

THE STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DE 10-188

ELECTRIC AND GAS UTILITIES  
2011-2012 CORE Electric Energy Efficiency Programs and Natural Gas Energy Efficiency  
Programs

SECOND REVISED REBUTTAL TESTIMONY OF

ANGELA LI AND BRIAN KEARNEY ON BEHALF OF  
ENERGYNORTH NATURAL GAS, INC. D/B/A NATIONAL GRID NH

AND THOMAS PALMA, ESQ. ON BEHALF OF  
NORTHERN UTILITIES INC.

NOVEMBER 15, 2010  
REVISED NOVEMBER 19, 2010  
REVISED DECEMBER 16, 2010

DE 10-188  
# 14  
Panel 1



1 **Qualifications of Thomas Palma**

2 **Q. Please state your name, position, business address, and professional**  
3 **background for the record.**

4 A. My name is Thomas Palma, Esq. I am the Manager of Distributed Energy  
5 Resources, Planning and Design, for Unitil Service Corp. My business address is 325 West  
6 Road, Portsmouth, New Hampshire 03801.

7 I have been employed by Unitil Service Corp. since November, 2009. As part of my  
8 responsibilities, I perform work for Northern Utilities, Inc.'s ("Northern" or the "Company") and  
9 Unitil Energy Systems, Inc.'s ("Unitil" or "UES") energy efficiency programs. Previously I  
10 worked for the New Hampshire Electric Cooperative. During my career I have gained extensive  
11 knowledge of renewable energy systems and energy efficiency systems. I have created  
12 renewable energy programs and researched renewable energy and energy efficiency  
13 technologies. I have also managed projects regarding the above-mentioned topics. I hold a  
14 Bachelor of Science Degree in Mechanical Engineering from the University of Massachusetts,  
15 Amherst and a Juris Doctorate Degree from Suffolk University. I am also a member of the  
16 Massachusetts Bar.

17 I have also been active in leadership roles in various organizations including the  
18 New Hampshire Sustainable Energy Association, the Northeast Sustainable Energy Association,  
19 and the Cooperative Research Network.

20 **Q. Have you previously testified before the Commission?**

21 A. Yes. I testified on March 2, 2010 in Docket DE 09-137: Investment in and Rate  
22 Recovery of Distributed Energy Resources and on July 13, 2010 in Docket DG 09-053: Request  
23 to Modify Energy Efficiency Components.

1 **Purpose of Testimony**

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

3 A. The purpose of our rebuttal testimony is to respond to some issues that have been  
4 raised in the testimony submitted by James Cunningham and Al-Azad Iqbal on behalf of  
5 Commission Staff, the testimony submitted by Stephen Eckberg on behalf of the Office of  
6 Consumer Advocate (“OCA”), Eric Steltzer on behalf of the Office of Energy and Planning  
7 (“OEP”) and Jeremy Hill, as well as some issues that have arisen during the discovery phase of  
8 this proceeding.

9 The issues we will address in this testimony include:

- 10 I. Methodology used to determine annual savings (Northern and National Grid NH);  
11 II. Percentage of total budget allocated to the Home Energy Assistance (“HEA”) Program  
12 (Northern and National Grid NH);  
13 III. The Home Performance with Energy Star Program (Northern and National Grid NH);  
14 IV. The Home Performance with Energy Star Program (National Grid NH);  
15 V. Issuance of Requests for Proposals (Northern and National Grid NH);  
16 VI. Performance Incentive design (Northern and National Grid NH);  
17 VII. Application of the GDS Study to Northern’s Proposal (Northern);  
18 VIII. The Energy Star Homes Program (Northern); and  
19 IX. National Grid NH’s Residential Energy Efficiency Reporting (National Grid NH).  
20 X. Conclusion

21

22

1 **I. METHODOLOGY USED TO DETERMINE ANNUAL SAVINGS (Northern and**  
2 **National Grid NH)**

3 **Q. Please describe the methodology used by Staff in their direct testimony to**  
4 **calculate the 2011 gas companies' annual savings goal.**

5 A. Staff took the 2011 budget for each energy efficiency program and divided the  
6 budget by the 2009 actual dollars spent per participant to calculate the number of participants  
7 projected for the 2011 programs. Staff then multiplied this number of participants by the actual  
8 MMBtu savings per participant in 2009 to calculate a hypothetical MMBtu total savings goal for  
9 2011.

10 **Q. Do you have any concerns about application of this methodology?**

11 A. Yes. First, we support the view regarding Staff's methodology that is stated in the  
12 rebuttal testimony submitted by Angela Li, Carol Woods, Thomas R. Belair, and Thomas Palma  
13 (together, the "Electric Utilities Testimony") in this docket. The gas utilities performed an  
14 analysis of savings goals similar to the Electric Utilities which includes an analysis of trends in  
15 cost per MMBtu saved, increases in measure costs, changes in measure life, energy code  
16 changes, federal guidelines, and measure mix. We believe that this is the most accurate way to  
17 calculate savings goals associated with the gas energy efficiency programs.

18 Second, Staff's analysis does not take into account certain circumstances which occurred  
19 in 2009. For example, Northern was able to offer an incentive for a large multi-family project  
20 that had an unusually low dollar spent per MMBtu saved. This skewed the data, making the  
21 2009 actual dollar per participant spent lower than it would have been without this project, thus  
22 increasing the 2011 savings goal.

1 In addition, the Staff's calculation relies heavily on only one calendar year instead of  
2 normalizing the data across several years. Perhaps most importantly, Staff's analysis does not  
3 take into account any changes in the operations of the energy efficiency programs. It does not  
4 consider factors such as increased costs of materials and labor, gas prices, changes in ownership  
5 of the companies, and weather, all of which impact projected savings. For example, the  
6 MMBtus saved associated with a measure could decrease, but through no fault of the utilities.  
7 Staff's calculation also does not consider changes in the calculation of average MMBtu. As  
8 explained in the Electric Utilities Testimony, over the years, the utilities have adjusted the  
9 savings associated with particular measures, as more information has become available regarding  
10 actual savings. Instead, as described in the Electric Utilities Testimony, the decrease in  
11 estimated savings is due to data-based analysis of the work performed, which provides the most  
12 accurate analysis of what those savings will be.

13 **II. PERCENTAGE OF TOTAL BUDGET ALLOCATED TO THE HOME ENERGY**  
14 **ASSISTANCE ("HEA") PROGRAM (Northern and National Grid NH)**

15 **Q. What percentage of the total energy efficiency budget is set aside for the low**  
16 **income HEA program by Northern and National Grid?**

17 A. In his testimony, Mr. Eckberg raised questions about whether the gas utilities  
18 should raise the percentage of funds used for the low income programs to meet the percentages  
19 applied by the electric utilities. There has been no formula approved by the Commission  
20 regarding the percentage of budget for income eligible customers of the gas utilities. However,  
21 the gas utilities have worked to increase both the amount of funds available to the Home Energy  
22 Assistance program, and the percent of total funds available to that program.

1 Northern has raised its Income Eligible budget from \$81,427 in 2010 (twelve months) to  
2 \$110,000 in 2011 and \$130,000 in 2012 as filed. In 2011 and 2012, the percentage of Northern's  
3 energy efficiency funds dedicated to the HEA program is 13%.

4 National Grid NH has raised its Income Eligible budget from \$635,997 in 2010 (twelve  
5 months) to \$730,895 in 2011 and \$773,062 in 2012. In 2011 and 2012, the percentage of  
6 National Grid NH's energy efficiency funds dedicated to the HEA program is 11.5%.

7 The gas utilities look forward to continuing to work with the parties in this docket and in  
8 future dockets to find ways to serve the needs of New Hampshire's low income population in a  
9 way that is equitable to all ratepayers.

10 **Q. Reference OCA pages 24 – 27. Do you agree with the OCA's position for**  
11 **increased funding of the Income Eligible Program?**

12 A. The Companies do not support the position that a larger percentage of the energy  
13 efficiency dollars should be allocated to the gas low income budget in the interest of more  
14 closely aligning the electric and gas energy efficiency programs. The low income budget was  
15 developed from the bottom up meaning that the demand and need for low income gas customers  
16 is reviewed and a reasonable budget is developed. The proposed budget for National Grid NH in  
17 2011 is \$100,000 greater than the 2010 budget. The proposed budget for Unitil in 2011 is  
18 \$28,500 greater than the 2010 budget. The Companies believe these increases allow for deeper  
19 installation of energy efficiency measures within a customer's residence.

20 Further, gas low income funding should not be allocated at the same level as electric low  
21 income funding due to equity parity. All gas customers are electric customers. The low-income  
22 sector is funded proportionately by both residential and commercial and industrial customers  
23 based on usage. Therefore, the distribution between commercial & industrial versus residential

1 funding for electric customers closely matches the general population. Gas, however, is a chosen  
2 heating source and the distribution between residential and commercial & industrial customers  
3 may not correlate to the overall population. Therefore, by increasing funding to gas customers,  
4 there may be an inequitable burden placed on one sector versus the other which is not consistent  
5 with how low income funds have been derived in the past.

6 **Q. What is your conclusion regarding raising the total budget to accommodate**  
7 **an HEA budget at 14.5% of the total budget?**

8 A. The gas utilities believe that the amount of funds allocated to low income  
9 customers in the 2011-2012 budgets are sufficient to meet the existing need given the balancing  
10 of the equities at issue.

11 **III. THE HOME PERFORMANCE WITH ENERGY STAR PROGRAM (Northern**  
12 **and National Grid NH)**

13 **Q. Do you have a response to the Staff, OCA and OEP's testimony regarding**  
14 **the Home Performance with Energy Star ("HPWES") program?**

15 A. Yes. With respect to concerns regarding administration and design of the  
16 HPWES programs, we agree with the Electric Utilities Testimony, and support a decrease of the  
17 rebate levels from 75% to 50% in response to concerns that the rebate levels for the HPWES  
18 program were too high.

19 **IV. THE HOME PERFORMANCE WITH ENERGY STAR PROGRAM (National**  
20 **Grid NH)**

21 **Q. In its testimony, OEP states that there are inconsistencies in National Grid NH's**  
22 **HPwES program and that National Grid NH should change its program to align with the**  
23 **CORE utilities. What is the Company's view on that issue?**

1 A. National Grid agrees that there are differences in the structure of its HPwES program  
2 from other CORE utilities such as differing incentive levels to participating customers.  
3 Currently, National Grid's HPwES program rebate differs in regards to offering customers air  
4 sealing at no charge to the customer (average value \$600) during the audit. This has been viewed  
5 as a successful program design based on the amount of energy savings achieved along with the  
6 removal of an additional barrier to move forward on the weatherization component.

7 The reason for this is based primarily on the Company's desire to align its delivery model  
8 across all its service territories in order to achieve operational efficiencies. The Company would  
9 be willing to modify its proposed HPwES program for 2011-2012 by incorporating the Home  
10 Heating Index (HHI) as a gateway to participation, utilizing common statewide software for the  
11 single family program, implementing a \$100 audit fee and incorporating air sealing into the  
12 \$4,000 weatherization incentive. With these changes, National Grid's HPwES program would  
13 be consistent with those of the other CORE utilities.

14  
15 **Q. In his testimony, Mr. Hill recommends that the Commission "open the market"**  
16 **to all vendors. How does this recommendation comport with the way in which National**  
17 **Grid NH administer its audit services for its HPwES program?**

18 A. National Grid NH uses a lead vendor to ensure consistent and equitable program  
19 design to all of its customers receiving services for its HPwES program. This vendor provides  
20 services across all of National Grid's service territories (of which New Hampshire is the  
21 smallest), which ensures consistency in the provision of services to customers and creates  
22 economies of scale. By using one vendor, the Company is able to provide these services  
23 efficiently because it is able to minimize its costs to hire and oversee the work of the vendor. If

1 the Company were to “open the market” to all vendors as Mr. Hill suggests, it would incur  
2 increased costs to provide these services to customers.

3  
4 **V. ISSUANCE OF REQUESTS FOR PROPOSALS (“RFPs”) (Northern and National**  
5 **Grid NH)**

6 **Q. Do you have any response to the OCA’s testimony regarding issuance of**  
7 **RFPs?**

8 A. Yes. With respect to OCA’s recommendation that RFPs be issued publicly and be  
9 available on the utility’s website as well as through public notices, we agree with the Electric  
10 Utilities Testimony. As described in the Electric Utilities Testimony, the gas utilities will, to the  
11 extent possible, disseminate requests for shows of interest publicly.

12 **VI. PERFORMANCE INCENTIVE DESIGN (Northern and National Grid NH)**

13 **Q. Do you have any response to the Staff and OCA’s testimony regarding the**  
14 **design of the Performance Incentive?**

15 A. Yes. With respect to design of the performance incentive, and application of  
16 “actual” costs to the performance incentive calculation, we agree with the Electric Utilities  
17 Testimony. The Gas Utilities believe that relying upon actual costs, instead of “budgeted” costs  
18 to determine the Performance Incentive will assure that the performance incentive cannot be  
19 earned twice, for example on funds which are carried over from year-to-year.

20  
21  
22

1 VII. APPLICATION OF THE GDS STUDY TO NORTHERN'S PROPOSAL

2 (Northern)

3 Q. In its direct testimony, the Office of Consumer Advocate discusses the GDS  
4 Study and the application of the GDS study to Northern's proposal. How did Northern  
5 utilize the GDS study in its planning for its August 2, 2010 filing?

6 A. In data request Staff 2-47, which is attached to Mr. Eckberg's testimony, Northern  
7 stated that it did not use the GDS Study in its budgetary planning for 2011 and 2012. However,  
8 that does not mean that the GDS Study was not used in developing Northern Utilities' proposal  
9 for the 2011 and 2012 energy efficiency programs.

10 After experiencing great demand for energy efficiency services during the 2009 program  
11 year, Northern decided to request a significantly increased budget for 2011 over prior years'  
12 efficiency budgets, and is now projecting to increase its energy efficiency charge from ~~\$0.01850~~  
13 \$0.0180 per therm to an estimated \$0.03400 per therm.<sup>1</sup> This will allow for an increased budget  
14 and allows for the associated savings.

15 Northern has analyzed the GDS Study regarding installed energy efficiency costs for  
16 residential customers and determined that it would have to raise its residential energy efficiency  
17 charge to ~~\$0.06800~~ \$0.0409 per therm to meet the annual costs in the GDS Study under the  
18 "potentially obtainable" scenario, and \$0.0829 per therm to meet the annual costs under the  
19 "maximum achievable cost effective" scenario.<sup>2</sup> The table below shows that meeting this energy  
20 efficiency charge would require an increase (above the 2011 increase) to the average customer of  
21 \$5.12 ~~36.93~~ per year under the "potentially obtainable" scenario and \$36.45 under the

<sup>1</sup> The 2011 rates are based on Northern's recent LDAC filing.

<sup>2</sup> The installed costs associated with the percentage of customers on low income rates were deducted from the GDS scenarios.

1 “maximum achievable cost effective” scenario, and a total energy efficiency cost of \$30.45  
 2 per year under the “potentially obtainable” scenario and \$61.78 per year under the “maximum  
 3 achievable cost effective” scenario. Using the “maximum achievable cost effective” scenario,  
 4 This increase equates to a 267.9% 360.7% cumulative increase over the pre-November 1, 2010  
 5 energy efficiency cost.

6 **TABLE 1**

**Annual Basis – Potentially Obtainable (Residential)**

	<b>21,669</b>		<b># of 16,143,774</b>
<b># of Meters</b>	<b>20,664</b>	<b>Therms</b>	<b>15,395,106</b>

	<b>Required Increase</b>	<b>Usage therms</b>	<b>EE Charge Increase</b>	<b>EE Charge</b>	<b>EE Cost *</b>	<b>Annual Increase *</b>	<b>Percent Cumulative Increase *</b>
A.	-	745	-	\$0.01850 \$0.0180	\$13.78 \$13.41	-	-
B.	-	745	\$0.01600	\$0.03400	\$25.33	\$11.55 \$11.92	83.8% 88.9%
C.	\$550,000.00 \$105,857	745	\$0.03407 \$0.00688	\$0.06807 \$0.0409	\$50.71 \$30.45	\$36.93 \$5.12	267.9% 127.1%

	<b>Gas Rate</b>	<b>Annual Cost</b>	<b>Percent Cumulative Increase</b>
A.	\$1.46690 \$1.49190	\$1,092.84 \$1,111	-
B.	\$1.48240 \$1.50790	\$1,104.39 \$1,123	1.1%
C.	\$1.51647 \$1.51478	\$1,129.77 \$1,129	3.4% 1.5%

Where:

- A. Current natural gas rate with 2010 EE charge
- B. Current natural gas rate with the estimated 2011 EE charge
- C. Current natural gas rate with the estimated 2011 EE charge plus the GDS Study increase

**Annual Basis – Maximum Achievable Cost Effective  
 (Residential)**

<b><u># of Meters</u></b>	<b>20,664</b>	<b><u># of Therms</u></b>	<b>15,395,106</b>
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	<b><u>Required Increase</u></b>	<b><u>Usage therms</u></b>	<b><u>EE Charge Increase</u></b>	<b><u>EE Charge</u></b>	<b><u>EE Cost</u></b> *	<b><u>Annual Increase</u></b> *	<b><u>Cumulative Increase</u></b> *
A.	-	745	-	\$0.0180	\$13.41	-	-
B.	-	745	\$0.01600	\$0.0340	\$25.33	\$11.92	88.9%
C.	\$753,278	745	\$0.04893	\$0.0829	\$61.78	\$36.45	360.7%

	<b><u>Gas Rate</u></b>	<b><u>Annual Cost</u></b>	<b><u>Percent Increase</u></b>
A.	\$1.49190	\$1,111	-
B.	\$1.50790	\$1,123	1.1%
C.	\$1.55683	\$1,160	4.4%

**Where:**

- A. Current natural gas rate with 2010 EE charge
- B. Current natural gas rate with the estimated 2011 EE charge
- C. Current natural gas rate with the estimated 2011 EE charge plus the GDS Study increase

It is important, in determining the right level of spending for energy efficiency programs for a given company or set of customers, to avoid large increases at any one time. Ramping up rates too quickly could have negative impacts on customer bills, and relying on the GDS Study alone to set rates would ignore this concern.

However, in developing its programs, the Company *did* consider statements in the GDS Study that indicated non-electric Heating Equipment make up a large portion of potential savings

1 for Natural Gas customers in choosing proposed programs, and has proposed programs which  
2 seek to benefit from these savings.

3 For example, Tables 54 and 55 in the GDS Study list the Commercial Non-Electric  
4 Savings Potential by Measure for Existing Construction and New Construction, respectively.  
5 The Company offers prescriptive incentives for three of the top five opportunities listed by GDS.  
6 The Company offers incentives for most of the top 20 measures listed, provided they are cost-  
7 effective. For example, one opportunity listed in both tables is the 92% AFUE Furnace. This  
8 measure has been eliminated from the Company's prescriptive offering in 2011 since it is not  
9 cost-effective, however, the Company does offer incentives for 94% AFUE furnaces. Also, the  
10 Company does not incentivize normal maintenance, like filter replacement, which is listed as an  
11 opportunity in both tables. Another opportunity found in both tables is ozone commercial  
12 laundry systems. The company has incentivized this measure in the past, but has found  
13 conflicting savings information.

14 In conclusion, it is incorrect to conclude that the GDS Study was not used at all by the  
15 Company in developing its plan for the 2011-2012 year. While the Study was not relied upon to  
16 set the initial budget and rates for Northern customers, it was in fact, considered as described  
17 above.

18 **Q. If the GDS Study increase was implemented, what would be the disparity**  
19 **between energy efficiency charges for Northern residential customers versus Unitil**  
20 **residential customers?**

21 A. One consideration regarding the gas energy efficiency rate is the increased  
22 disparity between residential electric service ratepayers and gas customers. All customers use  
23 electricity – a far smaller number use natural gas. As the following table shows, under the

1 potentially obtainable scenario, the energy efficiency cost for Northern residential customers  
 2 would be \$18.59 ~~40.83~~ more or 156% ~~413%~~ more than the same average cost for the average  
 3 UES residential electric customer. -Under the rates which have been approved by the  
 4 Commission, there is already a discrepancy between the energy efficiency costs to electric  
 5 customers versus the costs to gas customers. Relying on the GDS Study alone will magnify this  
 6 discrepancy.

7 **TABLE 2**

8 **Annual Basis – Potentially Obtainable**

<b><u>As Filed</u></b>	<b><u>Usages Units</u></b>	<b><u>Rate</u></b>	<b><u>Annual Cost</u></b>	<b><u>EE Charge</u></b>	<b><u>Annual EE Cost</u></b>
UES Average Residential Customer (kWh)	6,589	<del>\$0.1680</del> \$0.1293	<del>\$1,107</del> \$852	<del>\$0.0015</del> \$0.0018 <sup>3</sup>	<del>\$9.88</del> \$11.86
NU Average Residential Customer (therms)	745	<del>\$1.5165</del> \$1.5178	<del>\$1,130</del> \$1,129	<del>\$0.0684</del> \$0.0409	<del>\$50.71</del> \$30.45
					<b><u>\$40.83</u></b>
<b><u>Delta</u></b>					<b><u>\$18.59</u></b>
<b><u>Gas Percent Higher than Electric</u></b>					<b><u>413%</u></b> <b><u>156%</u></b>

9  
 10 As the following table shows, under the maximum achievable cost effective scenario, the energy  
 11 efficiency cost for Northern residential customers would be \$49.92 more or 421% more than the  
 12 cost for the average UES residential electric customer.

<sup>3</sup> For calculation purposes, this revised testimony reflects the funding level of 1.8 mils, which will be in effect starting on July 1, 2011. Until July 1, 2011, the SBC charge will actually be 1.5 mils in accordance with the passage 2010 NH Laws Chapter 001 (SB 300). Using this higher number produces a conservative result meaning that the discrepancy between gas and electric rates is less than if a combination of 1.5 mils and 1.8 mils is used.

**Annual Basis – Maximum Achievable Cost Effective**

	<u>Usage</u>				<u>Annual</u>
	<u>Units</u>	<u>Rate</u>	<u>Annual</u>	<u>EE</u>	<u>EE Cost</u>
			<u>Cost</u>	<u>Charge</u>	
UES Average Customer	6,589	\$0.1293	\$852	\$0.0018 <sup>4</sup>	\$11.86
NU Average Customer	745	\$1.5568	\$1,160	\$0.0829	\$61.78
<u>Delta</u> <u>Gas Percent Higher than</u> <u>Electric</u>					\$49.92  421%

**VIII. THE ENERGY STAR HOMES PROGRAM (Northern)**

**Q. Why did Northern decide not to offer an Energy Star Homes program in its filing?**

A. Northern decided not to request approval for the Energy Star Homes program in 2011 and 2012 for the following reasons:

- (1) New home starts are slow due to the current economic climate.
- (2) All Northern customers can participate in their electric company's Energy Star Homes Program; thus, they can still be served if building a new home.
- (3) Northern has had an overwhelming response to its Residential High Efficiency Heating, Water Heating and Controls Program (Gas Networks) and its Home Performance with Energy Star Program in the 2009 program year and both programs had to be closed early. Northern projects the same overwhelming interest in 2011 and 2012

<sup>4</sup> For calculation purposes, this revised testimony reflects the funding level of 1.8 mils, which will be in effect starting on July 1, 2011. Until July 1, 2011, the SBC charge will actually be 1.5 mils in accordance with the passage 2010 NH Laws Chapter 001 (SB 300). Using this higher number produces a conservative result meaning that the discrepancy between gas and electric rates is less than if a combination of 1.5 mils and 1.8 mils is used.

1 and accordingly budgeted all its non-income eligible residential funding into these two  
2 programs.

3 **Q. If Northern implemented an Energy Star Homes program, as suggested by**  
4 **the Office of Consumer Advocate, what impact on rates and energy efficiency charges**  
5 **would this have on Northern customers?**

6 A. The Company believes that including an Energy Star program by reallocating  
7 funds from the residential Gas Networks program and the HPwES program would adversely  
8 affect those programs as these programs have been oversubscribed in the past. The only other  
9 option is to raise the energy efficiency charge. As discussed earlier, the Company is concerned  
10 about raising the energy efficiency charge too quickly for its customers especially during the  
11 difficult economic climate locally and nationally.

12 ~~In addition, deploying and funding energy efficiency programs for natural gas consumers,~~  
13 ~~while not correspondingly deploying and funding energy efficiency programs for oil heat~~  
14 ~~consumers, may result in two very negative consequences. First, doing so discriminates between~~  
15 ~~two sets of consumers by providing benefits to the natural gas consumers that are not offered to~~  
16 ~~equivalently situated oil heat consumers. Second, imposing a natural gas efficiency charge while~~  
17 ~~not simultaneously imposing an oil heat efficiency charge introduces a pricing distortion that will~~  
18 ~~tend, over time, to encourage oil consumption and discourage natural gas consumption.~~  
19 ~~Increasing the gas energy efficiency charge too quickly could have the effect of escalating such a~~  
20 ~~migration.~~

21 The 2010 energy efficiency charge was \$0.0180 per therm and it is estimated to be  
22 \$0.034 per therm in 2011, an 89% 84% increase. The Company believes \$75,000 would be  
23 sufficient to administer an Energy Star Homes program, if such a program were mandated. To

1 increase energy efficiency funding by \$75,000, the average customer's bill would have to  
 2 increase ~~\$15.01~~ \$15.55 per customer for 2011, for a total increase of ~~109%~~ 116%. The below  
 3 table outlines the pre-Nov. 1, 2010 energy efficiency cost, the energy efficiency cost as filed, and  
 4 the energy efficiency cost from the Energy Star Homes program.

5 **TABLE 3**

	<b>Required Increase</b>	<b>Usage therms</b>	<b>EE Charge Increase</b>	<b>EE Charge</b>	<b>EE Cost *</b>	<b>Annual Increase *</b>	<b>Percent Cumulative Increase *</b>
A.	-	745	-	<del>\$0.01850</del> <u>\$0.0180</u>	<del>\$13.78</del> <u>\$13.41</u>	-	-
B.	-	745	\$0.01600	\$0.03400	\$25.33	<del>\$11.55</del> <u>\$11.92</u>	<del>83.8%</del> <u>88.9%</u>
C.	\$75,000.00	745	<del>\$0.00465</del> <u>\$0.0049</u>	<del>\$0.03865</del> <u>\$0.0389</u>	<del>\$28.79</del> <u>\$28.96</u>	<del>\$15.01</del> <u>\$15.55</u>	<del>108.9%</del> <u>116%</u>

6

	<b>Gas Rate</b>	<b>Annual Cost</b>	<b>Percent Increase</b>
A.	<del>\$1.46690</del> <u>\$1.4919</u>	<del>\$1,092.84</del> <u>\$1,111</u>	-
B.	<del>\$1.48240</del> <u>1.5079</u>	<del>\$1,104.39</del> <u>\$1,123</u>	1.1%
C.	<del>\$1.48705</del> <u>\$1.5128</u>	<del>\$1,107.85</del> <u>\$1,127</u>	1.4%

Where:  
 A. Current natural gas rate with 2010 EE charge  
 B. Estimated 2011 EE charge  
 C. Estimated 2011 EE charge plus the Energy Star Homes increase

7

8 **Q. If Northern implemented an Energy Star Homes program, what would be**  
 9 **the disparity between energy efficiency charges for Northern customers versus Unitil**  
 10 **customers?**

11 A. The following table compares the average Northern customer to the average  
 12 ~~Unitil~~ UES customer if rates were raised for an Energy Star Homes program. The average

1 Northern customer would pay \$~~17.10~~ ~~18.91~~ more than the average ~~Unitil~~ UES customer, which  
 2 is ~~191~~ ~~144~~%-higher. Importantly, such an increase would raise the energy efficiency charge for  
 3 Northern Customers to nearly ~~2.5~~ 2.57% of their total bill, while the portion of a UES customer's  
 4 energy efficiency costs are only ~~0.9~~ 1.39%.

5 **TABLE 4**

	Usage		Annual		Annual	EE as
	Units	Rate	Cost	EE	EE	Percent
				Charge	Cost	of
						Bill
UES Average Customer	6,589	\$0.1680 <u>\$0.1293</u>	\$1,107 <u>\$852</u>	\$0.0015 <u>\$0.0018<sup>5</sup></u>	\$9.88 <u>\$11.86</u>	0.902% <u>1.39%</u>
NU Average Customer	745	\$1.4870 <u>\$1.5128</u>	\$1,108 <u>\$1,127</u>	\$0.0386 <u>\$0.0389</u>	\$28.79 <u>\$28.96</u>	2.598% <u>2.57%</u>
<b>Delta</b>					<b><u>\$18.91</u></b> <b><u>\$17.10</u></b>	
<b>Gas Percent Higher than Electric</b>					<b><u>191%</u></b> <b><u>144%</u></b>	

6

7 **Q. What is your recommendation regarding the Energy Star Homes program?**

8 A. Northern requests that it be permitted not to offer an Energy Star Homes program.  
 9 Again, because customers within its service territory will be eligible for Energy Star Homes via  
 10 their electric provider, this program will remain available.

11 **IX. NATIONAL GRID NH'S RESIDENTIAL ENERGY EFFICIENCY REPORTING**  
 12 **(National Grid NH)**

13 **Q. Reference OCA page 27. Can you explain National Grid NH's Residential**  
 14 **Energy Efficiency Reporting?**

<sup>5</sup> For calculation purposes, this revised testimony reflects the funding level of 1.8 mils, which will be in effect starting on July 1, 2011. Until July 1, 2011, the SBC charge will actually be 1.5 mils in accordance with the passage 2010 NH Laws Chapter 001 (SB 300). Using this higher number produces a conservative result meaning that the discrepancy between gas and electric rates is less than if a combination of 1.5 mils and 1.8 mils is used.

1           A.     National Grid NH's Energy Efficiency Program actual collections and expenses,  
2 as well as forecasted expenditures, are presented monthly to the Commission for the Residential  
3 Heating and Non-Heating classes, Commercial and Industrial classes, and combined residential  
4 and commercial and industrial classes. The September 2010 National Grid NH Monthly Energy  
5 Efficiency Report is presented in Schedule 1. In this report, the Company is projecting to be  
6 overspent at the end of 2010. As described in the response to Staff 1-12 (attached as Exhibit  
7 SRE-7 page 49), any under or overspending from one year will be resolved in the energy  
8 efficiency factor. OCA refers to the bottom up approach for gas energy efficiency collections on  
9 page 25 of its testimony. OCA pages 50-53, SRE-7 and SRE-8 present National Grid's electric  
10 energy efficiency fund balance which is calculated independently of the gas reporting.

11           **Q.     Do you agree with the OCA's concern about the reporting structure?**

12           A.     No. National Grid NH's reporting provides monthly information to the  
13 Commission about over and under spending. Any variation from the forecast is made in  
14 collections the following year.

15

16   **X.     CONCLUSION**

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

18           A.     Yes.