

Executive Summary
NH Greenhouse Gas Emissions Reduction Fund (GHGERF)
Year 1 (July 2009 – June 2010) Evaluation

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This report provides an evaluation of the first year of GHGERF funded grants for the period July 15, 2009 through June 30, 2010. Between July 15, 2009 and October 21st, 2009, the GHGERF awarded \$17.7 million to 30 grants (19 grants had a duration of 1 year or less; 11 grants had a duration of 1 to 2 years) with an average award amount of just under \$600,000. These grants went to a wide variety of activities with approximately 80% of funds going to activities that directly reduce energy use.

During the *first year reporting period*, the GHGERF grants reduced energy use by 40,500 million BTU, saved NH residents and businesses \$1.5 million in energy costs, and reduced CO₂ emissions by 4,600 metric tons (Table 1).

Projects completed during the first year reporting period and completed or scheduled to be completed during the *second reporting period* (July 2010 to June 2011) will result in annual energy savings of \$4.2 million in energy costs and CO₂ emissions reductions of 13,200 metric tons (Table 2).

Lifetime savings due to grants funded by the \$17.7 million awarded through GHGERF are \$60.6 million in energy costs (at current energy prices) and CO₂ emissions reductions of almost 200,000 metric tons (Table 3).

Table 1: Actual energy reductions measured during first year reporting period (July 2009 to June 2010)

Fuel Type	Energy Reduced	MMBTU Reduced	Equivalent Annual NH Household Use	Energy Savings (\$ millions)	CO2 reduced (metric tons)
Electric	7.5 million (kWh)	25,700	1,100	\$1.2	3,700
Oil	54.5 thousand (gallons)	7,600	85	\$0.1	550
Natural Gas	50.0 thousand (therms)	5,200	65	\$0.1	270
Propane	21.5 thousand (gallons)	2,000	65	\$0.1	120
Total		40,500	1,315	\$1.5	4,600

Table 2: Projected energy savings for second reporting period (July 2010 to June 2011)

Fuel Type	Energy Reduced	MMBTU	Equivalent Annual NH Household Use	Energy Savings (\$ millions)	CO2 reduced (metric tons)
Electric	18.5 million (kWh)	63,100	2,650	\$2.9	9,100
Oil	98.5 thousand (gallons)	13,700	155	\$0.3	1,000
Natural Gas	484 thousand (therms)	49,700	620	\$0.7	2,570
Propane	97 thousand (gallons)	8,900	300	\$0.3	560
Total		135,400	3,725	\$4.2	13,230

Table 3: Projected lifetime energy savings for all GHGERF projects funded in Year 1.

Fuel Type	Energy Reduced	MMBTU	Equivalent Annual NH Household Use	Energy Savings (\$ millions)	CO2 reduced (metric tons)
Electric	253.5 million (kWh)	863,300	36,200	\$39.50	124,740
Oil	1.7 million (gallons)	235,800	2,600	\$4.40	17,300
Natural Gas	9.5 million (therms)	975,700	12,200	\$13.20	50,400
Propane	1.3 million (gallons)	119,000	3,900	\$3.50	7,480
Total		2,193,800	54,900	\$60.60	199,920

GHGERF supported energy efficiency training opportunities for 170 workers over 5,600 contact hours. GHGERF also supported 436 building benchmarking and energy audit evaluations. These are essential first steps in training the workforce and identifying and developing cost-effective projects that directly reduce energy use.

While GHGERF funds were not intended for job creation, the GHGERF grants directly supported 55 full time equivalent (FTE) jobs with an estimated additional (indirect and induced) 15 to 30 FTE jobs being supported by the grants for a total job impact of 70 to 85 FTE jobs. In addition, low-interest loans helped improve the competitiveness of two manufacturers employing a total of more than 400 workers.

Additional Key findings:

- GHGERF funded a wide range of projects that covered many essential areas of programmatic need for enhanced energy efficiency in the state.
- Energy reduction projects were cost effective. Of the evaluated energy reduction projects there was an average net SAVINGS of \$147 per metric ton of CO₂ reduced when considering both the cost of implementation and the cost savings resulting from reduced energy use. Put another way, each dollar invested by GHGERF resulted in \$3.42 in direct energy savings.
- The first year was a learning and infrastructure development period. It took a few months for the grant recipients to develop capacity to deliver new energy efficiency services. However, over time the grant recipients have become increasingly sophisticated in providing energy efficiency services.
- Key benefits of GHGERF in the energy efficiency marketplace are its flexibility, its ability to encourage innovation, and its leadership and support towards reducing dependence on imported energy sources in the state.
- The program has generated excitement and innovation for enhancing energy efficiency and reducing energy use among a diverse cross-section of private and non-profit organizations across New Hampshire.
- There has been significant development of best practices for reducing energy use and reducing dependence on imported energy.
- Strong models and processes have emerged from the first year of implementation and these new models are specifically reflected in the second round of GHGERF grants awarded in December 2010. The new grant programs are far reaching and are expected to result in projects with significant energy and emissions reductions.