

**THE STATE OF NEW HAMPSHIRE
BEFORE THE PUBLIC UTILITIES COMMISSION**

**REBUTTAL TESTIMONY OF
ANGELA LI, CAROL WOODS,
THOMAS R. BELAIR and THOMAS PALMA**

2011-2012 NH CORE ENERGY EFFICIENCY PROGRAMS

Docket No. DE 10-188

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

2 A. My name is Angela Li. My business address is 40 Sylvan Road, Waltham,
3 Massachusetts. I am a Senior Analyst within the Policy and Evaluation group in Energy
4 Efficiency Products, which includes responsibility for National Grid’s energy efficiency
5 programs.

6
7 My name is Carol Woods. My business address is 579 Tenney Mountain Highway,
8 Plymouth, New Hampshire. I am the Energy Solutions Manager for the New Hampshire
9 Electric Cooperative (“NHEC”).

10
11 My name is Thomas R. Belair. My business address is PSNH Energy Park, 780 North
12 Commercial Street, Manchester, New Hampshire. I am the Energy Efficiency Services
13 supervisor for Public Service Company of New Hampshire (“PSNH”).

14
15 My name is Thomas Palma. My business address is 325 West Ave., Portsmouth, New
16 Hampshire. I am the Manager of Distributed Energy Resources, Planning and Design,
17 for Unital Service Corp. and perform work for its affiliate Unital Energy Services
18 (“UES”).

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

2 A Yes, we have each testified before the Commission.

3 Q. **What is the purpose of your testimony in this proceeding?**

4 A. The purpose of our testimony is to respond to the following issues raised in testimony by
5 Staff, OCA, OEP and Mr. Hill:

- 6 1. Changes to the Home Performance with Energy Star Program;
- 7 2. Continuation of the fuel neutral Home Performance with Energy Star Program
8 for PSNH and UES;
- 9 3. The utilities' position regarding the development of the 2011 plan;
- 10 4. A proposal to modify the performance incentive calculation to be based on actual
11 expenditures;
- 12 5. Comments on hiring weatherization contractors;
- 13 6. Comments on issuing RFPs;
- 14 7. Comments on additional reports as part of the Performance Incentive
15 Calculation; and
- 16 8. Combined heat and power ("CHP") C&I pilot measure – UES.

17

18 **1. Changes to the Home Performance with Energy Star Program;**

19

20 Q. **How is the Home Performance with Energy Star Program being implemented in
21 New Hampshire?**

22 A. The New Hampshire electric and gas utilities have recommended implementing the
23 Home Performance with Energy Star (HPwES) Program in their 2011 and 2012 plans.

1 All electric utilities will serve remaining electric heat customers, while gas utilities will
2 serve their gas heat customers. In 2011 and 2012, PSNH and UES are proposing to
3 continue serving customers on a fuel neutral basis. As part of this HPwES program,
4 federal program guidelines are followed, including quarterly ENERGY STAR reporting.
5 The utilities are doing this jointly to ensure statewide consistency with this program. The
6 program measures and process are a continuation of the program currently being
7 implemented and which has been certified by EPA as compatible with national standards.

8
9 **Q. In Staff's testimony (page 27) and OEP's testimony (page 5), they recommend**
10 **several changes to rebate levels and program design. What is the utilities' response**
11 **to these changes?**

12 A. Absent a full evaluation, the utilities recommend that no significant changes be made that
13 might negatively impact a program that is already very successful and has been certified
14 by EPA. However, the two issues the utilities would like to comment on are unbundling
15 of measures, and the rebate levels.

16 Staff recommended that we unbundle weatherization from other measures. It is our
17 position that bundling of services makes the most sense for the HPwES program. For
18 example, health and safety measures must be incorporated with weatherization measures.
19 This supports the "do-no-harm" principal which is a hallmark of home performance
20 contracting, according to the Home Performance with Energy Star sponsor guide. It is
21 also an important component of the Building Performance Institute's certification
22 process. Both the previous HES Program and the newer HPwES incorporated health and
23 safety measures as part of the programs.

24 The assessment for potential health and safety risks is an important element of the
25 delivery of the HPwES program. Although a number of health and safety risks may be

1 identified during the assessment process and brought to the attention of the homeowner,
2 only risks that are related to moisture, ventilation and combustion safety are incorporated
3 in the project work scopes and receive limited incentives. These risks must be addressed
4 as part of the energy efficiency improvements being implemented. They include:

- 5 1. Providing minimum ventilation rates to ensure acceptable indoor air quality as
6 determined by the American Society of Heating, Refrigeration, and Air
7 Conditioning Engineers (ASHRAE) standard 62.2-2007 and BPI Technical
8 Standards. This requirement is included whenever air sealing is included in the
9 workscope.
- 10 2. Ensuring that all interior moisture generating devices are properly terminated to
11 the exterior of the home.
- 12 3. Ensuring the existence of at least one carbon monoxide detector when
13 combustion appliances are present.
- 14 4. Using vapor barriers on dirt basement floors and crawlspaces when insulating
15 these areas.

16 First and foremost, the program seeks to “do no harm” when delivering energy efficiency
17 improvements to program participants. These limited measures are critical to ensuring
18 the utilities uphold this commitment. As a result, the utilities recommend that health and
19 safety measures continue to be bundled as part of the delivery of weatherization measures
20 in this program to ensure the integrity of our work and the safety of our customers.

21
22 With respect to the rebate levels, both Commission Staff and the Office of Energy &
23 Planning recommended changes in the rebate levels. Staff recommended having the
24 weatherization incentives tied to energy savings as a percentage of overall household
25 energy use. OEP recommended either reducing the rebate to 50% up to \$4,000 or

1 creating tiered rebates to be based off of project energy savings. Changing the rebate to
2 be a percentage of savings adds complexity to this program from both an administrative
3 perspective and more importantly from a customer perspective. The utilities believe this
4 change should be reviewed and considered as part of the upcoming process and impact
5 evaluation and not instituted in 2011. However, changing the rebate level from 75% to
6 50% is a much simpler change to implement and to explain to customers. As stated in
7 OEP's testimony, this change would also allow the utilities to serve more customers and
8 thereby keep the program open longer.

9

10 **Q: Please summarize your position regarding any recommended changes regarding the**
11 **HPwES program.**

12 Based on Staff and OEP's testimony and subsequent discussions, the utilities recommend
13 that the rebate level be adjusted from 75% to 50%, and that the utilities continue to
14 bundle these limited but important health and safety measures with the weatherization
15 measures.

16

1 **2. Continuation of the fuel neutral Home Performance with Energy Star Program for**
2 **PSNH and UES:**

3
4 **Q. In Staff's testimony (pages 27-28), OCA's testimony (pages 11-12) and OEP's**
5 **testimony (pages 5-8), they comment on and make recommendations about the**
6 **continuation of the fuel neutral HPwES Program. Please explain whether anything**
7 **has been done to evaluate the fuel neutral Home Performance with Energy Star**
8 **program?**

9 **A.** First of all, during 2010 an interim evaluation was performed to review the program and
10 make sure we were collecting the data required for a full process and impact evaluation.
11 Working with the Staff and Settling Parties, the Electric Utilities hired an evaluation firm,
12 KEMA, to provide an early assessment of the New Hampshire Home Performance with
13 Energy Star Program (HPwES) as operated by PSNH and UES. KEMA met with
14 program administrators to understand the program and tracking systems in place,
15 reviewed a participant survey and provided refinement recommendations, reviewed
16 program tracking data and performed an assessment of its adequacy in meeting impact
17 evaluation needs down stream, interviewed contractors of the program including a
18 QA/QC vendor, and finally drafted and presented a memo of findings and
19 recommendations.

20
21 **Q. What have the utilities learned regarding the timing of an impact evaluation?**

22 **A.** As part of its findings, KEMA noted that an evaluation performed in 2010 would need to
23 utilize approaches more consistent with a 1) "meta study" or an 2) "on-site analysis with
24 re-engineering work", while a study performed at the end of 2010 or early 2011 could be
25 done with a 3) "billing analysis" approach. With the understanding that there are 3 types

1 of evaluation approaches that can be undertaken, the utilities took another look at the
2 third approach – a billing analysis. In reviewing the number of homes weatherized prior
3 to the 2009-2010 heating season, we counted 17 homes that were completely weatherized
4 by October 1, 2009 (PSNH: 8, UES: 9). We thought this total of completed
5 weatherization jobs would not be a sufficient sample size for a billing analysis comparing
6 before and after fuel usage. We then looked at how many homes were complete by
7 October 1, 2010 and counted 467 homes that were completely weatherized (PSNH: 400,
8 UES: 67) prior to the 2010-2011 heating season. Based on this information, PSNH and
9 UES believe that an evaluation that includes the larger sample of weatherized homes
10 provides the most thorough options for a comprehensive evaluation.

11

12 **Q. Based on this preliminary evaluation and the additional analysis, what do the**
13 **utilities recommend?**

14 A. In order to complete a thoughtful impact evaluation, the utilities believe that initiating an
15 evaluation in the first quarter of 2011 will provide evaluators with more options,
16 including a larger number of weatherized homes going through a full heating season, to
17 evaluate the results of this program. The utilities recommend that work be done in
18 December 2010 and January 2011 to complete an RFP that can be sent out in the first
19 quarter of 2011 so that an evaluation contractor can be hired to do preliminary work in
20 preparation for this evaluation (such as customer surveys, review of auditing software,
21 review of measure savings, in depth interview of contractors, etc.). We expect that if a
22 billing analysis is done on fossil fuels, the evaluator can gather useful information on
23 stored fuels (oil, LP, kerosene, wood) as of April 1, 2011.

24

25 **Q. Do the utilities have any other recommendations for the HPwES pilot program?**

1 A. Yes. At this time, UES and PSNH propose continuing with this pilot program. At stated
2 earlier, NHEC and National Grid will continue installing electric measures and serving
3 remaining electric heat customers. Northern Utilities and National Grid – NH will
4 continue serving their gas customers. For 2011, PSNH proposed serving 495 fuel neutral
5 homes and UES proposed serving 65 fuel neutral homes. If the recommendation to
6 reduce the rebate level from 75% to 50% is accepted, PSNH and UES recommend that
7 they be allowed to increase the number of customers served to reflect this rebate change.
8 Further, if these program changes are made, it is hoped that the conversion rate from
9 audit to full weatherization (i.e. the number of audits that result in measures being
10 installed) does not go down substantially. We are cautiously optimistic that the
11 availability of RGGI on-bill financing will help move customers from audit to
12 implementation, but the CORE utilities will closely monitor the conversion rate and the
13 reasons why customers do not implement recommendations.

14

15 **3. The utilities' position regarding the development of the 2011 plan.**

16

17 **Q. In Staff's testimony (pages 7- 11), they assert that actual achieved levels of savings**
18 **should be reflected in budgeted savings estimates. What is the utilities' response to**
19 **Staff's position?**

20 A. The utilities did incorporate prior year actual results in their planning process for the
21 2011-2012 programs, but that was not the only data point taken into consideration. As
22 part of the discovery process, the utilities provided specific examples comparing 2009
23 results with the 2011 plan, and included a list of the planning assumptions that were
24 actually taken into consideration for the 2011 goals. Please see the attached data
25 responses which reflect many of the planning assumptions used by the utilities.

1 In addition to actual prior year results, the utilities looked at:

- 2 1. increases in the cost per kilowatt hour saved trend over time (see page 3 of the
3 2011-2012 CORE Energy Efficiency filing showing the “Lifetime kWh Cost
4 (Cents)” going from 1.70 in 2003 to 2.32 in 2009.);
- 5 2. increases in measure costs (specifically increases in labor and/or material costs);
- 6 3. addition of newer, higher cost energy efficiency measures (e.g., LED lights cost
7 more than CFLs or other replacement fixtures);
- 8 4. reductions in measure life (e.g., for 2011 plan, clothes washer measure life
9 reduced from 14 to 11 years, CFL measure life reduced from 8 to 5 years);
- 10 5. changes in energy code that affect energy savings in the new construction
11 programs and make some measures more expensive;
- 12 6. changes to federal program guidelines which make certain measures more
13 expensive or reduce savings (for example, adoption of the new version of the
14 Energy Star Homes program will increase the cost to certify homes while
15 reducing energy savings due to a higher baseline); and
- 16 7. changes in measure mix (for example, in the residential programs, the utilities are
17 weatherizing fewer electrically heated homes while weatherizing more fuel
18 neutral homes, which results in less kWh savings per home. For C&I programs,
19 performing fewer lighting measures and more cooling and process measures
20 results in lower annual savings).

21

1 **Q. Are there any other differences between 2009 actual results and 2011 plan?**

2 **A.** Yes. In addition to the factors that go into planning, actual budget changes between
3 planned and actual need to be taken into consideration. For example, if one of the budget
4 categories was going to be underspent in 2009, (e.g., evaluation), the utilities attempted to
5 spend these funds on additional customer projects. Doing this increases the energy
6 savings in that year for that program.

7

8 **Q. Please summarize your response to Staff's recommendations, which rely solely on**
9 **2009 actual data to determine lifetime kWh savings goals.**

10 **A.** The utilities do take into consideration actual results from prior years, but there are many
11 other data points and factors that also have to be taken into consideration when
12 developing a plan for a future year. The current 2011-2012 plan reflects all of these
13 factors, along with changes in the program budgets and budget activities. The utilities
14 believe that the projected savings in the 2011-2012 are the most appropriate benchmark
15 because they are based on all the factors described above, which incorporate the use of
16 the most recent data available instead of relying solely on data from one year. The
17 utilities recommend that the Lifetime kWh Savings goals remain as filed.

18

1 **4. A proposal to modify the performance incentive calculation to include actual**
2 **expenditures.**

3

4 **Q. In Staff’s testimony (pages 28-31), they make recommendations regarding the**
5 **performance incentive calculation. What is the utilities’ response to these**
6 **recommendations?**

7 A. During 2010, the parties met on several occasions to examine the Performance Incentive.
8 One proposal that arose from this effort was to use “Actual Expenditures” rather than
9 “Budget” in the performance incentive calculation for the actual results. Although no
10 formal agreement for recommendations came out of that group, there was a general
11 understanding that utilities would file their proposal for the performance incentive for the
12 2011 – 2012 program years using actual versus budgeted amounts. The utilities believe
13 that moving to the Actual approach will solve a real problem in that there will no longer
14 be the chance for the performance incentive to be earned twice on certain funds such as
15 any carryover amount. This approach will result in a more consistent approach to the
16 performance incentive calculation by all the electric utilities and be consistent with the
17 way the natural gas utilities calculate their incentive. In summary, the utilities hope to
18 resolve this issue in the context of settlement discussions and present a consensus
19 resolution to this matter.

20

21 **5. Comments on hiring weatherization contractors.**

22

23 **Q. In Mr. Hill’s testimony (page 5), he makes recommendations regarding the utilities**
24 **hiring of contractors. What is the utilities’ response to this recommendation?**

1 A. Mr. Hill's testimony recommended that any qualified contractor should be allowed to
2 participate in the program. The utilities response is that any qualified contractor may be
3 allowed to participate in response to an RFP but that does not guarantee that every
4 contractor will be hired to perform program services. Given the current economic
5 conditions, the CORE utilities would prefer to hire well-qualified New Hampshire
6 contractors whenever possible and strive to do so. For the Home Performance with
7 Energy Star ("HPwES") program, each additional contractor increases the amount of
8 oversight which must be performed by the utilities and increases administrative costs.
9 The utilities have made an effort to utilize as many qualified contractors as possible. For
10 instance, some utilities hired additional contractors to participate in an effort to have
11 service providers located geographically around the state. Others satisfied their
12 requirements with their existing contractors. If the HPwES program becomes fully open
13 for fuel neutral weatherization, the utilities will issue a competitive bid process to select
14 contractors.

15
16 In addition, the utilities do provide opportunities for contractors not participating in the
17 HPwES Program. For example, non-electric heat customers in NHEC and National
18 Grid's service territory do not qualify for the HPwES Program. Similarly, PSNH and
19 UES, customers failing to meet the minimum requirements of the home heating index
20 cannot participate in the fuel neutral program. The utilities routinely refer these
21 customers to the www.repa-nh.org web site in order to connect them with interested
22 auditors and weatherization contractors.

23
24 With respect to letting the market set prices for services and solutions, the utilities have
25 been working with weatherization service providers for years to implement

1 weatherization programs that balance pricing in a way that is fair to the contractors while
2 also being fair to participating customers, and which meet the CORE program goals.
3 Pricing for the energy efficiency measures implemented in the HPwES program (and for
4 HEA measures) is consistent statewide. Both contractors and customers have been
5 receptive to this. In contrast, we have been told by some customers that they have
6 requested energy audits outside of this program only to have a salesperson aggressively
7 attempt to upsell windows – a measure that is typically not cost-effective. Customers
8 participating in the HPwES program have come to trust the auditors hired by the utilities
9 in this program, and appreciate the thorough audits, fair price and thoughtful
10 recommendations being presented.

11
12 **Q. Please summarize your testimony regarding utilities hiring contractors.**

13 In summary the utilities want to hire as many qualified New Hampshire contractors as
14 possible; however, that interest must be tempered with the economic realities of the
15 program. Program oversight and quality assurance costs are directly related to the
16 number of contractors and with limited budgets, the utilities must balance the number of
17 contractors and the administrative costs of the program. The utilities believe the current
18 program strikes the appropriate balance.

19
20 **6. Comments on issuing of RFPs.**

21
22 **Q. In OCA's testimony (page 29), they make a recommendation regarding the utilities
23 issuance of RFPs. What is the utilities' response to this recommendation?**

24 **A.** OCA recommended that all RFPs related to the CORE programs be issued through public
25 RFPs. The utilities are supportive of an open process, but do not believe that a public

1 RFP is the best approach for all contracted work. In cases where an RFP is appropriate,
2 the utilities propose to identify potential contractors via a show of interest through
3 various means such as on their websites or by contacting prospective contractors.
4 The utilities believe public solicitations of interest will allow them to pre-qualify bidders
5 who can perform the services (e.g. state-wide or regionally) and have a good track record
6 of performance. The utilities' bid process is formalized and detailed. Prequalifying
7 bidders would allow all potential participants to demonstrate their capabilities but would
8 not swamp the bidding and review processes and not increase the costs associated with
9 issuing RFPs publicly.

10

11 Also, it should be noted that some RFPs are initiated regionally such as NEEP's State
12 Program Working Group evaluations and CEE's Energy Star Awareness survey. The
13 utilities do not control the dissemination of these regional RFPs. For some projects, the
14 utilities believe it is more appropriate to sole source smaller projects if such action can be
15 justified and authorized by their Purchasing Departments.

16

17 **Q. Please summarize your testimony regarding issuance of RFPs.**

18 The utilities are supportive of an open process, but believe that a Show of Interest is the
19 preferred approach to publicly solicit bidders. Furthermore, there are circumstances
20 where the utilities need the flexibility to issue contracts with out a public RFP process.
21 Examples include regional RFPs and smaller contracts which cannot justify the
22 administrative overheads associated with a public RFP process.

23

1 **7. Comments on additional reports as part of the Performance Incentive Calculation.**

2

3 **Q. Please summarize Staff's Testimony on the additional report.**

4 A. Commission Staff recommends that energy efficiency filings and actual reports on
5 savings contain a schedule showing the development of lifetime kWh savings. Staff
6 recommended a side-by-side comparison that shows the build-up of budget and actual
7 savings on a consistent measure-by-measure basis including: number of participants,
8 annual savings per participant, realization rate, measure life and extended lifetime kWh
9 savings.

10 **Q. Please present the utilities' position regarding these additional reports.**

11 A. Although the utilities understand Staff's request for this additional information the
12 utilities are concerned about the increased administrative cost caused by additional
13 reporting requirements. The utilities are willing to work with Staff to develop reporting
14 requirements that are not unduly burdensome and provide Staff with meaningful data
15 with which to measure lifetime kWh savings.

16

1 **8. Combined heat and power C&I pilot measure – UES**

2

3 **Q. In its testimony, the OEP encourages the Commission to consider including a CHP**
4 **C&I rebate for UES customers. Why did UES decide not to file for a CHP C&I**
5 **pilot measure in the CORE filing?**

6 **A.** UES considered, but did not include a (CHP) pilot C&I measure for the 2011-2012
7 programs. During the summer of 2010, the Company solicited input regarding
8 developing a CHP program and/or pilot. Prior to the filing for the 2011-12 CORE
9 programs, the Company received input from Staff, the Office of Consumer Advocate, and
10 the Office of Energy and Planning. This feedback was helpful, but also demonstrated
11 that several parties had concerns about such a pilot, namely, there are still other purely
12 energy efficient measures to be implemented in UES' service territory and RSA 374:G
13 covers CHP projects.

14

15 The Office of Energy and Planning has since raised this issue in its testimony, in support
16 of establishing a pilot CHP program. CHP creates efficiency savings by significantly
17 decreasing the amount of electric energy required and at the same time decreasing the
18 amount of thermal energy required. These systems can also be used for demand response
19 and as backup generators. CHP systems are fueled by natural gas, diesel, wood, wood
20 pellets, etc. depending on the manufacturers' equipment. The Company would like to
21 revisit a proposed pilot C&I measure at a later date.

22

23

24 **Q. Does this complete your testimony?**

25 **A.** Yes, it does.