

**GREEN HOUSE GAS EMISSIONS REDUCTION FUND  
QUARTERLY PROGRESS REPORT  
LIGHTEC, INC.**

**September 1, 2010 through November 30, 2010**

1. **Program Title:** Energy, Carbon Savings, and Education for Schools, Municipalities, and Business
2. **Program Type:** Our program includes energy-efficiency project implementation and education. It falls into the following program categories:
  1. Energy Audits.
  8. Programs to improve the electric and thermal energy efficiency of new and existing residences and commercial buildings.
  10. Education, outreach and information programs that promote energy efficiency, conservation and demand response.

**Definitions:**

Facility - Any free standing building on a lot or campus that consumes energy.

Project - A facility or group of facilities with which LighTec has an energy-services contract. A project can consist of one or many facilities.

**3. Summary of Work Completed During This Reporting Period (Sep. 1, 2010 – Nov. 30, 2010):**

Task 1: Perform investment-grade energy audits in three projects, analyzing all major energy-using equipment and systems and provide engineered recommendations to clients.

Percentage Complete: 98%

- Project 1: The Town of Wolfeboro. Activities included:
  - Complete.
- Project 2: Holy Cross Hall Condo Association. Activities included:
  - Complete. (Letter of Support attached)
- Project 3: Town of Merrimack. Activities included:
  - Delivered the Merrimack Town Hall Energy Audit Report, final draft.

**Task 2:** Increase the energy efficiency of 13 educational facilities, 3 municipalities and 2 industrial corporations in New Hampshire.

Percentage Complete: **77.2%**<sup>1</sup>

As of November 30<sup>th</sup>, 2010 LighTec has secured contracts for 13 projects that include 21 facilities. Out of these 13 projects, 11 are complete and represent a combined annual energy savings of 1,045,777 kWh and reduced 516.53 tons of CO<sub>2</sub> emissions from the atmosphere.

### **Educational Facilities**

- To date, LighTec has secured contracts for seven projects that include ten educational facilities. Out of these seven projects, five are complete and represent a combined annual energy savings of 327,455 kWh and reduced 161.61 tons of CO<sub>2</sub> emissions from the atmosphere. Task details for each project are provided below.
  - Project E-1: New Hampton School (one facility): Lighting and Lighting Controls Upgrade.
    - Project Complete.
      - ❖ Annual Energy Savings: 104,607 kWh
      - ❖ CO<sub>2</sub> Reduced: 51.69 tons
  - Project E-2: Mount Saint Mary Academy (one facility): Lighting and Lighting Controls Upgrade.
    - Project Complete.
      - ❖ Annual Energy Savings: 56,545 kWh
      - ❖ CO<sub>2</sub> Reduced: 27.94 tons
  - Project E-3: Newfields Elementary School (one facility): Lighting and Lighting Controls Upgrade.
    - Project Complete.
      - ❖ Annual Energy Savings: 44,807 kWh
      - ❖ CO<sub>2</sub> Reduced: 22.09 tons
  - Project E-4: New England College (four facilities): Lighting and Lighting Controls Upgrade.
    - Project Complete.
      - ❖ Annual Energy Savings: 88,046 kWh
      - ❖ CO<sub>2</sub> Reduced: 43.4 tons

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<sup>1</sup> This includes the energy saved from the installed portions of the incomplete projects. Litchfield Middle school lighting installation at 62 tons of CO<sub>2</sub> reduced and White Mountains Regional Highschool lighting installation, less the auditorium, at 51.85 tons of CO<sub>2</sub> reduced. A Grand Total of 630.38 tons of CO<sub>2</sub> reduced.

- Project E-5: Manchester Community Music School (one facility): Lighting and Lighting Controls Upgrade.
  - Project Complete.
    - ❖ Annual Energy Savings: 33,450 kWh
    - ❖ CO<sub>2</sub> Reduced: 16.49 tons
- Project E-6: White Mountains Regional High School (one facility): Lighting and Lighting Controls Upgrade.
  - Obtained the Service & Installation Agreement from client.
  - Completed pre-build measurement and post-build verification (M&V).
  - Project installation 98 percent complete; waiting on arrival of the new fixtures for the auditorium.
- Project E-7: Litchfield Middle School (one facility): Lighting and Lighting Controls Upgrade and HVAC Controls Upgrade. Activities included:
  - Obtained the Service & Installation Agreement from client.
  - Completed project engineering for high efficiency lighting and HVAC controls Retrocommissioning in the Middle School.
  - Completed pre-build measurement and post-build verification for lighting upgrade.
  - Completed lighting project installation.
  - Began HVAC and Energy Management System (EMS) installation.
- Continued work on obtaining Service & Installation Agreements from the Hollis Schools and Brookline Schools.

### **Municipal Facilities**

- To date, LighTec has secured contracts for three projects that include seven town-owned facilities. Out of these three projects, two are complete and represent combined annual energy savings of 82,928 kWh and reduced 40.98 tons of CO<sub>2</sub> emissions from the atmosphere. Task details for each project are provided below.
  - Project M-1: Town of Wolfeboro (six facilities): Lighting and Lighting Controls Upgrade.
    - Project Complete.
      - ❖ Annual Energy Savings: 76,682 kWh
      - ❖ CO<sub>2</sub> Reduced: 37.88 tons

- Project M-2: Town of Dunbarton (one facility): Lighting and Lighting Control Upgrade. Activities included:
  - Obtained the Service & Installation Agreement from client.
  - Completed project engineering for high efficiency lighting and controls.
  - Completed pre-build measurement and post-build verification for lighting upgrade.
  - Completed lighting project installation.
  - Completed post installation M&V (M&V report and Letter of Support attached).
    - ❖ Annual Energy Savings: 6,246 kWh
    - ❖ CO<sub>2</sub> Reduced: 3.1 tons
- Project M-3: Town of Moultonborough (one facility): Completed an ASHRAE level III investment grade energy audit of the town hall. Activities included:
  - Drafted, revised, finalized and delivered the *Moultonborough Town Hall Energy Audit Report* to the Town of Moultonborough. (Letter of Support attached)

### **Industrial Corporations**

- LighTec secured contracts for three projects that included four facilities. All of these projects are complete and represent a combined annual energy savings of 635,394 kWh and reduced 313.94 tons of CO<sub>2</sub> emissions from the atmosphere. Task details for each project are provided below.
  - Project I-1: PCC Solutions (two facilities): Lighting and Lighting Controls Upgrade.
    - Project Complete.
      - ❖ Annual Energy Savings: 538,953 kWh
      - ❖ CO<sub>2</sub> Reduced: 266.29 tons
  - Project I-2: North Star Direct (one facility): Lighting and Lighting Controls Upgrade.
    - Project Complete.
      - ❖ Annual Energy Savings: 90,669 kWh
      - ❖ CO<sub>2</sub> Reduced: 44.8 tons
  - Project I-3: Excalibur (one facility): Motor Controller Installation
    - Project Complete.
      - ❖ Annual Energy Savings: 5,772 kWh
      - ❖ CO<sub>2</sub> Reduced: 2.85 tons

Table 1: Task Two Energy Efficiency Projects Completed to Date<sup>2</sup>

Project #	New Hampshire Client	Program Cost	GHGER Funds Requested	Program Participant Contribution	SBC Utility Rebate	Avg Monthly Demand Reduction (kW)	Annual Energy savings (kWh)	Tons of CO2 Reduced	% of Carbon Reduction Goal
<b>Educational</b>									
E-1	New Hampton School	\$33,725	\$13,750	\$19,975	-	15	108,141	53.31	6.5%
E-2	Mount Saint Mary Academy	\$49,108	\$11,000	\$34,093	\$10,960	29	60,332	29.74	3.6%
E-3	Newfields Elementary School	\$29,524	\$5,154	\$10,815	\$13,555	19	44,807	22.09	2.7%
E-4	New England College	\$88,435	\$17,302	\$53,433	\$16,965	28	90,256	44.49	5.4%
E-5	Manchester Community Music School	\$44,302	\$6,809	\$17,922	\$20,322	11	35,510	17.51	2.1%
E-6	Litchfield Middle School Lighting Only							62	7.5%
E-7	98% of WMRHS							51.85	6.3%
<b>Municipal</b>									
M-1	Town of Wolfeboro	\$63,088	\$15,458	\$47,630	-	30	76,682	37.88	4.6%
M-2	Town of Dunbarton Town Hall	\$8,911	\$2,291		\$4,087	3	6,246	3.1	0.4%
<b>Industrial</b>									
I-1	PCC Solutions Inc.	\$184,028	\$28,711	\$116,496	\$45,090	84	538,953	266.29	32.3%
I-2	North Star Direct	\$32,727	\$5,087	\$19,445	\$9,030	23	90,669	44.8	5.4%
I-3	Excalibur	\$5,281	\$3,436	\$1,845	-	-	5,772	2.85	0.3%
<b>Grand Total</b>		<b>\$539,129</b>	<b>\$108,998</b>	<b>\$321,654</b>	<b>\$120,009</b>		<b>1,057,368</b>	<b>635.91</b>	<b>77.2%</b>

**Task 3:** Provide education and training to students, faculty and maintenance employees regarding the energy-efficiency projects taking place in their buildings. The training will help to empower individuals so they can make similar efficiency improvements in their homes.

Percentage Complete: 45%

- Project Manager's conducted project reviews with maintenance staff as a result of the commissioning process, in all of the Task 2 projects completed. We included a binder of product specification sheets so that the energy savings can be sustained.
- Upon completion of the Manchester Community Music School efficiency project, began to communicate with contacts from Mount Saint Mary's Academy and the Manchester Community Music School regarding the draft display case informational posters.

**4. Activities Anticipated for Next Reporting Period (December 1, 2010 – February 28, 2011):**

**Task 1:** Perform investment-grade energy audits in three projects, analyzing all major energy-using equipment and systems and provide engineered recommendations to clients.

- Finalize the *Merrimack Town Hall Energy Audit Report*.

**Task 2:** Increase the energy efficiency of 13 educational facilities, 3 municipalities and 2 industrial corporations in New Hampshire.

- Work on obtaining Service & Installation Agreements from Lancaster Elementary, Saint Mary Academy (Dover), the Hollis/Brookline Schools and the Town of Tamworth. Once obtained: conduct and/or review audit and engineering specification/s; conduct pre-installation measurement and verification; and begin implementing the efficiency upgrades.

<sup>2</sup> Task 2: Energy Efficiency Projects completed to date. The "% of Carbon Reduction Goal" column reflects our programs full scope and is based on a target of 824.25 tons of carbon.

- Litchfield Middle School: Complete HVAC Controls and EMS installation work at the.
- White Mountains Regional High School: Complete lighting installation at the.
- Town of Moultonborough: Present the findings of the *Town Hall Energy Audit* to the Board of Selectmen; obtain installation contract, conduct pre-installation measurement and verification and begin implementing the efficiency upgrades.

Task 3: Provide education and training to students, faculty and maintenance employees regarding the energy-efficiency projects taking place in their buildings. The training will help to empower individuals so they can make similar efficiency improvements in their homes.

- Continue attempts to contact Clients via phone and email to determine interest in receiving educational material.
- Revise, customize and deliver educational materials to interested Clients.

#### **5. Total Hours Worked and Jobs Created: 1676 man hours**

- LighTec, Inc. employees: 654 man hours
- Subcontractors: approximately 1022 man hours
- LighTec continues to engage Computer Troubleshooters, located in Merrimack, NH, for IT services on an “as needed” basis.
- LighTec employs 6 full time and four part time people.

#### **6. Obstacles Encountered or Milestones Not Reached:**

LighTec is working with four clients that are also receiving ARRA grants: The Town of Dunbarton, White Mountains Regional High School, the Town of Tamworth and the Town of Hollis/Brookline (including schools). Coming to understand the ARRA contracts and reporting requirements took time and stalled the entire process, leading to delays in project start dates. As of this writing LighTec has completed the Town of Dunbarton and White Mountains Regional High School projects; has received a signed contract for the Town of Tamworth and is in the process of reviewing contracts with the Town of Hollis.

Please see the *June – August, 2010 Quarterly Progress Report, Section 6* for a further discussion of this topic. The issues discussed in that report continue to apply.

#### **7. Beyond the Contract:**

*1. Please report other activities, partnerships, funding or other synergies that have occurred as a result of this funding.*

- Attended the New Hampshire Local Government Center’s 69<sup>th</sup> Annual Conference. The Conference was attended by 90% of New Hampshire’s municipal administrators and direct staff. Our booth was very well attended, and we explained the RGGI program to all visitors. Although a few administrators were aware, of the program, specifically Merrimack, Wolfeboro and Moultonborough, the majority were unaware of RGGI and its New Hampshire program/s. We feel we did a good job communicating the program and the high level need for climate change management.
- Worked on a sub-committee of the Municipal Energy Working Group in an effort to develop standards for municipal energy audits.

- Participated in the Strategic Communication Planning Session held on September 8, 2010 at PSNH Energy Park.

8 *If applicable, please include brochures, workshop announcements, or other materials developed to promote your grant activities. Attachments (and other documentation) are appreciated.*

9 *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.)*

- See previously submitted invoices.

Date: \_\_\_\_\_

Initials: \_\_\_\_\_