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Appendix A

Educational and Professional Background

James J. Cunningham, Jr.

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

I am a graduate of Bentley University, Waltham, Massachusetts, and I hold a Bachelor of Science-Accounting Degree. Prior to joining the Commission I was employed by the General Electric Company (GE). While at GE, I graduated from the Corporate Financial Management Training Program and held assignments in General Accounting, Government Accounting & Contracts and Financial Analysis.

In 1988, I joined the staff of the NHPUC. I have provided expert testimony pertaining to depreciation studies, actuarial studies for pension and retirement benefits, energy efficiency programs and other topics pertaining to NH electric, natural gas, water, and steam utilities. In 1995, I completed the NARUC Annual Regulatory Studies Program at Michigan State University, sponsored by the National Association of Regulatory Utility Commissioners. In 1998, I completed the Depreciation Studies Program, sponsored by the Society of Depreciation Professionals, Washington, D.C. I am a member of the Society of Depreciation Professionals (SDP). In 2008, I was promoted to my current position of Utility Analyst

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Educational and Professional Background

Al-Azad Iqbal

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

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

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

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Appendix B

Tables

Table 1 Ramp-up in Fuel-Neutral Programs

Table 2 Reduction in MWH Savings

Table 3 Percent Increase in Cost per MWH

Table 4 Calculation of Non-Electric HPwES Savings

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Table 1
% Fuel-Neutral Programs
Actual 2011 vs. Proposed 2013
(\$'s in millions)

	<u>Actual*</u> <u>2011</u>	<u>Proposed**</u> <u>2013</u>
Fuel-Neutral Programs:		
HPwES	\$ 2.0	\$ 2.3
Energy Star Homes	\$ 1.7	\$ 1.2
Energy Star Appliances	\$ 0	\$ 2.6
Home Energy Assistance	\$ 2.5	\$ 3.5
Large Business Energy Sol.	\$ 0	\$ 6.2
Small Business Energy Sol.	<u>\$ 0</u>	<u>\$ 4.6</u>
Total Fuel-Neutral Programs	<u>\$ 6.2</u>	<u>\$ 20.4</u>
Total SBC/FCM/RGGI Funds	<u>\$ 18.5</u>	<u>\$ 25.4</u>
% Fuel-Neutral Programs	<u>34%</u>	<u>80%</u>

* Actual is based on 4th Quarter 2011 Core Report.
** Proposed is based on 2013-2014 Core filing (p. 135).

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Table 2
% Reduction in Lifetime MWH Savings
Actual 2011 vs. Proposed 2013

	<u>Lifetime MWH Savings</u>
Actual 2011 Lifetime MWH Savings	754,902*
Proposed 2013 Lifetime MWH Savings	<u>615,234**</u>
Reduction in Lifetime MWH Savings	<u>(139,668)</u>
% Reduction in Lifetime MWH Savings	<u>(19%)</u>

* Actual is based on 4th Quarter 2011 Core Report.
** Proposed is based on 2013-2014 Core filing (p. 135).

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Table 3
% Increase in Cost per MWH
Actual 2011 vs. Proposed 2013

	<u>Cost per Lifetime MWH</u>
Actual 2011 Cost per Lifetime MWH	\$24.51 *
Proposed 2013 Cost per Lifetime MWH	<u>\$41.28</u> **
Increase in Cost per Lifetime MWH	<u>\$16.77</u>
% Increase in Cost per MWH	<u>68%</u>

* Actual: \$18.5 million (Table 1) divided by 754,902 MWH (Table 2).

** Proposed: \$25.4 million (Table 1) divided by 615,234 MWH (Table 2).

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Table 4
Calculation of Non-Electric HPwES Savings
For Purposes of HPwES Performance Incentives
Illustration based on PSNH-HPwES Program
Year 2013

	<u>MWH</u> <u>Lifetime</u> <u>Savings</u>
Non-Electric Savings	
MMBtu (Filing, p. 165)	259,963
Conversion Factor to kWhs	293
kWh Lifetime Savings	76,169,159
MWH (divide by 1,000)	<u>76,169</u>
Electric Savings	
kWh (Filing, page 165)	4,569,963
MWH (divide by 1,000)	<u>4,569</u>
Total Savings	<u>80,738</u>
Non-Electric Percentage (76,169/80,738)	<u>94%</u>

Note: This methodology mirrors the one proposed by the utilities for RGGI-related allocations – i.e., the percent RGGI costs to total RGGI/SBC costs are used to calculate the percent RGGI savings to total savings. Likewise, our methodology to calculate non-electric savings is the same, just in reverse – i.e., percent of non-electric MMBtu savings to total MMBtu/kWh savings is used to calculate the percent of non-electric MMBtu costs.

Appendix C

Listing of Reference Materials

- C-1 Staff 01-002
- C-2 Staff 01-003
- C-3 Staff 01-015
- C-4 Staff 01-001
- C-5 Staff 01-021 (revised)
- C-6 Staff 01-019
- C-7 Staff 01-024
- C-8 Staff 01-023
- C-9 TWH 01-001-004
- C-10 Staff 01-013
- C-11 Staff 01-014
- C-12 Staff 01-017

Public Service Company of New Hampshire
Docket No. DE 12-262

Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-002
Page 1 of 1

Witness: Thomas R. Belair
Request from: New Hampshire Public Utilities Commission Staff

Question:

Staff 1-2

Regarding page 6, with respect to the additional \$6.0 million of Regional Green House Gas Initiative (RGGI) funding, please provide the following for each utility for 2013 and 2014:

- a. Budgeted expenditures by program;
- b. Planned number of participants by program;
- c. Annual and lifetime kwh savings; and
- d. Annual and lifetime MMBtu savings.

Response:

In developing the 2013-2014 programs, the Utilities followed the Legislature's directive contained in HB 1490 that states "All remaining proceeds received by the state from the sale of allowances shall be allocated by the commission as an additional source of funding to electric distribution companies for core energy efficiency programs that are funded by SBC funds." The utilities plan to utilize the percentage of total core funds which come from RGGI to determine the benefits, number of participants, and savings due to the RGGI funding. For example, 21.8% of PSNH's CORE Programs are funded by RGGI. Therefore, 21.8% of the budgeted expenditures, participants, and savings are funded by RGGI.

(Joint Utility Response)

**Public Service Company of New Hampshire
Docket No. DE 12-262**

**Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-003
Page 1 of 1**

**Witness: Thomas Palma
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Staff 1-3

Regarding page 58, with the addition of RGGI funds, Unil Energy Systems is proposing a C&I Combined Heat and Power (CHP) Pilot measure.

- a. Explain how this project is different from a renewable energy project.
- b. What is the proposed budget for the C&I CHP Pilot?
- c. What are the estimated incremental costs of C&I CHP equipment and the estimated rebates that would be offered to prospective Pilot participants?
- d. What levels of participation and savings are expected from the CHP pilot?

Response:

- a. CHP systems require fuel such as diesel, wood pellets, or natural gas, the latter being the typical choice as it is the most cost effective. Typically they do not run on a renewable source of energy and thus would not be considered a renewable energy project.
- b. If a CH&P project moves forward in 2013 or 2014, it would come out of the Large or Small Business Program budget (depending on the customer's size) for up to \$100,000, including monitoring for six to twelve months.
- c. Typically, New Equipment or New Construction projects require a cost delta between the standard version of the equipment and the energy efficient version of the equipment. Because there is no "standard" CHP equipment but only highly efficient systems, there is no incremental delta. Please see OCA-02-5 Part D for a discussion regarding rebate amounts.
- d. UES anticipates that during the pilot phase, one customer will install a CHP system that is 30 kW to 75 kW in capacity. In addition to the producing thermal energy of 45,750 therms, a 65 kW unit that runs at or near full load for 6,000 hours annually will produce approximately 390,000 kWh in electricity. To produce this amount of thermal energy *and* electricity, a natural gas CHP system will consume approximately 52,260 therms of natural gas. Because the electricity is generated on-site as opposed to at a generating facility, the CHP system avoids the losses associated with transmission from the generator to the site, thus reducing the amount of natural gas needed to generate and deliver the same amount of electricity.

(UES Response)

Public Service Company of New Hampshire
Docket No. DE 12-262

Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-015
Page 1 of 7

Witness: Thomas Palma, Carol Woods
Request from: New Hampshire Public Utilities Commission Staff

Question:

Staff 1-15

Regarding page 99, 135, NHEC is proposing a "RGGI Revolving Loan Fund" for \$100,000. UES is proposing an "On Bill Financing" program. Describe these programs in more detail.

Response:

NHEC is proposing to add \$100,000 to the existing Residential Energy Efficiency Loan Program, which was established in 2010. Program details can be found in the Terms and Conditions of NHEC's Tariff, which is provided in Attachment 1.

UES plans to add this funding to their existing On Bill Financing Revolving Loan Fund. Program details can be found in UES' Tariff, which is provided in Attachment 2.

(NHEC and UES Response)

V. Energy Conservation

1. Renewable Energy Monitoring Fee

In accordance with NHPUC rule 2500, solar PV, wind and other renewable energy resource installations at member premises are eligible to be certified by the NHPUC as “Customer Sited Sources” for the creation of Renewable Energy Certificates. The NHPUC has approved NHEC as an “Independent Monitor” of such sources. As such, if a member chooses to have NHEC monitor its renewable resource, NHEC will charge the member a Monitoring Fee in accordance with the Schedule of Fees and Charges.

As monitor of electric generating equipment (i.e. solar PV or wind), NHEC will install a meter on the member’s meter socket to measure the electric generation of the member’s renewable system. NHEC will maintain and read this meter. NHEC will report the metered information to the NHPUC and through the NEPOOL Generation Information System as required by the NHPUC rules. NHEC will also provide an annual report to the member.

As monitor of a solar hot water heater that displaces electric hot water heater usage, NHEC will calculate the electricity displacement as required by the NHPUC 2500 rule. NHEC will report this displacement to the NHPUC and through the NEPOOL Generation Information System as required by the NHPUC rules. NHEC will also provide an annual report to the member.

2. Residential Energy Efficiency Loan Program

Residential members who participate in NHEC’s Home Performance with Energy Star Program are eligible to apply for interest-free loans to finance a portion of their out-of-pocket expenses for energy efficiency improvements made as part of that program. Repayment of these loans is made through a separate charge on the member’s monthly electric bill.

These interest-free loans are made from a revolving loan pool made possible by funds provided through a grant from the Greenhouse Gas Emissions Reduction Fund, which is administered by the NHPUC pursuant to RSA 123-O:23. The availability of member loans is limited by loan pool fund availability and may be offered on a first-come first-serve basis. Any uncollected loan balances will reduce future loan pool fund availability.

a. Eligibility

At its sole discretion, NHEC shall determine member eligibility for this program, subject to fund availability and satisfaction of the following criteria:

01. Loan eligibility is limited to active residential members subject to the following credit checks:
02. \$500 - \$2,000: Loan term under 2 years, no outside credit check, member must have excellent payment history with NHEC.

03. Over \$2,000, over 2 year term, NHEC will perform outside credit check. Member must sign credit release form.
04. Loans must be used for eligible projects (co-pay) under the NH Home Performance with ENERGY STAR® Program for weatherization and heating system replacements.
05. The maximum loan will be \$7,500, with a maximum term of seven years, calculated in accordance with the table below. There is no requirement or promise that the savings achieved during the repayment period through installation of the financed energy efficiency improvements will equal or exceed the loan.

Amount (Minimum loan of \$500)	Loan Repayment Period
\$500 up to \$2,000	2 years
> \$2,000 up to \$3,000	3 years
> \$3,000 up to \$4,000	4 years
> \$4,000 up to \$5,000	5 years
> \$5,000 up to \$6,000	6 years
> \$6,000 up to \$7,500	7 years

06. Program participants are required to sign a Residential Energy Efficiency Loan Member Agreement in the form provided by NHEC.

b. Member Agreement

Participating members will be required to execute a Residential Energy Efficiency Loan Member Agreement which will provide:

01. Loan repayment will be made in equal monthly payments on the member's electric bill.
02. Late payments will be subject to NHEC's Late Payment Fees, Returned Check Fees and Collection Fee.
03. The loan repayment obligation will remain with the member, not the site.
04. Any remaining balance of the loan must be paid by the member if member vacates the premise..
05. Member cannot be disconnected for non-payment on the loan.

RESIDENTIAL ENERGY EFFICIENCY LOAN PROGRAM

AVAILABILITY

Subject to the Terms and Conditions of the Tariff of which it is a part, this program shall allow Customers installing energy-efficiency measures under an energy efficiency program offered by the Company and approved by the Commission (“Participating Customers”) to borrow all or a portion of the Customer’s share of the installed cost of the energy-efficiency measures (“Customer Loan Amount”) through an additional charge on their monthly electric service bill issued by the Company. It is available to Participating Customers who meet the following qualifications:

1. The Customer must own the residential property where the energy-efficiency measures are installed; and
2. The Customer must have an active Delivery Service account with the Company for the property where the energy-efficiency measures are installed and receive retail delivery service Domestic Delivery Service Schedule D; and
3. The Customer must have good credit with the Company, which is defined as a Customer that has not received a disconnect notice from the Company during the twelve months preceding the Customer’s request for service under this program; and
4. The Customer Loan Amount must be greater than or equal to \$500 and less than or equal \$20,000 and must not exceed the Customer’s share of the installed cost of the energy-efficiency measures installed under the Company’s approved energy-efficiency program.

At its sole discretion, the Company shall determine eligibility for service under this program subject to the availability of program funds. Loan amounts greater than \$7,500 are dependent upon the availability of funds from the NH Community Development Finance Authority.

Any Customer taking service under this program must remain a Domestic Delivery Service Customer of the Company at the residential property where the energy-efficiency measures are installed. In the event the Customer does not remain a Domestic Delivery Service Customer of the Company at the residential property where the energy-efficiency measures are installed, any remaining charges under this program shall immediately become due and payable.

Issued in Compliance with Secretarial Letter in Docket No. DE 10-188 dated October 2, 2012

Issued: August 20, 2012
Effective: September 1, 2012

Issued by: Mark H. Collin
Treasurer

RESIDENTIAL ENERGY EFFICIENCY LOAN PROGRAM

CUSTOMER LOAN AGREEMENT

Participating Customers shall be required to execute a separate Customer Loan Agreement which will specify the fixed monthly charge and the terms of the payment period. A Customer can choose to pay the remaining balance owed to the Company at any time. A late payment charge as described in the Terms and Conditions for Domestic Delivery Service section of the Company's Tariff is applicable to the monthly charges rendered under this program. Participating Customers are not subject to disconnection of electric service for nonpayment of the charges under this program.

The Customer Loan Amount shall be paid to the Company by Participating Customer through a fixed monthly charge applied over a term of months as established in the Customer Loan Agreement. Participating Customers may specify the repayment term of the Customer Loan Amount subject to the maximum repayment term limitations as specified below:

<u>Customer Loan Amount</u>	<u>Maximum Repayment Term (in Months)</u>
Greater than or equal to \$500 and less than or equal to \$2,000	24
Greater than \$2,000 and less than or equal to \$3,000	36
Greater than \$3,000 and less than or equal to \$4,000	48
Greater than \$4,000 and less than or equal to \$5,000	60
Greater than \$5,000 and less than or equal to \$6,000	72
Greater than \$6,000 and less than or equal to \$7,500	84
Greater than \$7,500 and less than or equal to \$10,000	96
Greater than \$10,000 and less than or equal to \$15,000	108
Greater than \$15,000 and less than or equal to \$20,000	120

The revolving loan fund is funded through a grant from the NH Community Development Finance Authority through April 2013 or until funds are loaned out, whichever comes first. Afterwards, the revolving loan fund is funded through a grant from the Greenhouse Gas Emissions Reduction Fund created pursuant to RSA 125 O:23 as administered by the Commission.

Issued in Compliance with Secretarial Letter in Docket No. DE 10-188 dated October 2, 2012

Issued: August 20, 2012
Effective: September 1, 2012

Issued by: Mark H. Collin
Treasurer

NON-RESIDENTIAL ENERGY EFFICIENCY LOAN PROGRAM

AVAILABILITY

Subject to the Terms and Conditions of the Tariff of which it is a part, this program shall allow Customers installing energy-efficiency measures under an energy efficiency program offered by the Company and approved by the Commission (“Participating Customers”) to borrow all or a portion of the Customer’s share of the installed cost of the energy-efficiency measures (“Customer Loan Amount”) through an additional charge on their monthly electric service bill issued by the Company. It is available to Participating Customers who meet the following qualifications:

1. The Customer must own or lease the property where the energy-efficiency measures are installed; and
2. For leased property, the Repayment Term of the loan cannot exceed the months remaining on the lease. Lease option months will be considered remaining months; and
3. The Customer must have an active Delivery Service account with the Company for the property where the energy-efficiency measures are installed and receive retail delivery service General Delivery Service Schedule G; and
4. The Customer must have good credit with the Company, which is defined as a Customer that has not received a disconnect notice from the Company during the twelve months preceding the Customer’s request for service under this program; and
5. The Customer Loan Amount must be greater than or equal to \$500 and less than or equal to \$50,000 per project and must not exceed the Customer’s share of the installed cost of the energy-efficiency measures installed under the Company’s approved energy-efficiency program; and
6. A Customer is limited to \$150,000 per year in loan funds with no limit on the number of projects at the sole discretion of the Company based on program demand; and
7. If at any point there are no loan fund recipients or there have been no loan fund recipients in a given year, the Company may petition the Commission to allow a particular Customer to receive more than \$150,000 in loan funds in a given year.

At its sole discretion, the Company shall determine eligibility for service under this program subject to the availability of program funds.

Any Customer taking service under this program must remain a General Delivery Service Customer of the Company at the property where the energy-efficiency measures are installed. In the event the Customer does not remain a General Delivery Service Customer of the Company at the property where the energy-efficiency measures are installed, any remaining charges under this program shall immediately become due and payable.

Authorized by NHPUC Secretarial Letter in Case No DE 11-213 dated October 21, 2011

Issued: September 21, 2011
Effective: November 1, 2011

Issued by: Mark H. Collin
Treasurer

NON-RESIDENTIAL ENERGY EFFICIENCY LOAN PROGRAM (continued)

CUSTOMER LOAN AGREEMENT

Participating Customers shall be required to execute a separate Customer Loan Agreement for each project which will specify the fixed monthly charge and the terms of the payment period, however, the Company may consolidate loans for projects with the same Repayment Term. A Customer can choose to pay the remaining balance owed to the Company at any time. A late payment charge as described in the Terms and Conditions for General Delivery Service section of the Company's Tariff is applicable to the monthly charges rendered under this program.

Participating Customers are not subject to disconnection of electric service for nonpayment of the charges under this program.

The Customer Loan Amount shall be paid to the Company by Participating Customer through a fixed monthly charge applied over a term of months as established in the Customer Loan Agreement. Participating Customers may specify the repayment term of the Customer Loan Amount subject to the maximum repayment term limitations as specified below:

<u>Customer Loan Amount</u>	<u>Maximum Repayment Term (in Months)</u>
Greater than or equal to \$500 and less than or equal to \$2,000	24
Greater than \$2,000 and less than or equal to \$3,000	36
Greater than \$3,000 and less than or equal to \$4,000	48
Greater than \$4,000 and less than or equal to \$5,000	60
Greater than \$5,000 and less than or equal to \$6,000	72
Greater than \$6,000 and less than or equal to \$7,500	84
Greater than \$7,500 and less than or equal to \$50,000	120

The revolving loan fund is funded through a grant from the Greenhouse Gas Emissions Reduction Fund created pursuant to RSA 125-O:23 as administered by the Commission.

Authorized by NHPUC Secretarial Letter in Case No DE 11-213 dated October 21, 2011

Issued: September 21, 2011
Effective: November 1, 2011

Issued by: Mark H. Collin
Treasurer

Public Service Company of New Hampshire
Docket No. DE 12-262

Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-001
Page 1 of 1

Witness: Thomas R. Belair
Request from: New Hampshire Public Utilities Commission Staff

Question:
Staff 1-1
Regarding footnote 3 of pages 86, 101, 111, 121:

- a. Please describe the methodology that each electric company will use to calculate the actual expenses related to the non-electric portion of the HPwES program.
- b. Will the methodology be uniform across all electric utilities?

Response:

- a. The actual expenses related to the non-electric portion of the HPwES Program are calculated by summing the customer rebates associated with the non-electric measures installed.
- b. Yes, the 4 electric utilities will use this same methodology.

(Joint Utility Response)

Public Service Company of New Hampshire
Docket No. DE 12-262

Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-021-RV01
Page 1 of 2

Witness: Thomas Palma
Request from: New Hampshire Public Utilities Commission Staff

Question:

Staff 1-21 REVISED

Regarding page 129, the following table summarizes the Small Business Energy Solutions Program for Unittel (Gas) for 2011 actual and 2013 forecast:

	2011 Act.	2013 Fcst.	% Reduction
Life MMBtu Savings	141,965	80,979	
# of Participants	14	104	
MMBtu/Participant	10,140	779	(92%)

Note: Source of actual data is the 4th Quarter CORE Report. Provide an explanation of this 92% reduction.

Response:

The Gas Companies have consolidated programs such that there is a Small C&I and Large C&I program. The multi-family program has been eliminated for 2013/2014, however, the Companies will continue to offer services/rebates to multi-family customers. The gas usage of the building will determine which program would be appropriate – Small C&I or Large C&I.

Multi-family buildings with C&I master-metered gas accounts could have either individually metered Residential or master-metered C&I electric accounts. Individually metered residential gas accounts will be coordinated as Home Performance with Energy Star projects. The utilities will manage the projects such that cost-effective savings are captured.

The 2011 actuals reported in the 4th quarter report distinguished between Multi-Family (MF) savings and Small Business Energy Solutions (SBES) Program savings, but they have been combined in the table referenced in the question. The 2013 Plan does not anticipate any specific multi-family projects, however, equipment planned for in the SBES Program may be installed in MF projects.

The number of participants reported in the 4th quarter report reflect the number of projects rather than the quantity of pieces of equipment installed. In the 2013-14 Plan, "participants" refers to pieces of equipment to better capture the nature of the program. In order to compare apples to apples, the table below treats number of participants as pieces of equipment. There were a total of 89 measures installed in 2011 in the MF program and 21 measures installed through the SBES Program, including custom measures. The table also shows a measure to measure comparison of 2011 vs. 2013.

The final lifetime savings for these two 2011 programs, as filed with UES' Performance Incentive, was 103,602 MMBtu, whereas the forecast for 2013 projects is 80,979 MMBtu in lifetime savings. The percent change is lower in 2013 due primarily to lower per measure savings assumptions in 2013 vs. 2011.

Public Service Company of New Hampshire
Docket No. DE 12-262

Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-021-RV01
Page 2 of 2

	2011 Actual	2013 Forecast	% change
Lifetime MMBtu Savings	103,602	80,979	
# of Participants	110	104	
MMBtu/Participant	942	779	-17%

(UES Response)

**Public Service Company of New Hampshire
Docket No. DE 12-262**

**Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-019
Page 1 of 1**

**Witness: Eric Stanley
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Regarding page 94, the following table summarizes the lifetime MMBtu savings for C&I Programs for Liberty Utilities (Gas) for 2011 actual and 2013 forecast:

	<u>2011Act.</u>	<u>2013 Fcst.</u>	<u>% Reduction Life</u>
MMBtu Savings	670,547	661,662	
# of Participants	172	491	
MMBtu/Participant	<u>3,899</u>	<u>1,347</u>	(65%)

Note: Source of actual data is the 4th Quarter CORE Report. Provide an explanation of this 65% reduction.

Response:

Based on the current trending of 2012 C&I program activity, LU-Gas is projecting an increase in many of the prescriptive equipment measures that have lower annual MMBtu savings per unit factors, such as condensing boilers, commercial kitchen equipment, steam traps, spray valves and thermostats. Also, based on the trending of 2012 commercial projects and potential for 2013, LU-Gas is projecting average annual MMBtu project savings for Large Business custom new equipment installations to be lower. These two factors are the primary drivers in the 65% decline in program MMBtu savings per participant.

(Liberty Utilities Response)

**Public Service Company of New Hampshire
Docket No. DE 12-262**

**Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-024
Page 1 of 1**

**Witness: Eric Stanley
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Regarding page 84, the following table summarizes the lifetime kwh savings for the Large Business Energy Solutions Program for Liberty Utilities (Electric) for 2011 actual and 2013 forecast:

	<u>2011 Act.</u>	<u>2013 Fcst.</u>	<u>% Reduction</u>
Life kWh Savings	32,561,162	23,689,000	
# of Participants	20	40	
kWh/Participant	1,628,058	592,225	(64%)

Note: Source of actual data is the 4th Quarter CORE Report. Provide an explanation of this 64% reduction.

Response:

The Large Business Energy Solutions Program category in 2013 is structured to encompass both New Equipment & Construction projects as well as and Retrofit projects. The combination of the two project types in 2013 is helping to increase the number of program participants, but also lowers the per participant kWh savings based on the savings associated with both type of project categories. Also, based on the current LU-Electric retrofit projects completed to date in 2012, LU-Electric is projecting significantly lower-savings per project in 2013.

(Liberty Utilities Response)

Public Service Company of New Hampshire
Docket No. DE 12-262

Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-023
Page 1 of 1

Witness: Thomas R. Belair
Request from: New Hampshire Public Utilities Commission Staff

Question:

Staff 1-23

Regarding page 110, the following table summarizes the lifetime kWh savings for the Small Business Energy Solutions Program for PSNH for 2011 actual and 2013 forecast:

	2011 Act.	2013 Fcst.	% Reduction
Life kWh Savings	120,654,981	107,385,300	
# of Participants	562	1,610	
kWh/Participant	214,689	66,699	(69%)

Note: Source of actual data is the 4th Quarter CORE Report. Provide an explanation of this 69% reduction.

Response:

The traditional projects (New Equipment & Construction, Retrofit, and Direct Install) are fairly similar between 2011 Actual and 2013 Forecast. Please refer to page 169 of the filing, top 3 rows, for the information below:

	2011 Act	2013 Plan (New)	2013 Plan (Retrofit)	2013 Plan (Direct)
Lifetime kWh Savings	120,654,981	31,432,153	42,978,806	35,772,621
# of Participants	530	143.5	167.8	192.1
L kWh Savings/Participant	224,684	219,039	256,131	186,219

PSNH did make some adjustments to the 2013 plan based on recent 2012 actual results, and to reflect the lower New Equipment & Construction project savings due to NH's adoption of the IECC 2009 Energy Code and preliminary information from the draft ERS Baseline Study.

In an effort to expand outreach to a larger number of customers and to help raise awareness of the energy efficiency programs, PSNH also plans to use the NHSaves Lighting Catalog to reach more customers (748) who can benefit from purchasing high quality CFLs and LED bulbs from the catalog. The catalog sales planned include a much larger number of smaller projects in the 2013 plan which contributes to a lower per participant kWh saving value. Also, the additional HVAC incentives (358) are yielding mostly MMBTU savings which will reduce the overall per participant kWh savings.

(PSNH Response)

**Public Service Company of New Hampshire
Docket No. DE 12-262**

**Data Request TWH-01
Dated: 10/04/2012
Q-TWH-001
Page 1 of 1**

**Witness: Thomas R. Belair
Request from: The Way Home**

Question:

Page 73, 2013 HEA Quarterly Production Schedule

1. **Unitil Total Jobs.**
Is 37 jobs correct?
Should the number of jobs be 49?
See page 135, 2013 Goals. HEA. Unitil: 49
2. **Total Electric**
Is 806 jobs correct?
Should the number of jobs be 818?
See page 34, HEA Electric Budgets, Goals, Benefits: 818
See also page 135, 2013 HEA Total: 818
See also page 184, HEA Customers: 818
3. **Northern Utilities Total Jobs**
Is 35 jobs correct?
Should the number of jobs be 30?
See page 139, 2013 HEA. Northern: 30 jobs
4. **Total Gas**
Is 191 jobs correct?
Should the number of jobs be 186?
See page 34, 2013 HEA Gas Budgets, Goals, Benefits: 186
See also page 139, HEA Totals: 186
See also page 184, HEA Gas Customer Total: 186
5. **Cumulative Total**
Is 997 jobs correct?
Should the number of jobs be 1004?
See page 34, 2013 HEA. (818 Electric plus 186 Gas= 1004)

Response:

The number of jobs in Attachment A pages 73-74 are preliminary quantities. Several changes occurred after the electric and gas utilities completed their final goals and Benefit/Cost modeling of the CORE Programs. These changes were not subsequently included in Attachment A pages 73-74 (HEA Production Schedule).

The total number of jobs on the 2013 HEA Quarterly Production Schedule on page 73 will be updated to the following:

1. From 37 to 49 jobs for Unitil
2. From 806 to 818 jobs for Total Electric
3. From 35 to 30 jobs for Northern Utilities
4. From 191 to 186 jobs for Total Gas
5. From 997 to 1,004 jobs for the Cumulative Total

(Joint Utility Response)

**Public Service Company of New Hampshire
Docket No. DE 12-262**

**Data Request TWH-01
Dated: 10/04/2012
Q-TWH-002
Page 1 of 1**

**Witness: Thomas R. Belair
Request from: The Way Home**

Question:

Page 73, 2013 HEA Job Distribution By County and By Utility

1. LU Gas
Hillsborough County.
Is 6 jobs correct?
Should the number of jobs be 120?
2. LU Gas
Merrimack County.
Is 120 jobs correct?
Should the number of jobs be 6?
3. Grand Total
Is 997 jobs correct?
What is the correct Grand Total?
4. Is the total number of Unitil jobs (37) correct?
What is the correct number?
5. Is the total number of Northern jobs (35) correct?
What is the correct number?
6. Grand Total Column
Is the Grand Total column correct for Merrimack and Hillsborough counties?
What are the correct numbers for those counties?

Response:

The following updates will be made to the 2013 HEA Job Distribution By County and Utility table found on Page 73:

1. From 6 to 125 jobs for LU-Gas in Hillsborough County
2. From 120 to 10 jobs for LU-Gas in Merrimack County
3. From 997 to 1,004 jobs for the Program Grand Total
4. From 37 to 49 jobs for the Unitil Program Total
5. From 35 to 30 jobs for the Northern Utilities Program Total
6. From 278 to 397 jobs for the Hillsborough County Grand Total and from 217 to 114 jobs for the Merrimack County GrandTotal

(Joint Utility Response)

**Public Service Company of New Hampshire
Docket No. DE 12-262**

**Data Request TWH-01
Dated: 10/04/2012
Q-TWH-003
Page 1 of 1**

**Witness: Thomas R. Belair
Request from: The Way Home**

Question:

Page 74, 2014 HEA Job Distribution By County and Utility

1. LU Gas
Hillsborough County.
Is 8 jobs correct?
Should the number of jobs be 123?
2. LU Gas
Merrimack County.
Is 123 jobs correct?
Should the number of jobs be 8?
3. Grand Total
Is the Grand Total column correct for Hillsborough and Merrimack counties?
What are the correct numbers for these counties?
Is the Grand Total of 1 028 jobs correct?
4. Are there any other corrections to the 2014 HEA Job Distribution by County and by Utility?

Response:

The following updates will be made to the 2014 HEA Job Distribution By County and Utility table found on Page 74:

1. From 8 to 130 jobs for LU-Gas in Hillsborough County
2. From 123 to 13 jobs for LU-Gas in Merrimack County
3. From 285 to 405 jobs for the Hillsborough County Grand Total; From 224 to 120 jobs for the Merrimack County Grand Total; From 1,028 to 1,032 jobs for the Program Grand Total
4. LU-Electric: From 12 to 11 jobs in Cheshire County; From 59 to 58 jobs for the Program Total.

PSNH: From 81 to 78 jobs in Belknap County; From 48 to 45 jobs in Carroll County; From 267 to 265 jobs in Hillsborough County; From 68 to 65 jobs in Merrimack County; From 67 to 65 jobs in Rockingham County; From 670 to 657 jobs for the Program Grand Total.

Unitil: From 27 to 36 jobs in Merrimack County; From 16 to 25 jobs in Rockingham County; From 43 to 61 jobs for the Program Grand Total.

LU-Gas: From 27 to 20 jobs in Belknap County; From 6 to 1 job in Rockingham County.

(Joint Utility Response)

**Public Service Company of New Hampshire
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**Data Request TWH-01
Dated: 10/04/2012
Q-TWH-004
Page 1 of 1**

**Witness: Thomas R. Belair
Request from: The Way Home**

Question:

Page 74, 2014 HEA Quarterly Production Schedule

1. Unitil total
Is 43 jobs correct?
See page 137, Attachment H, page 2 of 2, 2014
Core Energy Efficiency Goals, HEA. Unitil: 61 jobs
2. Total Electric
Is 829 jobs correct?
See page 34, HEA 2014 Budgets, Goals, Benefits.
Electric Total: 833
See also page 137, Attachment H, 2014 Core Efficiency Goals, HEA
Total: 833
3. Cumulative Total
Is 1028 jobs correct?
Should the correct number be 1032?
See page 34, HEA Budgets, Goals, Benefits, 2014
(833 Electric plus 199 Gas= 1 032)

Response:

The total number of jobs on the 2014 HEA Quarterly Production Schedule on Page 74 will be updated to the following:

1. From 43 to 61 jobs for Unitil.
2. From 829 to 833 jobs for Total Electric.
3. From 1,028 to 1,032 jobs for the Cumulative Total.

(Joint Utility Response)

**Public Service Company of New Hampshire
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**Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-013
Page 1 of 1**

**Witness: Thomas R. Belair
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Staff 1-13

Regarding page 143, 156, 164, 173, with respect to the HPwES program, the electric companies are forecasting lifetime MMBtu savings per participant for year 2013 as follows:

	Liberty	NHEC	PSNH	UES
MMBtu Savings*	18,568	14,007	259,963	29,458
# of Participants **	33	63	480	37
MMBtu/ Participant	562	222	542	796

* Represents a summary of values in 2nd last col. from right, "Total Lifetime MMBtu Savings 2013 Plan".

** Represents a summary of values in 3rd col. for left, "Quantity 2013 Plan".

Please explain why the lifetime MMBtu savings per participant differs among Liberty, NHEC, PSNH and UES.

Response:

NHEC used an incorrect measure life for the fossil fuel measures when calculating the lifetime MMBtu savings for 2013 and 2014. When corrected, the approximate savings per participant is 550. NHEC will make these corrections and provide updated attachments reflecting the correct measure lives when a revision is filed with the Commission.

Unitil, along with the other utilities, adjusted the measure savings per the Cadmus Impact evaluation recommendations. Unitil's higher per participant savings reflects their 2012 savings per home, which contains the Cadmus adjustments. The higher savings reflect what is being done in the field and is also impacted by home size, home condition and measures installed in each utility's service area.

(Joint Utility Response)

**Public Service Company of New Hampshire
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**Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-014
Page 1 of 1**

**Witness: Thomas R. Belair
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Staff 1-14

Regarding pages 143, 156, 164 and 173, with respect to the HPwES program, each utility proposes significantly different levels of lifetime MMBtu savings per participant for oil heating homes for year 2013 as follows:

	Liberty	NHEC	PSNH	UES
MMBtu Savings*	15,815	10,475	221,439	18,692
# Oil Participants **	26	45	370	28
MMBtu/ Participant	608	232	598	668

* Represents a summary of values in 2nd last col. from right, "Total Lifetime MMBtu Savings 2013 Plan".

** Represents a summary of values in 3rd col. for left, "Quantity 2013 Plan".

Please explain why the lifetime Oil MMBtu savings per participant differs among Liberty, NHEC, PSNH and UES.

Response:

NHEC used an incorrect measure life for the fossil fuel measures when calculating the lifetime MMBtu savings for 2013 and 2014. When corrected, the approximate savings per participant for oil heated homes is 600. NHEC will make these corrections and provide updated attachments reflecting the correct measure lives when a revision is filed with the Commission.

Unitil, along with the other utilities, adjusted the measure savings per the Cadmus Impact evaluation recommendations. Unitil's higher per participant savings reflects their 2012 savings per home, which contains the Cadmus adjustments. The higher savings reflect what is being done in the field and is also impacted by home size, home condition and measures installed in each utility's service area.

(Joint Utility Response)

**Public Service Company of New Hampshire
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**Data Request STAFF-01
Dated: 10/31/2012
Q-STAFF-017
Page 1 of 1**

**Witness: Thomas R. Belair
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Regarding page 52, 111, 114, PSNH's CEP program has dropped below the 1.0 TRC approved by the Commission in both 2013 and 2014.

- a. What caused the program to drop below the approved 1.0 TRC?
- b. Does the company expect the program to remain below 1.0 TRC in future years?
- c. What improvements will the company implement to raise the TRC above 1.0?

Response:

- a. The benefit/cost ratio associated with the initial year of PSNH's Customer Engagement Pilot Program and included in the 2013 Plan is 0.70. This estimate is lower than the benefit/cost ratio included in the 2012 Update Plan due to the receipt of more detailed information from the vendors during the RFP process. Based on input from the vendors, there is a ramp up period before the personalized energy savings reports have an impact and result in energy savings. Energy savings typically result over time after customers have received multiple energy savings reports. Therefore, during the initial program year, the overall energy savings is typically lower, resulting in a lower benefit/cost ratio.
- b. Assuming the same pilot program design (scalable to the residential customer population) and the same number of participants (25,000), PSNH estimated a benefit/cost ratio of 0.97 during year 2 of the pilot program (2014 Plan). A higher benefit/cost ratio is estimated during year 2 based on lower overall costs and higher energy savings. PSNH will utilize the results of the pilot program to evaluate the cost effectiveness of using a behavioral-based energy efficiency program in New Hampshire, to evaluate the most effective messaging approach and to more accurately estimate the benefit/cost ratio in future years. PSNH does not expect the program benefit/cost ratio to remain below 1.0 in future years, but will base its future estimates on the actual results achieved in the pilot program.
- c. PSNH will base its future decisions on the results of the pilot program.