22</sup>  
19

20 Although the Commission indicated that ancillary savings "could often be significant",  
21 our analysis indicates that, based on PSNH as an illustration, proposed ancillary savings  
22 represent only 0.7 percent of the overall savings of the proposed HPwES program.<sup>23</sup>

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<sup>20</sup> Source: *New Hampshire Climate Action Plan*, March 2009, page 15-16. Also, refer to Staff's Direct Testimony for additional comments pertaining to the *New Hampshire Climate Action Plan* (ref. pages 13-15, 20 and 30)

<sup>21</sup> Source: Office of Energy and Planning website, "What will it take to reach the 25% renewable energy goal?"

<sup>22</sup> Source: Re 2009 Core Energy Efficiency Programs, Order No. 24,930, 94 NH PUC 11 (2009).

<sup>23</sup> Source: Staff Direct Testimony, page 9, line 21.

1 Finally, given the character of HPwES program as fuel blind, OEP and OCA did not  
2 explore the possibility of funding the program with fuel blind funding sources. They did  
3 not explain why that should not be an option either. We believe for the best policy  
4 decision all viable alternatives should be explored.

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

6 A. Our testimony is summarized as follows:

- 7 • OCA's and OEP's use of the "inter-class" analysis does not go far enough. We  
8 believe "intra-class" and "program-by-program" analyses should be performed to  
9 properly analyze the fairness issue.
- 10 • OCA's and OEP's inter-class analyses fail to identify and address the  
11 disproportionate benefits and costs within the residential class that is fundamental  
12 to the proposed HPwES program.
- 13 • OCA's testimony is not consistent as to what fund should be used to pay for the  
14 weatherization for a natural gas customer – i.e. SBC or LDAC.
- 15 • Although OCA's and OEP's analyses conclude that the proposed HPwES  
16 program benefits all consumers equitably, their testimonies fail to recognize an  
17 inequity for residential customers of PSNH who heat with natural gas.
- 18 • Had OCA and OPE performed an intra-class analysis, as was performed by Staff,  
19 they would have determined that most of the savings (98.5 percent) are  
20 transferred from residential customers who heat with electricity to residential  
21 customers who heat with natural gas, oil, liquid propane, kerosene and wood.  
22 This transfer of electricity savings from the electric industry, in turn, reduces the  
23 "double benefits" that electric EE programs currently provide.

- 1           • OCA’s and OEP’s inter-class analyses fail to adequately recognize past  
2           Commission practice that has authorized EE programs that included a broad array  
3           of residential EE programs.
- 4           • OCA’s and OEP’s inter-class analyses fail to adequately recognize past  
5           Commission practice authorizing caps on rebates in order to help achieve a fair  
6           distribution of benefits on a “program-by-program” basis.
- 7           • OCA’s and OEP’s testimonies pertaining to *NH Climate Action Plan, 25x25*  
8           *Initiative*, and the *Better Buildings Program* does not recognize the importance of  
9           electric savings.
- 10          • OCA’s and OEP’s testimonies support full implementation of the proposed  
11          HPwES program; however, the proposed program does not comply with  
12          Commission Order No. 24,930 with respect to ancillary savings.
- 13          • OEP and OCA did not explore the possibility of funding the program with fuel  
14          blind funding sources before recommending the electric SBC be used for the  
15          program.

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

17   A.   Yes, it does. Thank you.

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1 **Appendix A**

2 **Educational and Professional Background**

3 **James J. Cunningham Jr.**

4  
5 I am employed by the New Hampshire Public Utilities Commission (Commission) as a  
6 Utility Analyst. My business address is 21 S. Fruit Street, Suite 10, Concord New  
7 Hampshire, 03301.

8 I am a graduate of Bentley University, Waltham, Massachusetts, and I hold a Bachelor of  
9 Science-Accounting Degree. I joined the Commission in 1988 and I've worked on a  
10 variety of cases pertaining to New Hampshire electric, natural gas, steam and water  
11 utilities. In 1995, I completed the NARUC Annual Regulatory Studies Program at  
12 Michigan State University, sponsored by the National Association of Regulatory Utility  
13 Commissioners. In 1998, I completed the Depreciation Studies Program, sponsored by  
14 the Society of Depreciation Professionals, Washington, D.C. I have reviewed and filed  
15 direct testimony on Depreciation Studies and I am a member of the Society of  
16 Depreciation Professionals (SDP).

17 In 1999, I was a participant in the Commission's Energy Efficiency Working Group, a  
18 diverse group of stakeholders that was assembled to take a fresh look at energy efficiency  
19 issues. In 2002, I worked on the Staff team that recommended re-institution of the  
20 Commission's natural gas energy efficiency programs. In 2008, I was promoted to the  
21 position of Utility Analyst IV and have been working on a variety of assignments  
22 including electric CORE energy efficiency programs, natural gas energy efficiency

1 programs and rate cases pertaining to the electric, water and natural gas utilities and other  
2 cases as assigned.

3 Prior to joining the Commission I was employed by the General Electric Company (GE).

4 While at GE, I graduated from the Corporate Financial Management Training Program  
5 and I held assignments in General Accounting, Government Accounting & Contracts and  
6 Financial Analysis.

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1 **Educational and Professional Background**

2 **Al-Azad Iqbal**

3 I am employed by the New Hampshire Public Utilities Commission (PUC) as a Utility  
4 Analyst. My business address is 21 S. Fruit Street, Suite 10, Concord New Hampshire,  
5 03301.

6 I received my Bachelor degree in Architecture (B. Arch). Later, I received my Masters  
7 (MS) in Environmental Management and another Masters in City and Regional Planning  
8 (MCRP). I was a Doctoral Candidate at the City and Regional Planning Department at  
9 Ohio State University. After joining the PUC in 2007, I participated in several utility  
10 related training courses including Advanced Regulatory Studies at Institute of Public  
11 Utilities, Michigan State University.

12 Prior to joining the PUC, I was involved in teaching and research activities in different  
13 academic and research organizations. Most of my research work was related to  
14 quantitative analysis of regional and environmental issues.

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