

## **GREENHOUSE GAS EMISSIONS REDUCTION FUND**

### **Quarter 3 Report Appendix – DRED/LRCC**

February 1, 2011 - March 31, 2011 (FY11)

#### **Program Title:**

Expanded Energy Efficiency and Renewable Energy Program  
(BPI Building Analyst, Energy Auditor Training Program Development and Delivery:  
Lakes Region Community College (LRCC), Laconia, NH and  
Program Management NH Department of Resources and Economic Development (DRED))

- 1. LRCC Web-based Explanation of Efficiency Training Program (ETP)**
- 2. LRCC Web-based Building Envelope Retrofit Mini Boot Camp** – Announcement for April and Home Builders and Remodelers Association of NH Calendar listing
- 3. Case Study – Southern NH Weatherization Business**
- 4. Case Study – Central NH Weatherization Business**
- 5. Case Study – North Country NH Weatherization Business**



## Energy Services and Technology Program

The Energy Services and Technology Program (ESTP) will provide students with the knowledge and skills to enter the rapidly expanding field of energy services and technologies. Students will be prepared to utilize knowledge and skills gained in the areas of energy fuels and consumption, energy efficiency, energy economics, electricity, HVAC, technical communications, computer sciences, to optimize the production, delivery, and use of energy resources.

Students will learn through extensive classroom and lab experience with hands-on state-of-the-art training equipment recently acquired through the Fund for the Post-Secondary Education (FIPSE) grant. With this equipment students will experience hands-on training in HVAC, climate control, thermal insulation properties, indoor air quality, solar energy, and geothermal principles. Individuals will also train with the latest in instrumentation such as infrared camera imaging, blower door testing, combustion efficiency analyzing, and more.

Graduates of the program will be prepared to enter into a variety of energy management and technological fields such as Energy Auditor, Energy Analyst, Building Operator, Resource Conservation Manager, Measurement and Verification Technician, Technical Service Representative, and many other related professions.

*For more information contact*

Professors Carl Daniels, [cdaniels@ccsnh.edu](mailto:cdaniels@ccsnh.edu) or

Wes Golomb, [wgolomb@ccsnh.edu](mailto:wgolomb@ccsnh.edu)

tel. 603-524-3207

[www.lrcc.edu/energy](http://www.lrcc.edu/energy)

## Efficiency Training Program

As the lead partner in the Efficiency Training Program, *Lakes Region Community College (LRCC)* is offering building energy efficiency trainings throughout New Hampshire. *LRCC* is providing a variety of short-term energy auditor and weatherization installer training programs including:

- ▶ BPI Building Analyst and Envelope Professional Training Courses
- ▶ BPI Air Sealing and Insulation Installer Training Courses
- ▶ Boot Camps and Efficiency Intensive Certificate Programs
- ▶ Short-Term Energy Efficiency Trainings
- ▶ Energy Efficiency Professional Mentoring Support
- ▶ Efficiency Equipment Rental Program

A key recommendation within the New Hampshire Climate Action Plan goal is to vastly improve the energy efficiency of 30,000 existing NH homes per year. The ETP program is helping to build a network of trained energy professionals to accomplish this recommendation, leading to:

- ▶ More energy efficiency jobs and a vibrant local economy
- ▶ Lower home energy bills
- ▶ Improved occupant comfort and building durability
- ▶ Reduced greenhouse gas emissions

The Efficiency Training Program is a partnership with *LRCC*, the NH Division of Economic Development (DED), the Plymouth Area Renewable Energy Initiative (PAREI) and other allies. The ETP grant is funded by the Greenhouse Gas Emissions Reduction Fund (GHGERF) administered by the NH PUC.

*For more information contact*

Andy Duncan, Energy Trainings Manager

[aduncan@ccsnh.edu](mailto:aduncan@ccsnh.edu)

tel. 603-524-3207

[www.lrcc.edu/energy/training](http://www.lrcc.edu/energy/training)



379 Blemont Road • Laconia, New Hampshire

603-524-3207 | [www.lrcc.edu](http://www.lrcc.edu)



Pilot Building Envelope Retrofit Mini Boot Camp

# Hands-on Weatherization Skills Builder

APRIL 14, 15, 21 AND 22



Discounted  
Tuition!

#### COURSE GOALS:

- Learn hands-on weatherization skills
- Gain experience with air sealing and insulation techniques
- Prepare for future BPI Installer certification

**LOCATION/TIMES:** Home Builders and Remodelers Association of NH, Concord, NH. Thursdays and Fridays April 14, 15, 21 and 22. All sessions 8 A.M. – 4 P.M.

**COST:** The discounted tuition fee is \$650. The fee includes tuition, binder, textbook, materials and personal safety gear. GHGERF\* grant funding enables a \$600 scholarship from the \$1,250 cost of this training.

**COURSE PREREQUISITES:** Please contact Andy Duncan, 603-524-3207 or <aduncan@ccsnh.edu> for course eligibility.

**REGISTER** for the course #LWKS9019 by calling Andy Duncan or Andrée Thibault at 603-524-3207. For more information see [www.lrcc.edu](http://www.lrcc.edu).

**PROGRAM SPONSORS:** \*Co-sponsored by the Home Builders and Remodelers Association of NH, in conjunction with NH Division of Economic Development, with funding assistance from the NH Public Utilities Commission's Greenhouse Gas Emissions Reduction Fund (GHGERF).

*This hands-on course prepares the student for the installation of basic air sealing and insulation measures in a residential environment. This PILOT course is offered at a reduced cost, and is open to a limited number of students. This training will help qualify students for positions in energy performance contracting. The class will include a review of insulation and air sealing principles, diagnostics tests, and safety considerations. Students will learn to implement building science-based retrofit techniques, including blower door-guided air sealing, duct sealing, densepack cellulose and loose-fill insulation. Taught by Andy Duncan, LRCC and Don LaTourette, Building Energy Technologies, LLC.*



LAKES  REGION  
Community College

[theconomy.com](http://theconomy.com)  
The NH Division of Economic Development

**Limited class size—preregistration required—register now!**

## EVENT DETAILS

Calendar | Login

**Green Retrofit Mini Bootcamp-Pilot**

Organizer	HBRA of New Hampshire
Date & Time	Thursday, April 14, 2011, 8:00 AM - 1:00 PM Friday, April 15, 2011, 8:00 AM - 1:00 PM
Location/Venue	The Housing Center
Address	119 Airport Road, Concord, NH 03301 <a href="#">[Map]</a>

**Lakes Region Community College Pilot Building Envelope Retrofit Mini Boot Camp Training Course Description**

Sponsored jointly by the Build Green NH/ Home Builders and Remodelers Association of NH, in conjunction with NH Division of Economic Development and funding from NH PUC's Greenhouse Gas Emissions Reduction Fund.

**COURSE DESCRIPTION:**

This hands-on course prepares the student for the installation of basic air sealing and insulation measures in a residential environment. This training will help qualify students for positions in energy performance contracting. The class will include a review insulation and air sealing principles, diagnostics tests, and safety considerations. Students will learn to implement building science-based retrofit techniques, including blower door-guided air sealing, duct sealing, densepack cellulose and loose-fill insulation. This PILOT course is offered at a reduced cost, and is open to a limited number of students.

**REGISTRATION: COURSE NUMBER:** LWKS 9019, CRN 22182

Students may register by telephone 603-524-3207 with a credit card, by mail, or in person at LRCC, 379 Belmont Road, Laconia, NH 03246 and filling out a program application/registration form. Seats will be filled on a first come, first served basis. For further information contact Andy Duncan, Energy Trainings Manager, at 603-524-3207 ext. 6629 or 1-800-357-2992.

**DATES:**

Thursdays & Fridays, April 14 & 15 & 2011, April 21,22 8:00 am – 4:00 pm, including a practicum field test final day

**LOCATION:**

Home Builders and Remodelers Association of New Hampshire, 119 Airport Road, Concord, NH and nearby field locations.

**COURSE OUTLINE**

- DAY 1 AM: Safety and building science review, air sealing and insulation principles  
PM: Developing a detailed installation work scope from an energy audit
- DAY 2 AM: Air sealing and insulation techniques  
PM: Air sealing and insulation techniques continued
- DAY 3 AM: Insulation hands-on training  
PM: Densepack cellulose hands-on training
- DAY 4 AM: Other insulation and air sealing topics  
PM: Practicum test

**COURSE PREREQUISITES:**

- Safety training, either OSHA-10 training or equivalent.
- Ability to crawl in an attic and other spaces while wearing a respirator and other safety gear.
- Ability to lift 30 pounds
- Tolerance for work in dusty and dirty conditions
- Familiarity with blower door usage
- Basic math, verbal and written communication skills
- Familiarity with residential building energy, mechanical and structural systems.

**Recommended skills:**

- BPI Building Analyst and/or Envelope Professional certification and/or NAHB Certified Green Builder
- Familiarity with air sealing and insulation techniques
- Lead-safe training

**INSTRUCTORS:**

Andy Duncan, Manager of Energy Trainings, Lakes Region Community College and Don LaTourette, Owner, Building Energy Technologies, LLC. Both are seasoned weatherization professionals and BPI-certified Building Analyst and Envelope Professionals.

**TUITION AND FEES:**

The tuition for the instructional program is \$650, including all materials and personal safety gear used in the course. NHPUC GHGERF grant funding enables a \$600 reduction from the \$1,250 cost of this program. Participants who successfully complete this course will be eligible for a shortcut pathway to LRCC testing for BPI's "Air Sealing Controller Installer" certification, once it becomes available (separate fee).

**REGISTRATION:**

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**COURSE REFERENCE INFORMATION:**

Lakes Region Community College, [www.lrcc.edu](http://www.lrcc.edu), has course registration available on the College website, and well as information about many other courses, certificate and degree programs through the Energy Services and Technology program. The New Hampshire Dept. of Resources and Economic Development, [www.dred.state.nh.us](http://www.dred.state.nh.us), has information regarding economic development in the state. Building Performance Institute (BPI), [www.bpi.org](http://www.bpi.org), offers a nationally recognized training, certification, and accreditation and quality-assurance programs.

Contact Elizabeth Fischer, Build Green NH Program Manager, at [erfischer@buildgreennh.com](mailto:erfischer@buildgreennh.com)

FEE: \$650.00

10th & 11th at The Housing Center

17 & 18th BET Building Energy Technologies Bow NH

[Add to Calendar](#) | [Add to Microsoft Outlook](#)



**NH's Greenhouse Gas Emissions Reduction Fund (GHGERF)**  
*Promoting a Green Economy & Energy Independence for New Hampshire*

**A CASE STUDY**

**Southern New Hampshire Business Specializes in Energy Efficiency**

Owners John Haithcock and Phil Morano started Adros Energy in a basement in Nashua in January 2009, the result of the merger of two separate operations following a GHGERF funded energy efficiency training course. The company now has eight employees in its own Amherst building.

Mr. Haithcock and Mr. Morano took the Lakes Region Community College's (LRCC) Building Analyst course and became certified Building Performance Institute (BPI) Building Analysts. Over the past year, the company conducted 125 energy audits and performed many weatherization projects with outstanding results.

John Haithcock explained, "I am also a builder, and have built over 80 homes in the past 12 years along with many other projects. I am interested in participating in LRCC's new mentoring program because there is a real need to educate both homeowners and builders on the dynamics of how energy is used and wasted in buildings. Many times it's too late once the building is complete."

As part of its Building Analyst course, the LRCC conducted 13 energy-auditor trainings during late 2009 and throughout 2010. The courses have reached over 170 building professionals from across the state and have expanded the New Hampshire workforce capable of reducing energy costs incurred by New Hampshire residents, businesses and municipalities.

Increasing the number of building and energy professionals trained to perform energy efficiency work helps to ensure NH companies can compete in this



**John Haithcock checking pressure and draft on water heater**

rapidly growing industry. This training also ensures NH consumers are receiving quality work to achieve maximum energy and cost savings.

Global energy costs continue to rise and New Hampshire continues to import 90 percent of its energy from other states and nations. A workforce trained to perform energy-efficiency work in all sectors is essential to reduce energy costs and support New Hampshire's future economic growth.

LRCC worked with the New Hampshire Division of Economic Development to develop and implement the energy auditor training program with GHGERF funding. Without this grant funding the program would not have been developed.

In 2010, LRCC received an additional GHGERF grant of \$235,000. The additional support will allow LRCC to continue to expand their leadership role in state-wide training of energy efficiency certified professionals.

***The training given by LRCC was very detailed and intense. The BPI certifications have been very good for our business and we are looking forward to taking more courses through the College.***

John Haithcock, Adros Energy

**FOR MORE INFORMATION**

LRCC Efficiency Training Program, Andy Duncan, Energy Trainings Manager  
aduncan@ccsnh.edu Tel. 603-524-3207 x6629

GHGERF and New Hampshire's Regional Greenhouse Gas Initiative  
[www.puc.nh.gov/Sustainable%20Energy/GHGERF.htm](http://www.puc.nh.gov/Sustainable%20Energy/GHGERF.htm)



**NH's Greenhouse Gas Emissions Reduction Fund (GHGERF)**  
**Promoting a Green Economy & Energy Independence for New Hampshire**

**A CASE STUDY**

**Central New Hampshire Business Expands into Energy Efficiency**

For over 20 years, Newell & Crathern Builders, LLC in Loudon has been serving the residential home community in New Hampshire with its expertise in new construction and remodeling. Owner Bill Newell built his first house in 1987 and he has remodeled many houses in the Concord area. He took the Lake Region Community College's (LRCC) Building Analyst course and became a certified Building Performance Institute (BPI) Building Analyst (BA) in early 2010. Following the course, he made a significant investment in new equipment and expanded his company's offerings.

The training and equipment have allowed his company to offer energy auditing and weatherization services to the private sector, as well as to work extensively as a contractor for the Community Action weatherization program and reduce energy costs for residents in New Hampshire. The energy auditor training has allowed Newell & Crathern to offer customers a new way of looking at how a building should be constructed to allow for maximum energy efficiency.

To accommodate the additional work, Newell and Crathern, LLC has expanded and now has a crew of four, several of them building framers who were out of work due to the depressed housing industry. "It's hard work and I am not getting rich from this business, but it is a good feeling to make a difference in people's homes."



**Bill Newell preparing to dense-pack walls with blown-in insulation.**

As part of its Building Analyst course, the LRCC conducted 13 energy-auditor trainings during late 2009 and throughout 2010. The courses have reached over 170 building professionals from across the state and have expanded the New Hampshire workforce capable of reducing energy costs incurred by New Hampshire residents, businesses and municipalities.

Increasing the number of building and energy professionals trained to perform energy efficiency work helps to ensure NH companies can compete in this rapidly growing industry. This training also ensures that NH consumers are receiving quality work that will achieve maximum energy and cost savings.

Global energy costs continue to rise and New Hampshire continues to import 90 percent of its energy from other states and nations. A workforce trained to perform energy-efficiency work in all sectors is essential to reduce energy costs and support New Hampshire's future economic growth.

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*"My crew is great, and now they look at buildings completely differently. They now see every piece of framing as a negative in overall thermal performance."*

*Bill Newell, Owner, Newell & Crathern Builders, LLC*

**FOR MORE INFORMATION**

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GHGERF and New Hampshire's Regional Greenhouse Gas Initiative  
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**NH's Greenhouse Gas Emissions Reduction Fund (GHGERF)**  
**Promoting a Green Economy & Energy Independence for New Hampshire**

**A CASE STUDY**

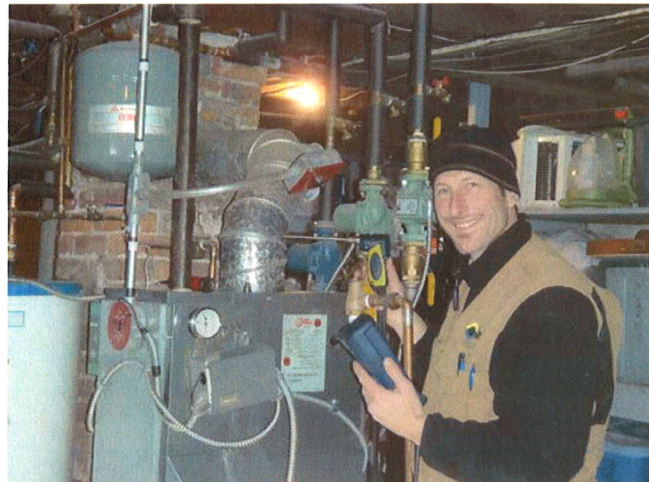
**New North Country Business Specializes in Energy Efficiency**

**NHNRG is a full-service energy-auditing and building-performance contractor that serves residential, commercial and municipal clients in the North Country.** The company was founded by Shad Lawton and Jamie Myers, who were students in an October 2009 Building Performance Institute (BPI), Building Analyst (BA) class developed by the Lakes Region Community College (LRCC) with funding from the GHGERF. As a result of taking the class, held in Littleton, NH, they decided to work together and started their company in Lisbon, NH.

As a company, they have conducted over 140 energy audits and over 80 retrofits since taking the course. Mr. Lawton commented, "I was very interested in learning more about building science after building several Energy Star® homes. I really enjoyed the course and the field-based instruction was very helpful. I had wanted to get certified for a while but the cost and distance to the closest course was prohibitive for me. Then LRCC advertised that they were offering the BPI BA course with the discounted tuition in Littleton – it was a no-brainer."

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Increasing the number of building and energy professionals trained to perform energy efficiency work helps to ensure NH companies can compete in



*Shad Lawton, NHNRG, performing combustion testing*

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*The key components of the audits that we are now doing every day are taught in the Building Analyst course. We had a very busy year in 2010, but there is enough housing stock in the North Country alone, to keep several companies busy for years to come.*

Shad Lawton, NHNRG

**FOR MORE INFORMATION**

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