

**STATE OF NEWHAMPSHIRE**  
**PUBLIC UTILITIES COMMISSION**

**DE 10-188**

**In the Matter of:**  
**2010 CORE Electric Energy Efficiency Program**  
**& Natural Gas Energy Efficiency Programs**

**Direct Testimony**  
**of**  
**James J. Cunningham**  
**&**  
**Al-Azad Iqbal**

**October 15, 2010**

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  
3           by the New Hampshire Public Utilities Commission (Commission) as Utility  
4           Analysts. Our business address is 21 S. Fruit Street, Suite 10, Concord New  
5           Hampshire, 03301.

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

7     A.     Our educational and professional backgrounds are summarized in Appendix A.

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

9     A.     Our joint testimony provides a report on the 2010 activities of the Core Team.  
10          These activities pertain to issues identified in the Commission's orders approving  
11          2010 Core programs.<sup>1</sup> Also, our testimony provides comments and  
12          recommendations pertaining to the proposed 2011-2012 CORE electric and  
13          natural gas energy efficiency programs, including planned lifetime savings,  
14          design of the Home Performance with Energy Star (R) program, performance  
15          incentives and other comments.

16    **Q.     You mention that your testimony provides recommendations on natural gas**  
17          **energy efficiency programs. Is this the first time natural gas energy**  
18          **efficiency programs are included in the Core filing?**

19    A.     Yes. The natural gas utilities are Energy North Natural Gas, Inc. (d/b/a National  
20          Grid NH) and Northern Utilities, Inc. (d/b/a/Unitil). The electric utilities are  
21          Granite State Electric Company (d/b/a National Grid), New Hampshire Electric  
22          Cooperative, Inc. (NHEC), Public Service Company of New Hampshire (PSNH)  
23          and Unitil Energy Systems, Inc. The combined filing is expected to provide

---

<sup>1</sup> Commission Order No. 24,062 and Order No. 25,099.

greater integration of natural gas efficiency with electric energy efficiency programs. Also, given the acquisition of Energy North Natural Gas, Inc., by National Grid and the acquisition of Northern Utilities, Inc. by Unitil Corporation, the combined filing is expected to provide greater administrative efficiency.

#### CORE TEAM ACTIVITIES DURING 2010

**Q. Please provide a summary of the 2010 Core Team activities.**

A. The Core Team met monthly during 2010 and reviewed a number of issues outlined in the Commission orders approving 2010 energy efficiency programs.<sup>2</sup> Following is a summary of the key issues.

#### 2009 Performance Incentive Filings

The new timelines established by the Commission for reporting and reviewing performance incentive amounts were met in 2010. The electric companies made their initial filings of 2009 Core performance incentives in June. Staff completed its desk audits in June and July and noted that the amounts proposed were calculated properly and the companies were entitled to recognize these performance incentives in July 2010.

Table 1 summarizes the final proposed amounts for 2009 performance incentives:

<u>Table 1</u>		
<u>2009 Performance Incentives</u>		
National Grid		\$ 194,887
NHEC		\$ 119,851
PSNH		\$1,478,171
UES		\$ 163,659
NGRID NH (Natural Gas)		\$ 291,015
Unitil (Natural Gas)		N/A <sup>3</sup>

<sup>2</sup> Reference Commission Order No. 25,062, dated January 5, 2010 approving the initial Core Budgets; and Order No. 25,099, dated April 30, 2010 approving revised program budgets, pursuant to Senate Bill 300 which was signed into law on January 14, 2010.

<sup>3</sup> Table 1 does not include the amounts for Unitil (Natural Gas). The Settlement Agreement, approved by the Commission in Docket DG 09-053, provided for a 20-month period, May 1, 2009 to December 31, 2010. In June 2011, Unitil will submit its performance incentive filing for the entire 20-month period.

1 PSNH and UES amounts exclude performance incentives related to the fossil fuel portion  
2 of the budget of the Home Energy Solutions (HES) program<sup>4</sup>, pursuant to Commission  
3 Order No. 24,974 (at page 6). Also, the performance incentive filing for each company  
4 included an additional schedule that summarized the year-end carry forward balance.

5 **Performance Incentive Working Group**

6 Pursuant to Order No. 25,062 (p. 19) and Order No. 25,099 (p. 14), the Core Team  
7 established a Working Group to review the formula for calculating performance  
8 incentives.<sup>5</sup> The Working Group met twice during 2010 and will continue to meet to  
9 fully explore all the issues. At this time, no final recommendation has been put forward  
10 by the Working Group.

11 The 2011-2012 electric and natural gas filing incorporates one of the possible changes  
12 that was discussed by the working group – i.e. the use of “actual” expenditures in lieu of  
13 “budget” expenditures for purposes of calculating performance incentives. However, our  
14 testimony recommends no change from the existing formula until this issue is explored  
15 more fully by the Working Group. Later in our testimony, we address this issue.

16 **Carry Forward Balances**

17 For any program year, funds that are not used by the end of the year are carried forward  
18 to the next program year. In the Commission’s Order No. 25,099, in Docket DE 09-170,  
19 the Commission directed the Core Management Team to develop a uniform report that  
20 demonstrates (1) how the carryover funds are calculated, including details about the  
21 sources of fund and uses of funds, and (2) how carryover funds are used in the calculation  
22 of performance incentives in order to ensure that carryover funds are not double counted  
23 in the determination of performance incentives (Order No. 25,099, page 16). The June

---

<sup>4</sup> In 2010, the name of the program was changed from HES to Home Performance with Energy Star (HPwES).

<sup>5</sup> The original formula was recommended by the NHEEWG and approved by the Commission in Order No. 23,574, dated November 1, 2000.

1 2010 performance incentive filings provided this report; but, the reporting format was not  
2 uniform across all utilities, as directed by the Commission.<sup>6</sup> Also, the reports do not  
3 describe how carryover funds are used in the calculation of performance incentives to  
4 ensure that carry funds are not double counted. Staff plans to work with the utilities to  
5 resolve these issues.

6 **Fuel-Neutral Pilot - Initial Review Report**

7 Pursuant to the settlement agreement in Docket DE 09-170, PSNH and UES engaged the  
8 services of KEMA Inc. to conduct a preliminary Review of the fuel neutral pilot for the  
9 Home Performance with Energy Star (HPwES), formerly the Home Energy Solutions  
10 program (HES). The purpose of the Review was to ensure that the data planned to be  
11 tracked is sufficient to support future evaluation of program savings.<sup>7</sup> PSNH and UES  
12 will use this data to conduct a subsequent evaluation of the fuel-neutral pilot for the  
13 HPwES program at the end of the 2009-2010 heating season.<sup>8</sup>

14 **Revised Budgets Responding to SB 300 Resolution**

15 Pursuant Commission Order No. 25,062, the utilities met with Staff and the parties to  
16 discuss how the 2010 Core Program budgets should be revised to respond to the  
17 reduction of SBC funds for energy efficiency resulting from Senate Bill 300.<sup>9</sup> The  
18 reduction in funds was \$3.2 million, reflecting a reduction of 0.3 mills/kWh, from 1.8  
19 mills/kWh to 1.5 mills/kWh. National Grid, Unitil and PSNH were able to reconfigure  
20 their budgets with carryover funds, reallocation of funds from certain budet items and  
21 resources unique to each utility in order to fill the budget shortfall. NHEC projected a  
22 budget shortfall of approximately \$148,534 and proposed to eliminate this shortfall with

---

<sup>6</sup> Source: Order No. 25,099, page 16.

<sup>7</sup> Reference filing at page 11.

<sup>8</sup> The requirement to perform this fuel-neutral pilot evaluation was included in the Settlement Agreement in Docket DE 09-170, approved by the Commission in Order No. 25,062 (p. 15, 18). The companies agreed to provide a report to the parties and Staff at the end of the 2009-2010 heating season.

<sup>9</sup> SB 300 was signed into law on January 15, 2010.

1 funding from the Greenhouse Gas Emissions Reduction fund. A final budget was filed  
2 on February 19, 2010 and, with certain modifications, was approved by the Commission  
3 in its Order No. 25,099.

4 **RSA 125-O:5 (2 percent set aside of system benefit charge by PSNH):**

5 The Settlement Agreement approved by the Commission in Docket DE 09-170, Order  
6 No. 25,062 specified that the methodology used to determine the amount of the 2 percent  
7 set aside of the system benefit charge by PSNH would be reviewed (p. 15). The Core  
8 Team met in technical sessions and, subsequently, PSNH, the Office of Consumer  
9 Advocate (“OCA”) and the Staff entered into a Settlement Agreement (“Settlement  
10 Agreement”) wherein a resolution of the outstanding issues was achieved. With respect  
11 to differing views among PSNH, OCA and Staff regarding the past calculation of set  
12 aside amounts and management of RSA 125-O funds, it was agreed that, rather than  
13 expend the time and resources necessary to fully litigate those issues, the Parties and  
14 Staff agreed that no further action should be taken. Instead, the parties and Staff agreed  
15 on a starting point for calculation of RSA 125-O funds and a methodology for calculating  
16 funds available for RSA 125-O Set-Aside, going forward. In addition, among other  
17 points resolved, the parties and Staff agreed that PSNH would consult with all Core  
18 Parties and Staff when it considers projects to be funded in the future by the RSA 125-O  
19 Set-Aside amounts. The Settlement Agreement was filed with the Commission on July  
20 13, 2010 by the OCA. We recommend that the Commission take action on the  
21 Settlement Agreement in the context of this instant docket.

22 **Marketing Plan**

23 Pursuant to Commission Order No. 25,062 (p.17), the utilities filed with the Commission,  
24 Staff and the parties an initial Core Marketing Plan on February 1, 2010. A modified  
25 Core Marketing Plan was filed on May 21, 2010 incorporating more direct mailing of the

1 low income Home Energy Assistance program brochures, as required and wider  
2 circulation of the NH Saves catalog.

3 **RFP for Multi-Year M&E Plan**

4 The selection of a vendor to provide a multi-year monitoring and evaluation plan is in-  
5 process. The selection of a vendor is still pending due, in part, to consideration of  
6 funding issues pertaining to Senate Bill 323 and whether funding for the required Senate  
7 Bill 323 study could impact whether sufficient funds could be available for the multi-year  
8 monitoring and evaluation plan. SB 323 requires the Public Utilities Commission (PUC)  
9 to contract for an independent study utilizing a broad collaborative process, regarding  
10 legislative, regulatory, and market-based policy options to address a number of issues  
11 including energy efficiency, conservation, demand response, and sustainable energy  
12 programs and incentives in the state and recommendations for possible improvements to  
13 maximize their effectiveness and increase coordination of those programs and incentives.

14 **Enhancements to 2011-2012 Filing:**

15 A number of enhancements were discussed and some were included in this year's filing  
16 including an accelerated filing date, multi-year (2011-2012) filing, inclusion of natural  
17 gas programs for the first time, incorporation of additional data pertaining to savings  
18 input assumptions, and expanded savings data to include "annual" kWh and MMBtu  
19 savings.

20 **2011-2012 ELECTRIC & GAS PROGRAMS**

21 **Q. Please summarize the issues that you will be addressing in your testimony**  
22 **pertaining to the 2011 and 2012 electric and gas energy efficiency programs.**

23 A. Our testimony addresses the following issues: proposed lifetime savings for Core  
24 electric programs and natural gas programs, proposed program design for the Home  
25 Performance with Energy Star (HPwES) program for Core electric and natural gas

1 programs, and proposed performance incentive formulas for electric and natural gas  
2 programs. In addition, our testimony provides brief comments on other topics.

3 **Proposed Lifetime kWh Savings for Core Electric Programs**

4 **Q. Please summarize your testimony pertaining to proposed lifetime kWh**  
5 **savings for Core electric programs.**

6 A. The proposed lifetime kWh savings for the Core electric programs appear to be  
7 overly conservative, i.e. low. Actual lifetime savings achieved in 2009 were  
8 significantly higher than the levels of savings proposed for 2011-2012 and we  
9 believe that the proposed savings should be more reflective of historical  
10 performance to ensure that proposed savings budgets represents goals that are  
11 sufficiently challenging so that performance incentives earned by the utilities  
12 reflect extraordinary savings.

13 **Q. Please explain why you believe the proposed lifetime kWh savings appears to**  
14 **be conservative, i.e. too low.**

15 A. Electric utilities outperformed proposed savings goals in the past two years. In  
16 2008, actual lifetime kWh savings were 29 percent higher than proposed for 2008.  
17 Again, in 2009, the electric utilities outperformed proposed savings goals. Actual  
18 lifetime kWh savings were 46 percent higher than proposed for 2009. Table 2  
19 summarizes the 2008 and 2009 lifetime kWh savings and related costs.



Table 2

2008 and 2009 Electric Utility Performance  
Utility Costs, Planned Savings and Cost per kWh Saved  
(Cost and Lifetime Savings are in Millions)

	<u>Actual</u>	<u>Proposal</u>	<u>% Variance</u>
<u>2008 Performance:</u>			
Utility Cost	\$17.7	\$18.9	(6%)
Lifetime kWh Savings	814.8	630.0	29%
Cost per kWh Saved	\$0.022	\$0.030	(28%)
<u>2009 Performance:</u>			
Utility Cost	\$17.3	\$18.2	(5%)
Lifetime kWh Savings	805.1	551.4	46%
Cost per kWh Saved	\$0.021	\$0.032	(35%)

Based on the above, electric companies' planned savings targets, as a whole, appear to have been very conservative. Electric companies proposed 630.0 million kWh for lifetime savings in 2008 and achieved 814.8 million kWh. In 2009, electric companies proposed 551.4 million kWh for lifetime savings but actually achieved 805.1 million kWh. In addition to outperforming the savings targets, the companies have been able to achieve higher levels of actual savings at less cost per kWh than proposed in both 2008 and 2009.

**Q. Are the actual lifetime savings achieved in 2008 and 2009 reflected in the 2011 proposed levels of savings?**

A. Actual lifetime savings do not appear to be fully reflected in the 2011-2012 proposed levels of savings. Electric companies, as a group, are proposing lifetime kWh savings in 2011 that are significantly below the actual levels achieved in 2008 and 2009. Table 3 provides a comparison of proposed lifetime kWh savings and related costs for 2011 versus 2008 and 2009.

Table 3

2011 Core Proposal vs. 2008-2009 Actual Results  
Utility Costs, Planned Savings and Cost per kWh Saved  
 (Costs and Lifetime Savings are in Millions)

	Proposed <u>2011</u>	Actual <u>2009</u>	Actual <u>2008</u>
Utility Cost	\$17.9	\$17.3	\$17.7
Lifetime kWh Savings	592.4	805.0	814.8
Cost per lifetime kWh saved	\$0.030	\$0.021	\$0.022

Based on the above, it appears that the 2011 proposal is not fully reflective of the levels of savings that have been achieved in the prior two years. We believe that 2011 proposed kWh savings budgets should reflect actual kWh savings achievements to ensure that proposed savings budgets represent goals that are sufficiently challenging so that performance incentives earned by the utilities reflect extraordinary savings. Although the electric companies achieved actual lifetime kWh savings of greater than 800 million kWh, the proposed level of lifetime savings is less than 600 million kWh. Also, with respect to the cost per kWh to achieve planned lifetime savings, proposed costs per lifetime kWh saved are expected to be approximately 40 percent higher than actually incurred in 2008 and 2009 (i.e.  $\$0.030 / \$0.021 = 42.8\%$  increase).

**Q. Based on your review of the data, what have you concluded?**

A. Based on our review, we believe that proposed lifetime kWh savings for 2011 is very conservative (i.e. low). We believe that the proposal should be more reflective of higher level of lifetime kWh savings recently achieved.

**Q. Have you performed a hypothetical savings calculation that incorporates actual historical data?**

A. Yes, we performed a hypothetical savings calculation that incorporates actual historical data. Our hypothetical calculation reflects only 2009 data<sup>10</sup> for (1) the level of participation and (2) lifetime savings. With respect to participation, we divide the actual 2009 utility cost per participant into the proposed 2011 utility cost to determine the calculated level of participation. With respect to lifetime kWh savings, we multiply actual 2009 lifetime savings per participant by the calculated level of participation. Table 4 summarizes the results of our hypothetical.

Table 4

<u>Hypothetical vs. 2011 Core Proposal</u>			
<u>Utility Costs, Planned Savings and Cost per kWh Saved</u>			
(Costs and Lifetime Savings are in Millions)			
	Actual <u>2009</u>	Proposed <u>2011</u>	Hypothetical <u>2011</u>
Cost	\$17.3	\$17.9	\$17.9
kWh Savings	805.1	592.4	854.9
lifetime kWh saved	\$0.021	\$0.030	\$0.021

By incorporating actual 2009 performance, our hypothetical indicates that the Core filing could provide lifetime savings of 854.0 million kWh, an increase of 262.5 million kWh over the proposed 2011 592.4 million kWh. This increase represents a potential 44 percent increase (i.e. 262.5 million kWh / 592.4 million kWh). The increase in lifetime savings in our hypothetical calculation is

<sup>10</sup> Our hypothetical reflects only 2009 data (rather than average 2008 and 2009 data) because 2009 was the most recent full year of program activity and we believe it reflects the most recent rebate amounts, measure lives and estimated savings per measure.

1 consistent with the Commission's goal for the companies to achieve extraordinary  
2 savings.<sup>11</sup>

3 Please refer to Schedule 1 for a summary of lifetime savings, proposal vs.  
4 hypothetical.

5 **Q. Does your testimony provide a schedule showing the development of**  
6 **hypothetical lifetime savings for each electric company?**

7 A. Yes. Schedules 1A, 1B, 1C and 1D show the development of the hypothetical  
8 lifetime savings for each electric company.

9 **Q. Does your hypothetical address both 2011 and 2012.**

10 A. No, our hypothetical calculation covers only year 2011. However, the same  
11 calculation could easily be performed for 2012. Year 2012 proposed utility costs  
12 would be substituted for 2011 utility costs. Then, the 2012 utility costs could be  
13 divided by actual 2009 utility cost per participant to calculate 2012 participation.  
14 The calculated participation numbers could then be multiplied by actual 2009  
15 lifetime savings per participant to calculate hypothetical lifetime savings.

16 **Q. Do you recommend that actual savings achievements should be reflected in**  
17 **performance incentive calculations?**

18 A. Yes. We believe that actual achieved levels of savings should be reflected in  
19 budgeted savings estimates for purposes of calculating performance incentives.

20 **Q. Do other states reflect actual savings achievements in their calculations of**  
21 **performance incentives?**

22 A. Yes, the Public Service Board of the State of Vermont reflects actual  
23 achievements in their calculations of performance incentives.<sup>12</sup>

---

<sup>11</sup> Source: Docket DR 92-024, Order No. 20,457 and Docket DR 96-150, Order No. 23,574, page 19.

1     **Q.     Do you recommend any filing and reporting requirements pertaining to the**  
2     **development of lifetime kWh savings?**

3     A.     Yes. We recommend that energy efficiency filings and actual reports on savings  
4     contain a schedule showing the development of lifetime kWh savings. We  
5     recommend a side-by-side comparison that shows the build-up of budget and  
6     actual savings on a consistent measure-by-measure basis including: number of  
7     participants, annual savings per participant, realization rate, measure life and  
8     extended lifetime kWh savings. Actual savings data should be provided as part of  
9     the annual performance incentive filings in June of each year. Budgeted savings  
10    data should be reconciled to the most recent actual program year savings data  
11    showing a side-by-side comparison of the build-up of savings for actual vs.  
12    budget, including number of participants, annual savings per participant,  
13    realization rate, measure life and extended lifetime kWh savings. We recommend  
14    that this data be provided in a consistent format for all electric companies.

15    **Q.     You recommend that the electric utilities provide savings data for each**  
16    **program, on a measure-by-measure basis. Have the companies provided this**  
17    **data in the past?**

18    A.     No, the electric companies have not provided this data. The electric companies  
19    have provided summary data for lifetime kWh savings in the filings. However,  
20    the measure-by-measure data for each program is available and some of this data  
21    has been provided during the course of discovery. The natural gas companies  
22    have provided this data for the past 7 years.

---

<sup>12</sup> Source: <http://psb.vermont.gov/docketsandprojects/eeu/rfpsandcontracts/2009-2011/eeucontract>.

1   **Q.     What are the benefits of providing program data on a measure-by-measure**  
2       **basis?**

3   A.    We believe that measure-by-measure savings data for actual vs. budgeted savings  
4       provides a necessary side-by-side reconciliation between budgets and actual  
5       results. The companies have provided this side-by-side analysis in their responses  
6       to our data requests; and, we believe this data could be provided with the filing as  
7       part of the documentation to support the budgeted savings. Given the  
8       combination of natural gas filings with electric Core filings, and the compressed  
9       time-frame allowed for review, discovery, analysis and preparation of testimony,  
10      we believe this is a necessary enhancement for energy efficiency filings going  
11      forward.

12   **Q.     Do you recommend a specific format that captures the lifetime savings data**  
13       **on a measure-by-measure basis for each program?**

14   A.    Yes. We recommend that the electric companies use a format similar to the  
15       format used in discovery responses. This format provides measure-by-measure  
16       savings data for each program including numbers of participants, savings per  
17       measure, realization rate, measure lifetime and lifetime savings for each measure.

18   **Proposed lifetime MMBtu Savings for Natural Gas Programs.**

19   **Q.     Please summarize your testimony pertaining to proposed lifetime MMBtu**  
20       **savings for natural gas programs.**

21   A.    The proposed lifetime MMBtu savings for the natural gas programs appear to be  
22       overly conservative, i.e. low. We believe that the proposed lifetime savings  
23       should be more reflective of historical performance.

**Q. Please explain why you believe the proposed lifetime MMBtu savings appears to be conservative, i.e. too low.**

A. With respect to NGRID-NH, for the most recent period, May 2009 through December 31, 2009, the Company outperformed its proposed goals. During this period, actual lifetime MMBtu savings were 81 percent higher. Table 5 summarizes the 2009 performance.

Table 5

2009 NGRID-NH Performance  
Utility Costs, Planned Savings and Cost per MMBtu Saved  
(Cost and Lifetime Savings are in Millions)

	2009 <u>Actual</u>	2009 <u>Proposal</u>	<u>% Variance</u>
Utility Cost	\$2.5	\$2.8	(12%)
Lifetime MMBtu Sav.	2.1	1.2	81%
Cost per MMBtu Saved	\$1.18	\$2.43	(51%)

Based on the above, NGRID-NH was able to outperform its proposed savings target. Although the company proposed 1.2 million MMBtu lifetime savings in 2009, it achieved 2.1 million MMBtu. In addition to outperforming the savings target, the company was able to achieve higher levels of savings at 51 percent less cost per MMBtu than proposed.

**Q. What was the performance for Unitil natural gas programs during the most recent period?**

A. With respect to Unitil, for the period May 2009 to December 2009, the Company was not required to file performance measurements. Instead, the Company will

file its performance measurements at the end of the 20-month period, May 1, 2009 to December 31, 2010.

**Q. What was the performance for Unitil natural gas programs for prior period?**

A. The prior period was the program year May 1, 2008 to April 30, 2009.

Unlike NGRID-NH, Unitil did not outperform its budget. Actual lifetime MMBtu savings were 48 percent lower. Table 6 summarizes Unitil's 2009 performance.

Table 6

2009 Unitil Performance  
Utility Costs, Planned Savings and Cost per MMBtu Saved  
(Cost and Lifetime Savings are in Millions)

	<u>2009</u> <u>Actual</u>	<u>2009</u> <u>Proposal</u>	<u>% Variance</u>
Utility Cost	\$0.6	\$0.8	(25%)
Lifetime MMBtu Sav.	206.9	402.6	(48%)
Cost per MMBtu Saved	\$2.92	\$1.95	50%

Although the company proposed 403 thousand MMBtu lifetime savings in 2009, it achieved only 207 thousand MMBtu. Also, the actual cost per MMBtu saved was 50 percent higher than the budgeted cost.

**Q. What are the proposed levels of savings for 2011 for both NGRID-NH and Unitil and do the levels of proposed savings reflect the favorable performance the companies achieved in 2009?**

A. On a combined basis, in 2011, NGRID-NH and Unitil are proposing lifetime MMBtu savings of 2.2 million MMBtu. Table 7 provides a comparison of proposed lifetime MMBtu savings for 2011 versus and 2009.



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
  
14  
15  
16  
17  
18  
19  
20  
21  
22  
  
23  
24  
25  
26  
27  
28  
29

Table 7  
  
Natural Gas Companies  
2011 Proposal v. 2009 Actual Results  
Utility Costs, Planned Savings and Cost per MMBtu Saved  
(Costs and Lifetime Savings are in Millions)

	<u>Proposed</u> <u>2011</u>	<u>Actual</u> <u>2009</u>	<u>Variance</u> <u>Percent</u>
Utility Cost	\$7.3	\$2.7	168%
Lifetime MMBtu Savings	2.2	1.8	23%
Cost per lifetime MMBtu	\$3.35	\$1.54	117%

Based on the combined amounts for both companies, utility costs are rising 168 percent; but, savings are not keeping pace, rising only 23 percent above 2009 actual results. Also, proposed costs per MMBtu saved are rising significantly above 2009 actual costs, increasing by 117 percent. With respect to utility cost increases, the overall increase is \$4.6 million, from \$2.7 million in 2009 to \$7.3 million in 2011. National Grid-NH accounts for \$4.2 million of the increase and Unitil accounts for the remaining \$400 thousand. The utility cost increases, by individual cost component, were still under review at the time this testimony was prepared.

**Q. Based on your review of the data, what have you concluded?**

A. Based on our review, we believe that proposed lifetime MMBtu savings for 2011 for the combined natural gas companies are very conservative (i.e. low). Based on the above, the natural gas companies, as a whole, have been able to outperform their proposed savings targets. We believe that the proposal for the combined companies should be more reflective of actual lifetime MMBtu savings performance achieved in 2009.

1   **Q.     Does your testimony provide a hypothetical calculation for lifetime MMBtu**  
2       **savings, similar to the one you provide for the electric companies?**

3   A.     Yes. Our testimony provides the same hypothetical calculation for lifetime  
4       MMBtu savings for the natural gas companies.

5   **Q.     What are the results of your hypothetical calculation for the natural gas**  
6       **companies?**

7   A.     Both companies are proposing 2.2 million lifetime MMBtu savings for 2011. Our  
8       hypothetical calculation results in lifetime savings of 5.1 million MMBtu.

9   **Q.     Does your testimony provide details supporting the development of the**  
10       **hypothetical for both natural gas companies?**

11  A.     Yes. The hypothetical is summarized for both companies on Schedule 2, with  
12       details broken out for each natural gas company in Schedules 2A and 2B.

13  **Q.     How did you calculate hypothetical savings for the natural gas companies?**

14  A.     We reviewed the proposed level of participation and the proposed level of lifetime  
15       savings. With respect to participation, we divide the actual 2009 utility cost per  
16       participant into the proposed 2011 utility cost to determine the hypothetical level  
17       of participation. With respect to lifetime kWh savings, we multiply actual 2009  
18       lifetime savings per participant by the hypothetical level of participation. Table 8  
19       summarizes the results of our hypothetical calculation.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
  
14  
15  
16  
  
17  
18  
  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

Table 8  
  
Natural Gas Companies  
Hypothetical vs. 2011 Proposal  
Utility Costs, Planned Savings and Cost per MMBtu Saved  
(Costs and Lifetime Savings are in Millions)

	<u>Actual</u> <u>2009</u>	<u>Proposed</u> <u>2011</u>	<u>Hypothetical</u> <u>2011</u>
Utility Cost	\$2.7	\$7.3	\$7.3
Lifetime MMBtu Savings	1.8	2.2	5.1
Cost per lifetime MMBtu saved	\$1.54	\$3.35	\$1.43

By incorporating actual 2009 performance, our hypothetical indicates lifetime savings of 5.1 million MMBtu, an increase of 2.9 million MMBtu, a 132 percent increase over the proposed level of savings.

**Q. Please explain why your hypothetical calculation incorporates actual 2009 data for participation and lifetime MMBtu savings?**

A. Similar to our hypothetical calculation for the electric companies, our calculation for the natural gas companies incorporates actual data on participation and lifetime MMBtu savings because actual data provides a good basis for predicting future performance. Our hypothetical calculation incorporates 2009 data because it represents the performance actually achieve by both companies in the most recent full year of program activity. Lifetime savings for NGRID-NH in our calculation are 132 percent higher than proposed. The increase in lifetime savings resulting from our hypothetical calculation is consistent with the Commission’s goal for the companies to achieve extraordinary savings.<sup>13</sup>

<sup>13</sup> Source: Docket DR 92-024, Order No. 20,457 and Docket DR 96-150, Order No. 23,574, page 19.

1     **Q.     Does your hypothetical calculation address both 2011 and 2012?**

2     A.     No, our hypothetical covers only year 2011. However, the same calculation could  
3           be easily performed for 2012. Year 2012 proposed utility costs would be  
4           substituted for 2011 utility costs. Then, the 2012 utility costs would be divided by  
5           actual 2009 utility cost per participant to calculate 2012 participation.

6     **Q.     Do you recommend that actual savings achievements should be reflected in**  
7           **performance incentive calculations?**

8     A.     Yes. We believe that actual achieved levels of savings should be reflected in  
9           budgeted savings estimates for purposes of calculating performance incentives.

10    **Q.     Do other states reflect actual savings achievements in their calculation of**  
11          **performance incentives?**

12    A.     Yes. As noted above for the electric utilities, the Public Service Board of the  
13          State of Vermont reflects actual achievements in their calculation of performance  
14          incentives.<sup>14</sup>

15    **Q.     Do you recommend any filing and reporting requirements pertaining to the**  
16          **development of lifetime MMBtu savings?**

17    A.     Yes. We recommend that energy efficiency filings and actual reports on savings  
18          contain a schedule showing the development of lifetime MMBtu savings. We  
19          recommend a schedule that shows the build-up of budget and actual savings on a  
20          consistent measure-by-measure basis including: number of participants, annual  
21          savings per participant, measure life and extended lifetime MMBtu savings.  
22          Actual savings data should be provided as part of the annual performance  
23          incentive filings in June of each year. Budgeted savings data should be reconciled

---

<sup>14</sup> Source: <http://psb.vermont.gov/docketsandprojects/eeu/rfpsandcontracts/2009-2011/eeucontract>.

1 to the most recent actual program year savings data showing a side-by-side  
2 comparison of the build-up of savings for actual vs. budget, including the number  
3 of participants, annual savings per participant, measure life and extended lifetime  
4 MMBtu savings. We recommend that this data be provided in a consistent format  
5 for both natural gas companies.

6 **Q. You recommend that the companies' filings and actual reports include**  
7 **savings data on a program-by-program basis and on a measure-by-measure**  
8 **basis. Have the natural gas companies provided this data in the past?**

9 A. Yes, as noted above, the natural gas companies have provided this data in prior  
10 filings. However, in the current filing, the natural gas companies have adopted  
11 the exhibit format that the electric companies have been providing. This provides  
12 consistency in reporting and we appreciate the companies' initiative in this regard.  
13 However, this approach can be further enhanced by providing savings data by  
14 program on a measure-by-measure basis.

15 **Q. What are the benefits of providing program data on a measure-by-measure**  
16 **basis?**

17 A. We believe that measure-by-measure savings data for actual vs. budgeted savings  
18 provides a necessary side-by-side comparison between budgeted and actual  
19 results. The companies have provided this side-by-side analysis in their responses  
20 to our data requests; but, we believe this data should be provided with the filing as  
21 part of the documentation to support the planned savings. Given the combination  
22 of natural gas filings with electric Core filings, and the compressed time-frame

1 allowed for review, discovery, analysis and preparation of testimony, we believe  
2 this is a necessary enhancement for energy efficiency filings going forward.

3 **Q. Do you recommend a specific format that captures the lifetime savings data**  
4 **on a measure-by-measure basis for each program?**

5 A. Yes. We recommend that the natural gas companies use a format similar to the  
6 format used in discovery responses. This format provides measure-by-measure  
7 savings data for each program including number of participants, savings per  
8 measure, measure lifetime and lifetime savings for each measure.

9 **Proposed design for the Home Performance with Energy Star® (HPwES)**  
10 **program for Core electric and natural gas programs,**

11 **Q. What is Home Performance with Energy Star® (HPwES)?**

12 A HPwES offers whole-house solutions to increasing the energy performance and  
13 comfort of existing homes with contractor participation and quality assurance  
14 while mitigating adverse environmental effects.<sup>15</sup> HPwES is a partnership  
15 between program sponsors and EnergyStar®. The goal of HPwES is to make  
16 cost-effective, energy-efficient improvements to homes.

17 **Q. What are the requirements for a program to be accepted by EnergyStar®?**

18 A. According to the sponsor guidelines, the design of every HPwES program could  
19 be different, but all programs must meet the requirements of the Partnership  
20 Agreement. As described in the agreement, the program consists of the following  
21 components:

---

<sup>15</sup>[http://www.EnergyStar.gov/ia/home\\_improvement/HPwES\\_Sponsor\\_Guide.pdf](http://www.EnergyStar.gov/ia/home_improvement/HPwES_Sponsor_Guide.pdf), Page 5

- 1        1. **Home Performance Assessment or “Test-in”.** An energy specialist trained in  
2        building science principles performs a Home Performance Assessment (HPA)  
3        which includes a visual and diagnostic energy inspection of the home using a  
4        form standardized for the program.
- 5        2. **Inspection Results and Recommended Improvements.** Improvements to  
6        the home are recommended, based on the initial inspection and homeowner  
7        interview. The homeowner will be provided a review of the findings and  
8        provided with a summary report including:
- 9            a. A summary of HPA findings,  
10          b. Improvement recommendations,  
11          c. An estimation of costs for the improvements, and  
12          d. An estimation of energy savings from implementing the  
13          recommendations.
- 14        3. **Installation of measures.** The program helps homeowners identify qualified  
15        contractors qualified to implement the HPA recommendations. This can  
16        either be the participating contractor providing the inspection and  
17        recommendations or other contractors qualified in home energy inspection,  
18        building science, and proper installation techniques. All installed measures  
19        will be in accordance with industry best practices.
- 20        4. **Post-Installation Tests or “Test-out”.** Documentation of improvements and  
21        diagnostic testing (test-out) will be used to verify the performance of installed  
22        measures as well as to meet health and safety standards. A summary of the  
23

1 final tests will be given to the homeowner. The results may be in the form of a  
2 “Summary Certificate”.

3 The program also has program Quality Assurance (QA) requirements for the  
4 participating contractors, and Program Data Reporting Requirements to  
5 EnergyStar®.

6 **Q. Please describe HPwES as it is proposed in the Core filing.**

7 A. Under the CORE residential program, the HPwES replaces the former Home  
8 Energy Services program (HES). The HES was a residential retrofit program that  
9 supported electric heat customers. For the 2009 program year, PSNH and UES  
10 proposed a fuel-neutral HES pilot program and the Commission approved the  
11 program limiting the participation level to 200 and 100 for PSNH and UES  
12 respectively (Order No 24,974). The pilot was extended with the same  
13 participation levels for the 2010 program year (Order No 25,062) to facilitate the  
14 program evaluation. Currently a 75% program incentive up to \$4,000 is offered  
15 for eligible measures, with a separate prescriptive incentive, which is not under  
16 the rebate cap, is available for heating and cooling systems.

17 **Q. What are the issues you want to discuss?**

18 A. Two main issues about HPwES will be discussed: 1) program design, and 2)  
19 rebate/customer incentives.

20 **Q. Describe the program design issues.**

21 A. The program basically covers two types of improvements – 1) weatherization and  
22 2) other improvements. Although under the HPwES partnership agreement, the  
23 home assessment is required, customers may choose the contractor to install the



recommended improvements. If a customer decides to install measures listed in the assessment, the agreement requires a post-installation test. Post-installation 'test out' is essential to measure the performance of the work done, particularly for weatherization. For other installations, health and safety are the main concern. Under the current program, incentives for weatherization are bundled with the installation of other measures. Staff believes that "bundling" is unnecessary, unclear and wasteful. The bundling of weatherization with other measures limits customer choice and flexibility and is not required under the partnership agreements for HPwES. The bundling makes the program unclear because the program does not provide any details regarding what measures are supported and what incentive levels apply to such measures. Under the current program design, to install a single measure (which was covered under the former Home Energy Services (HES) program), a customer has to go through the assessment process and post-installation test. To implement the suggested measures identified in the assessment report in multiple years, a customer has to go through the whole process every year. It is wasteful and unnecessary to perform these steps year after year. It is also inflexible for customers as it limits their ability to choose to implement one or more measures in one year, or to spread the cost over multiple years according to their financial situations. Not only that, if a customer qualifies for incentives and chooses to install a few measures which might put him/her out of the Home Heating Index (HHI) threshold, s/he cannot participate in the program next year to install the rest of the suggested measures.

1     **Q.     What do you suggest?**

2     A.     Staff recommends that measures other than weatherization measures should be  
3             separate programs, as was the case under the former HES program. Only  
4             weatherization should be covered by the proposed HPwES. All other measures  
5             should be provided under separate programs, as they were under the former HES  
6             program.

7             We believe the HPwES program design, which provides a home performance  
8             assessment (HPA) and weatherization, could be enhanced by introducing the  
9             customer to other stand-alone programs and encourage the customer to install  
10            measures under these other stand-alone programs; so, the customer would have  
11            the choice and flexibility to participate in either the HPwES program and/or other  
12            programs to implement the suggested measures under the other stand-alone  
13            program.

14    **Q.     Describe the issues related to customer rebates for measures installed.**

15    A.     The issues are as follows:

16            1.    Given a limited budget, it is reasonable to set the rebate level lower to  
17                    maximize participation, savings, and private investment (i.e. customer cost).

18                    The proposed rebate of 75% for all suggested measures up to a \$4,000 cap  
19                    combined with other incentives available under HPwES is too high compared  
20                    to similar programs in the region. For instance, it's Staff understanding that  
21                    the rebate cap in Massachusetts is \$2,000.

22            2.    The proposed rebate is based on cost, not savings. Every measure gets a  
23                    rebate of 75% of cost irrespective of energy savings.

1           3. There is no savings threshold required to receive a 75% rebate. Measures with  
2           identical costs – for example, one having a 5% savings and one with 50%  
3           savings – receive the same rebate as percentage of cost.

4   **Q.   What are the common rebate methods used for HPwES?**

5   A.   First of all, under the Department of Energy (DOE) model, rebates or incentives  
6           are not required under HPwES. The most common rebate methods used in  
7           HPwES around the country are as follows:

- 8           1. Rebates based on savings as percentage of household energy use,
- 9           2. Separate rebate level for assessment/audit, low cost weatherization and  
10           other measures,
- 11           3. No rebate, only low cost financing ,
- 12           4. Prescriptive rebates for measures, and
- 13           5. Rebates as bill discounts.

14   **Q.   Why do you believe the rebate level is too high?**

15   A.   We believe the rebate level for the proposed HPwES is too high for several  
16           reasons.

- 17           1. Some measures are provided free of charge which is not counted in the cap  
18           (i.e. air sealing and installed domestic hot water measures installed by the  
19           implementation contractor (IC) such as showerheads, aerators, pipe wrap  
20           and tank wraps.
- 21           2. The program has prescriptive rebates which are not under the cap.
- 22           3. It provides low cost financing. In some states, only financing is used as an  
23           incentive for HPwES.

- 1           4. One of the New Hampshire Gas utilities (National Grid NH) ran a  
2           successful weatherization program with a 50% incentive with a cap of  
3           \$1,500 until last year (the Company is now proposing a new higher  
4           incentive level just for the sake of uniformity).
- 5           5. “Additional Opportunities for Energy Efficiency in New  
6           Hampshire”<sup>16</sup> shows that with 50% rebate level, there is a lot of untapped  
7           achievable energy efficiency opportunity.

8   **Q.    What do you recommend about rebates?**

9   A.    Staff recommends separate prescriptive rebates for the home performance  
10       assessment, including low cost weatherization (air sealing, etc.), and other low  
11       cost measures. In addition, we recommend a separate full weatherization  
12       component under HPwES with incentives tied to energy savings as a percentage  
13       of overall household energy use.

14   **Other HPwES issues**

15   **Q.    Do you think HPwES is ready for full implementation?**

16   A.    No, in our view, HPwES is not ready for full implementation. Implementation is  
17       premature as a full evaluation or the program required pursuant to DE 09-170  
18       settlement agreement is not yet completed. We think that implementing a  
19       program without full evaluations of its pilot phase nullifies the benefit of such  
20       pilot program. As reflected in this testimony, there are several issues in the  
21       design of the HPwES program as well as its effectiveness that need to be  
22       assessed.

---

<sup>16</sup> <http://puc.nh.gov/Electric/GDS%20Report/GDS%20Final%20Report.htm>

1     **Q.     You mentioned earlier in your testimony that KEMA Inc. was engaged to**  
2           **conduct a preliminary report of the fuel neutral pilot. Does the KEMA**  
3           **report meet the evaluation requirement?**

4     A.     The KEMA report only looked at the data requirement and possible evaluation  
5           methodologies that could be used for a full evaluation study. In their initial pilot  
6           program proposal, the utilities did not provide any evaluation methods. The  
7           Commission directed that “[T]hey shall also file a complete description of the  
8           methodology and measures by which they will evaluate the performance of the  
9           HES Pilot.” (Order 24, 974). Subsequently, the Utilities submitted an outline of  
10          their evaluation plan without sufficient details. The KEMA report just fills the  
11          gap by providing a complete description of the methodology and measures by  
12          which the evaluation can be done. It does not substitute a replacement of a full  
13          evaluation requirement. Going forward, the parties need to have enough time to  
14          review the pilot program so that any pilot is fully developed before it is  
15          implemented.

16     **Proposed Performance Incentive Formula for Electric and Natural Gas Companies**

17     **Q.     The electric and natural gas companies are proposing to change the**  
18           **calculation of performance incentives. Please explain the proposed change.**

19     A.     The companies are proposing a change to the calculation of performance  
20           incentives to substitute actual expenditures in lieu of budgeted expenditures in the  
21           formula. The utilities state that “in order to ensure that the utilities have the  
22           ability to earn on any dollar collected for energy efficiency *only once (emphasis*

1        *added*), the Utilities are proposing to calculate the earned incentive, if any, using  
2        actual expenses as the basis for quantifying the target incentive amount.”<sup>17</sup>

3        **Q.     Does Staff agree that the use of actual expenditures will lessen the potential**  
4        **for any double counting of budget amounts for purposes of calculating**  
5        **performance incentives?**

6        A.     Yes. Double counting takes place when a utility’s budgeted dollars are not spent  
7        in the prior year and are carried forward into the following year’s budget and  
8        those same dollars are taken into account in calculating performance incentives.  
9        However, Staff believes the companies can avoid double counting by excluding  
10       unspent prior year budget amounts from the subsequent year budget amounts that  
11       are used to calculate performance incentives. This can be done by notifying the  
12       Commission of under spending that will not be counted in the subsequent year  
13       budgets. Recently, National Grid-NH notified the Commission that it would be  
14       carrying forward 2009 funds into 2010 and will not seek performance incentives  
15       on these funds.<sup>18</sup> The Company’s letter notified the Commission of its intentions;  
16       and, at the same time, allowed the company to earn a performance incentive on  
17       every dollar collected for energy efficiency only once.

18       **Q.     What is your recommendation on the companies’ proposed change to**  
19       **calculate performance incentives on actual vs. budget amounts?**

20       A.     At this time, we recommend that the Commission not approve the companies’  
21       proposal to use actual utility expenditures, in lieu of budget expenditures, for  
22       purposes of calculating performance incentives. Performance incentive amounts

---

<sup>17</sup> Source: Core Filing at page 16.

<sup>18</sup> Source: Docket DG 09-049, letter from Sara Knowlton, August 10, 2010.

1 are significant, in excess of \$2 million in 2009 (Ref. Table 1); and, we believe that  
2 while a working group was established and some discussions have been held  
3 among the parties on this issue, additional time needs to be set-aside to review all  
4 the relevant issues pertaining to such significant amounts.

5 Also, one of the Commission's performance metrics could be eliminated – i.e.  
6 delivering lifetime kWh savings at or below budget. For instance, as the  
7 calculation currently works, if actual utility expenditures were substituted for  
8 budgeted expenditures, and actual expenditures increased, the companies would  
9 receive an increase in performance incentives. In this filing, the companies are  
10 calculating performance incentives based on an estimate of 8 percent of utility  
11 expenditures. If actual utility expenditures greater than budgeted expenditures,  
12 the companies' performance incentives will increase by 8 percent of the increase.  
13 This is compounded by the fact that companies typically earn performance  
14 incentives in excess of 8 percent. For instance, in 2009, the electric and natural  
15 gas companies earned between 9 percent and 11.5 percent of budgeted utility  
16 expenditures.

17 Also, we believe the proposed change is premature. As previously mentioned, a  
18 working group was established in 2010 to examine, in a comprehensive way, all  
19 the issues affecting performance incentives, and the comprehensive examination  
20 has not been completed. A lot more work needs to be done to ensure that all the  
21 issues are fully explored and that performance incentives earned by the companies  
22 reflect extraordinary performance.<sup>19</sup> For instance, the natural gas companies are

---

<sup>19</sup> Reference Commission Order No. 20,457: "They (incentive payments) are provided only when extraordinary savings are actually achieved."

proposing to increase utility costs by 168 percent, while lifetime MMBtu savings are increasing by only 23 percent (ref. Table 7). The overall filing appears to be very conservative with respect to savings (i.e. low) and very conservative with respect to costs (i.e. high). The causes of utility cost increases, while savings are not keeping pace, needs to be better understood so as to not reward the companies with potentially higher performance incentives without corresponding increases in lifetime savings.

#### **Other Comments**

**Q. Do you have any other comments?**

**A.** Yes. We note that National Grid NH natural gas energy efficiency expenditures continues to ramp up spending.

Following is a summary of the actual and proposed energy efficiency expenditures for NGRID-NH energy efficiency programs for the 2006-2012 period:

Table 9

NGRID-NH Natural Gas Energy Efficiency Expenditures 2006-2012

2006-2007 Actual May 1 to April 30	\$1.5 million
2007-2008 Actual May 1 to April 30	\$1.4 million
2008-2009 Actual May 1 to April 30	\$2.1 million
2009 Transition Actual May 1 to Dec 30	\$2.5 million
2010 Budget Calendar Year	\$5.0 million
2011 Budget Calendar Year	\$6.3 million
2012 Budget Calendar Year	\$6.9 million

Clearly, National Grid NH expenditures are ramping up significantly. In 2012, National Grid NH proposes to increase energy efficiency expenditures to \$6.9 million. Compared to the current Commission approved budget for 2010 of \$5.0 million, the 2012 proposal represents a 38 percent increase. Compared to latest full year of actual spending from



1 May 1 2008 to April 30, 2009, National Grid NH's 2012 proposal represents a 229  
2 percent increase (i.e. \$6.9 million vs. \$2.1 million).

3 **Q. You noted above that the calendar year budget for 2010 is \$5.0 million. Is National**  
4 **Grid NH on track to spend this \$5.0 million amount?**

5 A. It's still too early to tell for sure because actual results, at the time of preparation of this  
6 testimony, are available for only January through May 2010.<sup>20</sup> There are seven months  
7 left in the 2010 program year; and, typically, the last three months of the year indicate  
8 relatively higher spending than in prior months.<sup>21</sup>

9 **Q. Are the programs proposed by NGRID-NH gas for 2011 and 2012 cost effective?**

10 A. Yes, based on the total resource cost test.<sup>22</sup> But, the cost effectiveness is declining based  
11 on 2009 actual TRC as compared to proposed 2011 and 2012 TRC. The following table  
12 summarizes the trend:

13 Table 10  
14 TRC Ratios for National Grid NH Programs<sup>23</sup>

	<u>2009 Act.</u>	<u>2011 Prop.</u>	<u>2012 Prop.</u>
16 Residential TRC	2.51	1.96	1.87
17 C & I TRC	3.15	1.47	1.51

18  
19  
20 The proposed TRC ratio for residential programs in 2012 is 25 percent lower than the  
21 actual 2009 TRC ratio (.64 / 2.51). The proposed TRC ratio for C&I programs in 2012 is  
22 52 percent lower than the actual 2009 TRC ratio (i.e. 1.64 / 3.51). The hypothetical  
23 calculations of planned lifetime savings, as noted earlier in our testimony, would improve  
24 the proposed TRC ratios. For instance, in 2011, our hypothetical calculation of lifetime

---

<sup>20</sup> Source: Data response Staff 1-12. Spending for the three-month period, March through May 2010 indicates an average monthly spending of approximately \$365 thousand per month. When annualized by multiplying by 12, the annualized amount is \$4.4 million.

<sup>21</sup> In October to December 2009, National Grid NH gas program expenditures were \$1.5 million, 60 percent of total actual expenditures for this 8-month transition year of May - December 2009.

<sup>22</sup> Total Resource Cost (TRC) is calculated by dividing total lifetime benefits from running energy efficiency programs (i.e. kWh's or MMBtu's saved x estimated avoided costs) by total resource costs (i.e. utility costs + performance incentives + customer costs). To illustrate, PSNH's TRC for residential programs in 2011 is between 1.42 (Energy Star Appliances) and 4.76 (Energy Star Homes).the

<sup>23</sup> Source: Performance Incentive filing for 2009 and DE 10-188 filing, page 36 for 2011 and 2012.

1 savings for Core electric Residential programs, for all electric companies combined, is  
2 291,812,139 kWh, an increase of 134,375,040 from the proposed level of savings of  
3 157,437,099 kWh. This represents an 85 percent increase (ref. Schedule 1). All other  
4 factors unchanged, this increase in kWh savings will increase the proposed Residential  
5 TRC by 85 percent, from 1.96 to 3.63.

6 With respect to C&I programs, our hypothetical calculation of lifetime savings, for all  
7 companies combined, is 563,103,113 kWh, an increase of 134,375,040 kWh from the  
8 proposed level of savings of 434,977,824. This represents a 29 percent increase (ref.  
9 Schedule 1). All other factors unchanged, this increase in savings will increase the  
10 proposed C&I TRC by 29 percent, from 1.47 to 1.90.

11 **Q. Are you recommending any changes to NGRID-NH's energy efficiency**  
12 **expenditures?**

13 A. No, we are not recommending any changes to the proposed energy efficiency  
14 expenditures in 2011 and 2012. However, we note that, when compared to our  
15 hypothetical calculations of lifetime MMBtu savings, as described earlier in our  
16 testimony, NGRID's estimates are very conservative (i.e. low). If NGRID-NH  
17 were to incorporate our hypothetical calculations, the programs would be more  
18 cost effective, generating significantly higher lifetime MMBtu savings.

19 **Q. Do you have any additional comments about performance incentives?**

20 A. Yes. During the course of discovery in this case, we noted that each company  
21 appears to be recording performance incentives (PI) differently. With respect to  
22 program year 2009 PI, National Grid recognizes a charge against energy  
23 efficiency funds in January 2010. NHEC recognizes the charge against energy  
24 efficiency funds in December 2010. PSNH recognizes a portion of the PI in

1 December 2009. UES recognizes one twelfth each month during 2009. Staff  
2 believes that there should be more uniformity in the recording of performance  
3 incentives and will work with the utilities to achieve this goal going forward.

4 **Q. Do you have any other comments?**

5 A. Yes. With respect to customer costs, PSNH is the only company that reports  
6 “Customer Costs” for the low income Home Energy Assistance program.<sup>24</sup> These  
7 costs pertain to Federal Weatherization Assistance Program, (WAP), ARRA or  
8 other collaboration funds in the Home Energy Assistance Program. The  
9 Company believes that these costs and related benefits should be reported as  
10 customer costs because these costs, along with the related benefits, are properly  
11 reflected in the total resource cost test.

12 We believe that customer costs should not be reported in the Home Energy  
13 Assistance program because low income HEA customers do not incur costs for  
14 the program. Also, these costs are not provided from Core funds via the SBC;  
15 rather, these funds are provided by WAP, ARRA or other funds that are used in  
16 collaboration with Core funds. All these separate funds have separate accounting  
17 and savings tracking systems. In addition, the savings from the WAP, ARRA and  
18 other funds are reported in other venues; hence, if the savings are also we reported  
19 in the Core program, the savings would be double counted.

---

<sup>24</sup> Source: Core Filing at page 105 and 110.

1    **Q.     Do you have any comments on the proposal submitted by the NH Energy**  
2           **Trust?**

3    A.     We have not performed any in-depth analysis of the NH Energy Trust proposal  
4           and prefer to reserve judgment until such time as we have an opportunity to fully  
5           review it.

6    **Q.     Do you have any other comments?**

7    A,     Yes. We note that for planning purposes, the electric utilities assumed revenues  
8           are based on 1.5 mills/kWh for January to June 2001, and 1.8 mills/kWh for July  
9           to December 2011. For January to December 2012, the electric utilities assumed  
10          revenues of 1.8 mills/kWh.

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

12   A.     Yes, it does, thank you.



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

3 Prior to joining the Commission I was employed by the General Electric  
4 Company (GE). While at GE, I graduated from the Corporate Financial  
5 Management Training Program and I held assignments in General Accounting,  
6 Government Accounting & Contracts and Financial Analysis.

### 7 **Educational and Professional Background**

#### 8 **Al-Azad Iqbal**

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

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

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