

**Lakes Region Community College
with New Hampshire Division of
Economic Development**

**Energy Auditor Training
RGGI Grantee Presentation
August 2009 – March 2011 Program**

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Community College**

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Development**



Overall Program & Purpose

- **Official Title: “Expanded Energy Efficiency and Renewable Energy Program”**
- ***Working Title: “Energy Auditor Training Program”***
 - Goal: “To increase the number of trained energy auditor contractors in the NH workforce”
- **\$174,000 in total RGGI funding over 1 ½ years**
 - Through NH Division of Economic Development
 - \$168,500 to Lakes Region Community College
 - Reduced tuition costs for students

Training Leading to BPI Certification

- **Building Performance Institute (BPI)**

www.bpi.org

- Nationally recognized certifications
- Focus on existing residential buildings
- Multiple certifications
- Rigorous examination & recertification process

- **BPI emphasis on health & safety, building durability as well as energy efficiency**

- Combustion safety
- Reducing interior moisture problems
- “Seal tight and ventilate right”



**AFFILIATE
ORGANIZATION**

Energy Auditor Training: BPI “Building Analyst” Course

- **Intensive 6+ day training**
 - Contact hours similar to 3 credit college course
 - About half instruction in the field
- **Leading to BPI certification exams**
 - 100 question written exam + 2 hour field exam



Jan. 2010 class at HBRANH



BPI field exam -- proctor & student

Components of a Building Analyst Energy Audit



Visual assessment



Blower door air leakage test

Minimum Building Airflow

$$CFM_{50} = \frac{0.35 * \text{volume} * N_{hc}}{60}$$

Field calculations



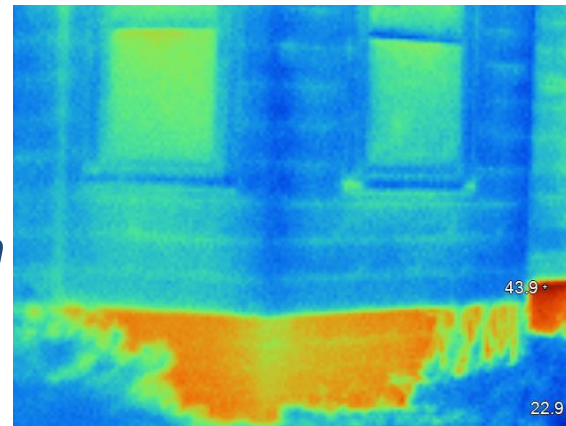
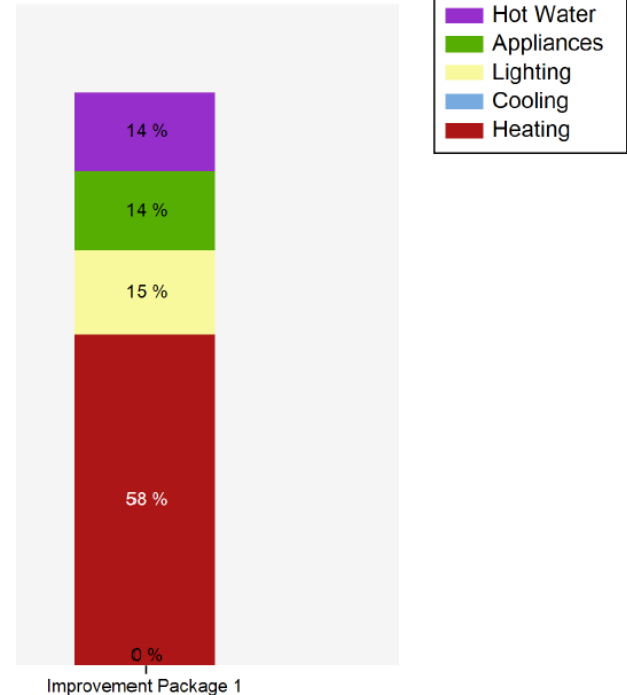
Carbon monoxide & combustion safety tests

Additional Trainings Offered

- BPI “Envelope Professional”
- “TREAT Energy Modeling”
 - *Sample TREAT report graphic* →
- “Insulation & Air Sealing Muddy Boots Workshop” (through PAREI)
- “Infrared for Weatherization and Energy Audits”

– *Exterior infrared image with uninsulated basement* →

Energy Bill by Category



Training Classroom Locations

Laconia (6)

Concord (5)

Nashua (2)

Plymouth (2)

Littleton

Portsmouth

Lebanon



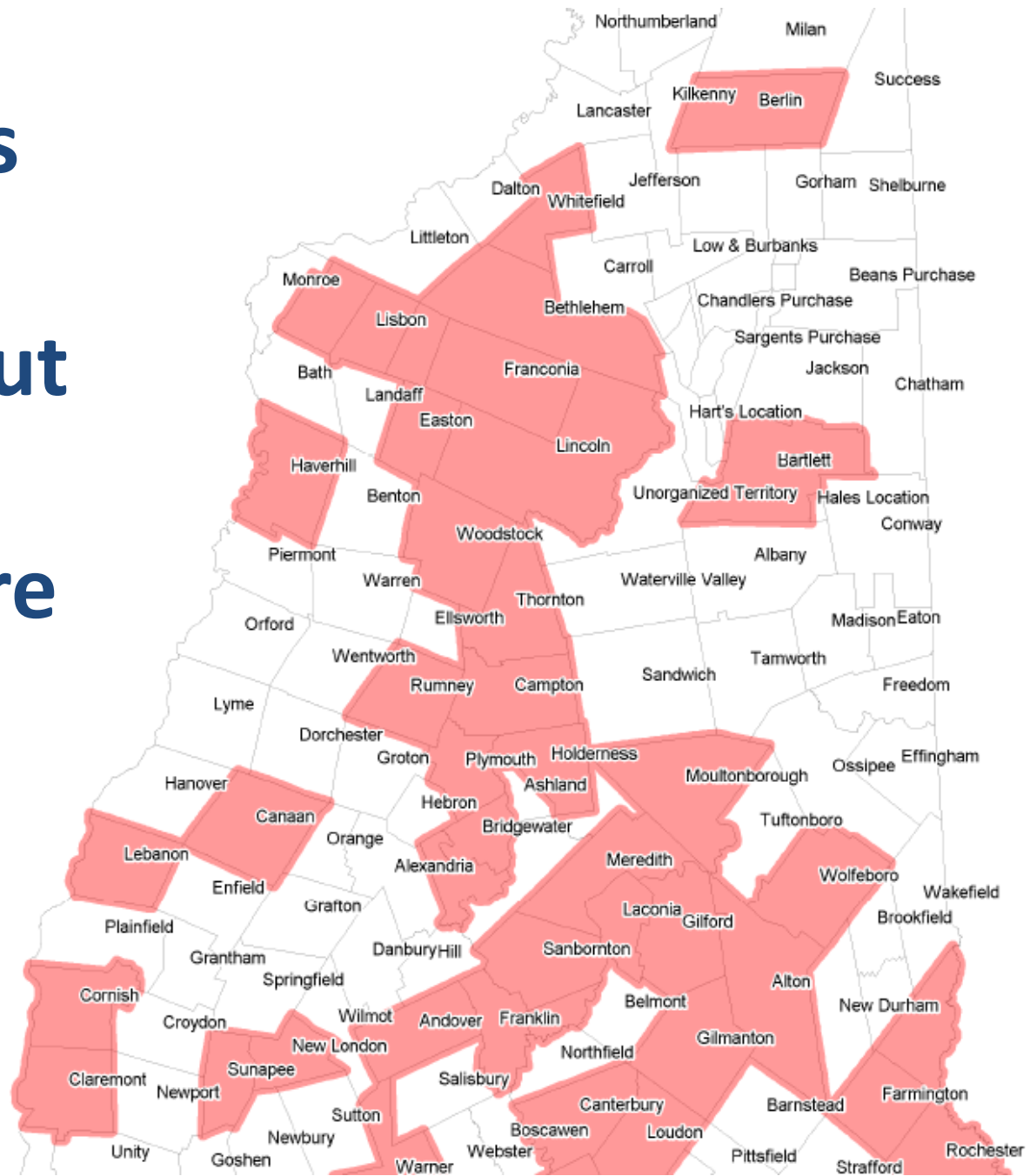
Student Characteristics

- **Overall:**
 - Average age ~45
 - Over 90% male
 - Typically homeowners
- **Common student types**
 - Energy professional seeking BPI credentials
 - Remodeler/carpenter gaining building science skills
 - Other professional career changer
 - Unemployed / student



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Students from throughout New Hampshire



Volunteer Houses

- **Crucial to the success of the course**
 - Time consuming logistics
- **Students sleuthing a house in return for free diagnostic tests**
- **Over 90 houses used**
 - A weatherization training center would facilitate instruction
- **Energy savings**
 - In volunteer's homes
 - In student's homes



Alliances with Other Organizations

Including:

- **NH Colleges**
 - White Mountains Community College, Nashua Community College, Great Bay Community College, Lebanon College, Southern NH University
- **Not-for-profit Organizations**
 - Home Builders & Remodelers Assn. of NH (HBRANH), Plymouth Area Renewable Energy Initiative (PAREI), Sustainable Energy Resource Group (SERG), Society for Protection of NH Forests (SPNHF)
- **All Major NH Energy Utilities**
- **NH Office of Employment Security**

Training Outcomes

- **222 total students in 18 courses**
 - 151 BPI certified out of 176 taking BPI exams
 - From 80 NH municipalities
- **August 2010 alumni survey results**
 - 8.5% became employed in the energy field
 - 10% started a new energy business
 - 20% started a new line of work or attracted new customers
 - 38% increased their skills in existing jobs
- **Developing the building energy performance field**
 - Higher standards and more professionalism
 - Green collar jobs, saving energy & reducing fossil fuel use

Student Stories: Shad from Sugar Hill, NH

- Took Fall 2009 Building Analyst in Littleton
- With classmate formed a successful energy auditing and contracting company

Student Stories: Bill from Loudon, NH

- Took January 2010 Building Analyst course
and two additional trainings in 2011
- Expanded a building/remodeling company into weatherization contracting
 - Hired 4 underemployed framers

2nd Round 2011 – 2012

Efficiency Training Program

- **Continues and expands on 1st round program**
 - Adds Plymouth Area Renewable Energy Initiative (PAREI) as a supporting partner
- **Components include:**
 - Wider audience- building energy professionals, allied professionals and advanced DIY'ers
 - More weatherization installer trainings
 - Mentoring program
 - Equipment rental program
 - Collaborating with additional organizations

Conclusion

- **Successful energy auditor training program**
- **BPI certification has created additional professional credibility**
- **Ongoing Efficiency Training Program is building from this successful foundation**
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