

RGGI Expansion of the CORE NH Energy Efficiency Programs

“RE-CORE”

August 19, 2009 – May 31, 2010
Third Quarter Report



New Hampshire Electric Utilities

Granite State Electric Company d/b/a National Grid
New Hampshire Electric Cooperative, Inc.
Public Service Company of New Hampshire
Unitil Energy Systems, Inc.



GREENHOUSE GAS EMISSIONS REDUCTION FUND

Quarterly Progress Report

August 19, 2009 – May 31, 2010

1. **Program Title:** RGGI Expansion of the CORE Energy Efficiency Programs (RE-CORE).
These programs have resulted in an annual Carbon Dioxide reduction of 7,995 metric tons through May 31, 2010, or a lifetime reduction of 105,767 metric tons.

2. **Program Type:** RE-CORE is a portfolio of programs for residential, low-income, and business customers. It is based on the CORE Energy Efficiency Programs approved by the New Hampshire Public Utilities Commission in Docket DE 08-120.
 - a. **Energy Star Lighting Program:** Increase spending for energy efficient residential lighting.
 - ✓ Achievement to Date: 70% Complete based on budget.
 - ✓ NGRID, NHEC, Unutil used these funds to provide rebates for customers purchasing 58,121 Energy Star lighting products.

 - b. **Energy Star Appliance / Products Program:** Develop the Energy Star Appliance Program to include a turn in/recycle component for room air conditioners and second refrigerators and freezers.
 - ✓ Achievement to Date: 44% Complete based on budget, which includes rebates for clothes washers and room air conditioners in addition to the following two programs. (Note: As of May 31, 2010, JACO, the vendor for the refrigerator/freezer pick-up had not yet submitted a bill for the nearly 700 units they recycled.)
 - ✓ Room AC Turn-in Event: As of May 31, 2010, 100 room air conditioners have been turned in. Because of the lower than expected results, the program which initially ran from May and June was extended beyond June to allow more turn-ins. A copy of the ad is included on page 7.
 - ✓ Refrigerator/Freezer Pickup/Recycling: The initial schedule for the refrigerator/freezer pickup/recycling program was between April 15th and June 30th. NH residents called 877.545.4113 to arrange to have their old, working refrigerators/freezers picked up free of charge to be recycled by JACO. Customers received a \$30 incentive check for participating. Expected savings of up to \$200 in energy costs are expected for customers removing older working refrigerators or freezers. As a value added service, JACO also picked up any older operating room air conditioners at the same time they picked up any refrigerators/freezers. The program was very successful and was closed on May 14, 2010, just a month from the start of the program. The total number of working appliances picked up for recycling was 693, of which 17 were room air conditioners. Based on the feedback, customers were pleased with the sign-up process, scheduling, verification of scheduled appointment prior to arrivals and the pick-up process itself. Program administrators went out with the recyclers on several trips. A wait list has been started for customers still calling in.

 - c. **Energy Star Homes (Green Building Certification):** Expand the Energy Star Homes Program to give homeowners the option of participating in the National Green Building Program developed by the National Association of Home Builders. The Program will certify homes as meeting the nationally recognized ANSI approved National Green Building Standard. The utilities are using the RGGI



funds to pay for the NH Build Green verification while also providing a \$500 builder incentive for their efforts to do both the site work required and the paperwork.

- ✓ Achievement to Date: 22% Complete based on budget.
- ✓ 2 homes have been registered and have earned the Build Green certification.
- ✓ An additional 32 homes are currently in process of being Build Green Certified.
- ✓ A total of 34 new affordable housing units were also certified as Energy Star Homes.

d. **HES (Fuel Neutral Single and Multi-Family Program):** fuel neutral home weatherization services through the Home Energy Solutions Program for multi-family facilities larger than 4 units and some single family homes.

- ✓ Achievement to Date: 27% Complete based on budget.
- ✓ There have been 290 single and multi-family homes completed to date.
- ✓ Currently there are 113 single and multi-family units in various stages of completion, working toward a September 30th deadline.

e. **Home Energy Assistance Program:** Increase spending for weatherization in low income homes.

- ✓ Achievement to Date: 101% Complete based on budget.
- ✓ 540 low income homes or apartment units were completed by May 31, 2010.
- ✓ 140 additional low income homes are in various stages of weatherization.
- ✓ Note: National Grid installed approximately \$63k in electric measures as part of the Home Energy Solutions Program. After identifying that the buildings were serving low income customers, the funds were adjusted to be paid out of the Home Energy Assistance Program, and a request was made to transfer \$63k from HES to HEA to properly account for these projects as serving income eligible customers. (If not allowed to transfer funds to HEA, National Grid will return the rebates dollars back to HES and assign these as HES projects.)

f. **Small Business Retrofit:** Increase spending for small business energy efficiency projects.

- ✓ Achievement to Date: 85% Complete based on budget.
- ✓ 74 projects were completed by May 31, 2010.

g. **Large Business Retrofit Program:** Increase spending in the Large Business Retrofit Program to support retro-commissioning projects as well as traditional energy saving measures.

- ✓ Achievement to Date: 70% Complete based on budget.
- ✓ 84 projects were completed by May 31, 2010.

h. **New Equipment & Construction Program:** Increase spending for new equipment and new construction energy efficiency projects.

- ✓ Achievement to Date: 68% Complete based on budget.
- ✓ 20 projects were completed by May 31, 2010.

i. **Education:** Advance educational training efforts in three areas: Energy Code Training, Building Operator Certification (BOC), and BPI Building Analyst training course development. A fourth will be a new self-directed educational component that will allow customers to better understand their energy usage by borrowing a watt-monitor from their local library.



- ✓ Achievement to Date: 36% Complete based on budget.
- ✓ **Energy Code Training:** A total of four energy code training sessions have been held in December 2009 and January 2010. Task Complete.
 - Residential Energy Code Training
 - (a) Dec 2: in Manchester 42 attendees
 - (b) Jan 14: in Plymouth 62 attendees
 - Commercial Energy Code Training
 - (a) Jan 12: in Plymouth 28 attendees
 - (b) Jan 13, in Manchester 63 attendees
- ✓ **BOC Level 2:** In lieu of a BOC Level 2 class, a separate Commercial Energy Auditing Class will be held in the Fall but may be partially funded by the CORE Energy Efficiency Programs. The utilities are also scheduling a Retro-commissioning class, funded by RGGI, for the Aug-Sep timeframe.
- ✓ **Watt Meter:** In December, 760 kill-a-watt monitors were distributed from the State Library to 235 city and town libraries around the state as part of a “Cut the Carbon” kit. This program is designed for any resident of the state to be able check out a meter free of charge to help them identify how much power is consumed by a variety of appliances used in their home or office. This meter allows people to discover the true cost to operate a toaster, TV, computer, microwave, dehumidifier, primary or secondary refrigerator, etc. The meter also identifies any “phantom loads” or items that consume power even while turned off yet still energized. Armed with the information provided through the use of this meter, homeowners and renters should be able to identify opportunities to save energy and reduce electric bills. This program benefits all residential sectors including low income.

Update: In addition to the public library, 19 small communities that do not have public libraries are being served by the NH State Library. Based on a 30% reporting rate, as of May 31, 2010, 820 Cut the Carbon kits have been checked out by NH residents. If the same loan rate were used statewide, that would represent over 2,500 meters being used statewide. The NH State Library is polling all libraries in July to get an updated number of meters being used in the state.
- ✓ A survey of librarians came back with 79 responses and many favorable comments. A new survey will be going out in July. A customer survey goes out with each meter, and to date 94 surveys have been returned, with the following comments based on a 1-5 scoring method, with 5 being the best.
 - overall impression 4.4
 - ease of use of the watt meter 4.3
 - convenience 4.9
 - When asked if they found ways to save energy after using these meters, customers have said:
 - “Turning off the computer, printer and speaker saves approx \$9 per month. Turning off certain chargers (battery) saves another \$3.00 per month.”
 - “Amazed how much toaster & coffee maker use while in use!”
 - “Decided to use power surge strips on some appliances.”
 - “Put computer in standby manually - don't wait for it to shut down.”



- "I'll be turning off computer and surge protector that powers TV/DVD when not in use."
- "Turning off computer and all accessories may save about \$10.00 per month. TV savings are less but would not want to always have to reset clock and recording times."
- "We put green dots on items with cords that could be left plugged in due to no phantom load - red on those that should be unplugged."

Newspaper ads promoting these meters were run in April to coincide with the 40th Anniversary of Earth Day 2010. A copy of the ad is shown on page 7.

- j. **PSNH Energy Rewards RFP:** Increase spending for new RFP energy efficiency projects.
 - ✓ Achievement to Date: 1% Complete based on budget.
 - ✓ Training held in December, customer projects submitted in January and February. Selection of the projects was completed in March and customers have been granted \$300,000 through RFP Agreements to do the energy efficiency work.
 - ✓ Expect all projects to be completed by September 30, 2010.
 - k. **PSNH Energy Star Homes – Geothermal:** Increase spending for new geothermal homes.
 - ✓ Achievement to Date: 94% Complete based on budget.
 - ✓ Eight projects were completed through May 31, 2010.
 - l. **RGGI Funds for Revolving Loan Fund:**
 - ✓ Achievement to Date: 21% Complete based on budget.
 - ✓ Utility billing systems have been modified and are ready to handle on-bill financing. Several customers that were on hold awaiting this financing are now being served in the weatherization program.
3. Summarize work to be completed next quarter: **June 1, 2010 – August 30, 2010.**
- a. The Refrigerator/Freezer pickup/recycle program will close down (a review of available funding will be done in July to determine if any of the wait list can be served).
 - b. The Room Air Conditioner turn-in program will continue into July and August.
 - c. Plan to finish a number of weatherization projects and to start working on the single family wait list.
 - d. Finish certifying the 32 enrolled Build Green homes.
 - e. Continue wrapping up C&I projects over the next few months.
4. Please document any jobs created.
- a. We have not tracked any new jobs created directly via these RGGI funds. However, using a preliminary number of 3.5 FTEs per \$1,000,000 spent on Energy Efficiency, the \$4.9M spent (RGGI funds plus matching funds) translates into **17.3 Full Time Equivalentents (FTEs) or 35,984 hours worked** (using 2,080 hours/FTE).
 - ✓ Estimated FTEs = $(\$3,176,835 + \$1,769,570) \times (3.5 \text{ FTEs} / \$1,000,000 \text{ spent}) = 17.3 \text{ FTEs}$
 - ✓ or Estimated Hours Worked = $17.3 \text{ FTEs} \times 2,080 \text{ hours/FTE} = 35,984 \text{ hours worked}$
 - b. The 3.5 FTEs / \$1M spent is a rough estimate of direct labor costs. This estimate does not include any numbers for indirect labor or induced labor.



5. Explain any obstacles encountered or any milestones not reached.
 - a. The room AC turn-in numbers were lower than expected in May-June. The utilities and retailers are working to increase the numbers turned-in during July, expecting that the hot weather and retailer advertising will help.

6. If applicable, in a section labeled *Beyond the Contract* (or some other well defined title), please report other activities, partnerships, funding or other synergies that have occurred as a result of this funding.
 - a. The New Hampshire Electric Utilities continue working with NH Homebuilders & Remodelers Association on the NH Build Green program. The Homebuilders are providing seminars and outreach while the utilities are focused on certification of homes.
 - b. RGGI funding has allowed the utilities to partner with the NH State Library on the Cut the Carbon Kill-A-Watt library loan program. The synergies associated with having a library loan out this new technology benefits consumers (they have free and easy access to the kill-a-watt meters) and it also benefits the libraries as they may get new customers to serve. The libraries are also fully equipped to loan these out and the provide access to the meters to EVERY town in New Hampshire. Library visitors have been very receptive to this program.

7. If applicable, please include brochures, workshop announcements, or other materials developed to promote your grant activities. Attachments (and other documentation) are appreciated.
 - a. Mr. Ruderman was given a “Cut the Carbon” package at the unloading event. If the NHPUC requires more kits, please let us know.
 - b. A copy of the brochure for the Commercial and Residential Energy Code Training was provided in the Q1 Report.
 - c. Attached are copies of the ads for the Library Program and the Room Air Conditioner Turn in Program.

8. Budget vs. Actual Expenditures: (if you have included this with your invoicing, there is no need to repeat for the quarterly report.) *Using the budget you submitted for the final approved grant proposal, please add a column and provide actual expenditures as well as match dollars for this quarter. (Save this worksheet for future reporting as we will want to see your quarterly expenditures as the project continues.)*
 - a. See the next 8-10 pages for a summary of:
 - ✓ the Statewide budgets/expenses
 - ✓ Annual energy and CO₂ savings
 - ✓ Lifetime energy CO₂ savings



For lower electric bills and a cleaner New Hampshire,
**make tracks to
 your local library!**

Take the first step to lower electric bills and a smaller carbon footprint. Check out our **CUT the CARBON** Kit for FREE from your local library today! Use the Kill a Watt Energy Detector to find out just how much electricity each device in your home is using.



Our **CUT the CARBON** Kit is not only informative and fun; it could also save you real money on your next electric bill by following any of the ten simple energy-saving tips provided.

For more information, visit
nhsaves.com
 energy solutions for New Hampshire
 In partnership with the New Hampshire State Library

You may also purchase a Kill A Watt Energy Detector online at **nhsaves.com**



**Room Air Conditioner
 Turn In Event**



BE COOL!

♻️ This program is available to all New Hampshire residents until funding runs out.

Bring in your old working room air conditioner to recycle for free and receive a **\$30 Mail in Rebate** toward the purchase of a new ENERGY STAR®
 See sales associate for details. Brought to you by:

nhsaves.com
 energy solutions for New Hampshire



Locations of the participating retailers are:

- Baron's Major Brands Appliance
- Strafford Appliance Company
- Bay Street Discount, Inc.
- Top Furniture, Inc.
-
- State Street Discount



Regional Greenhouse Gas Initiative
RGGI Expansion - CORE Energy Efficiency Programs
Q3 (August 19, 2009 - May 31, 2010 Reporting Period)

Program

Program	RGGI BUDGET					Q1 - Q3 Actual Expenditures					Matching Funds (Customer Contributions)				
	National Grid	NHEC	PSNH	UNITIL	Total RGGI Budget	National Grid	NHEC	PSNH	UNITIL	Total Actual Expenditures	National Grid	NHEC	PSNH	UNITIL	Matching Funds (Customer Contributions)
CORE EE Programs (additional funds)															
Energy Star Lighting	\$40,826	\$66,886	\$0	\$54,295	\$162,007	\$40,826	\$27,873	\$0	\$44,507	\$113,206	\$12,828	\$36,186	\$0	\$85,605	\$134,619
Energy Star Appliances / Products (Room AC Turn-in, 2nd Ref pickup)	\$44,307	\$60,136	\$100,000	\$46,000	\$250,443	\$24,307	\$39,170	\$7,589	\$38,873	\$109,939	\$0	\$82,050	\$0	\$53,770	\$135,820
Energy Star Homes (+ Build Green NH Certification)	\$56,313	\$47,196	\$100,000	\$48,000	\$251,509	\$0	\$44,882	\$992	\$10,021	\$55,894	\$0	\$55,904	\$0	\$0	\$55,904
HES (Fuel Neutral Multi-Family Weatherization)	\$440,025	\$251,111	\$250,000	\$113,935	\$1,055,071	\$174,777	\$106,702	\$617	\$6,632	\$288,729	\$149,558	\$7,904	\$0	\$0	\$157,462
HEA (approximate 50% increase in homes/units for each utility) ¹	\$50,000	\$110,354	\$800,000	\$140,348	\$1,100,702	\$113,117	\$101,903	\$797,328	\$98,453	\$1,110,801	\$0	\$0	\$349,809	\$0	\$349,809
Small Business Retrofit	\$182,037	\$54,250	\$0	\$245,127	\$481,414	\$174,369	\$48,678	\$0	\$184,150	\$407,198	\$69,563	\$43,862	\$0	\$174,559	\$287,984
Large Business Retrofit (more rebates + \$ for Retro-commissioning)	\$0	\$143,755	\$800,000	\$275,102	\$1,218,857	\$0	\$51,160	\$670,852	\$129,433	\$851,445	\$0	\$72,860	\$644,305	\$163,848	\$881,013
New Equipment & Construction	\$0	\$93,584	\$100,000	\$0	\$193,584	\$0	\$26,063	\$105,680	\$0	\$131,743	\$0	\$42,772	\$45,436	\$0	\$88,208
Education (Energy Code Training, BOC 2, Tech College BPI Training)	\$6,099	\$21,700	\$100,595	\$35,000	\$163,394	\$0	\$6,219	\$42,996	\$9,931	\$59,146	\$0	\$0	\$0	\$0	\$0
Utility Specific Programs (additional funding)															
Energy Rewards RFP	\$0	\$0	\$315,000	\$0	\$315,000	\$0	\$0	\$1,771	\$0	\$1,771	\$0	\$0	\$0	\$0	\$0
High Efficiency Heat Pump Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Smart Start Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ESHomes Geothermal	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$46,964	\$0	\$46,964	\$0	\$0	\$44,584	\$0	\$44,584
EE Website & Home Energy Audit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SmartStart - RGGI \$ for revolving loan fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Funds for Loan Fund Capital (RLF)															
RGGI Funds for Revolving Loan Fund	\$350,000	\$200,000	\$500,000	\$725,000	\$1,775,000	\$0	\$0	\$375,000	\$6,328	\$381,328	\$0	\$0	\$0	\$0	\$0
TOTAL (not including RGGI Funds for Revolving Loan Fund)	\$ 869,607	\$ 848,972	\$ 2,565,595	\$ 957,807	\$ 5,241,981	\$ 527,396	\$ 452,650	\$ 1,674,789	\$ 522,000	\$ 3,176,835	\$ 231,949	\$ 341,538	\$ 1,084,134	\$ 477,782	\$ 2,135,403
Performance Incentive ²	\$ 65,569	\$ 71,918	\$ 205,248	\$ 76,625	\$ 419,360										
PROJECTED GRAND TOTAL (including performance incentive)	\$ 935,176	\$ 920,890	\$ 2,770,843	\$ 1,034,432	\$ 5,661,341										

Note 1: Customer Contribution for HEA is actually other funding such as WAP, ARRA, Gas Utility EE Funding, etc.

Note 2: At Risk Performance Incentive, 0-12%, shown at 8% incentive level.



Regional Greenhouse Gas Initiative
RGGI Expansion - CORE Energy Efficiency Programs
Q3 (August 19, 2009 - May 31, 2010 Reporting Period)

Method # 2, using MWH & MMBtu (million Btus)

Reductions from	Enter Reductions in Units shown in next Column (Annual MMBtu savings) - NGRID	Enter Reductions in Units shown in next Column (Annual MMBtu savings) - NHEC	Enter Reductions in Units shown in next Column (Annual MMBtu savings) - PSNH	Enter Reductions in Units shown in next Column (Annual MMBtu savings) - UNITIL	Enter Reductions in Units shown in next Column (Annual MMBtu savings) - TOTAL	Units	CO2 Emission Factors in lbs/unit	Estimated CO2 Emission Reductions in pounds (lbs.)	Estimated CO2 Emission Reductions in Metric Tons
Electricity	748	1,503	7,540	4,363	14,154	MWH	1,087	15,384,994	6,977.32
Natural Gas	0	0	1,623	146	1,769	MMBtu	117.1	207,119	93.93
Distillate Fuel Oil (#1, 2 & 4)	5,794	104	3,117	418	9,433	MMBtu	161.4	1,522,495	690.47
Residual Fuel Oil (#5 & 6)	0	0	0	0	0	MMBtu	173	0	0.00
Kerosene	63	0	503	156	723	MMBtu	159.5	0	0.00
LPG	0	0	0	0	0	MMBtu	139	0	0.00
Propane	1,583	773	1,274	58	3,688	MMBtu	139.2	513,326	232.80
Wood or Wood Pellet	0	0	367	12	379	MMBtu			
Other	0	0	0	0	0	MMBtu			
TOTAL									7,994.53

Electric Line Loss

Source of CO2 Emission Factors in lbs/unit:

<http://www.eia.doe.gov/cneaf/electricity/epa/epata3.html>



Regional Greenhouse Gas Initiative
RGGI Expansion - CORE Energy Efficiency Programs
Q3 (August 19, 2009 - May 31, 2010 Reporting Period)

Method # 2, using MWH & MMBtu (million Btus)

Reductions from	Enter Reductions in Units shown in next Column (Lifetime MMBtu savings) - NGRID	Enter Reductions in Units shown in next Column (Lifetime MMBtu savings) - NHEC	Enter Reductions in Units shown in next Column (Lifetime MMBtu savings) - PSNH	Enter Reductions in Units shown in next Column (Lifetime MMBtu savings) - UNITIL	Enter Reductions in Units shown in next Column (Lifetime MMBtu savings) - TOTAL	Units	CO2 Emission Factors in lbs/unit	Estimated CO2 Emission Reductions in pounds (lbs.)	Estimated CO2 Emission Reductions in Metric Tons
Electricity	6,960	18,139	100,675	50,989	176,763	MWH	1,087	192,141,828	87,139.15
Natural Gas	0	0	29,491	2,424	31,915	MMBtu	117.1	3,737,198	1,694.87
Distillate Fuel Oil (#1, 2 & 4)	104,285	1,455	59,438	8,019	173,197	MMBtu	161.4	27,954,067	12,677.58
Residual Fuel Oil (#5 & 6)	0	0	0	0	0	MMBtu	173	0	0.00
Kerosene	1,140	0	10,684	3,124	14,948	MMBtu	159.5	0	0.00
LPG	0	0	0	0	0	MMBtu	139	0	0.00
Propane	28,493	18,693	19,209	1,007	67,403	MMBtu	139.2	9,382,429	4,255.07
Wood or Wood Pellet	0	0	6,895	247	7,142	MMBtu			
Other	0	0	0	0	0	MMBtu			
TOTAL								105,766.68	

Electric Line Loss

Source of CO2 Emission Factors in lbs/unit:

<http://www.eia.doe.gov/cneaf/electricity/epa/epata3.html>

