

Building Performance Institute

An Overview of BPI
Certification & Standards
Massachusetts Green Career
Conference

September 30, 2011

John Jones



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The Challenge

- Nearly 130,000,000 housing units in U.S. older stock
- HPwES programs currently reaching less than 10% of the non-low income housing stock
- Ramping up to a ten year upgrade on all existing homes
- Aging Workforce
- Creating Career Path for the Home Performance Industry

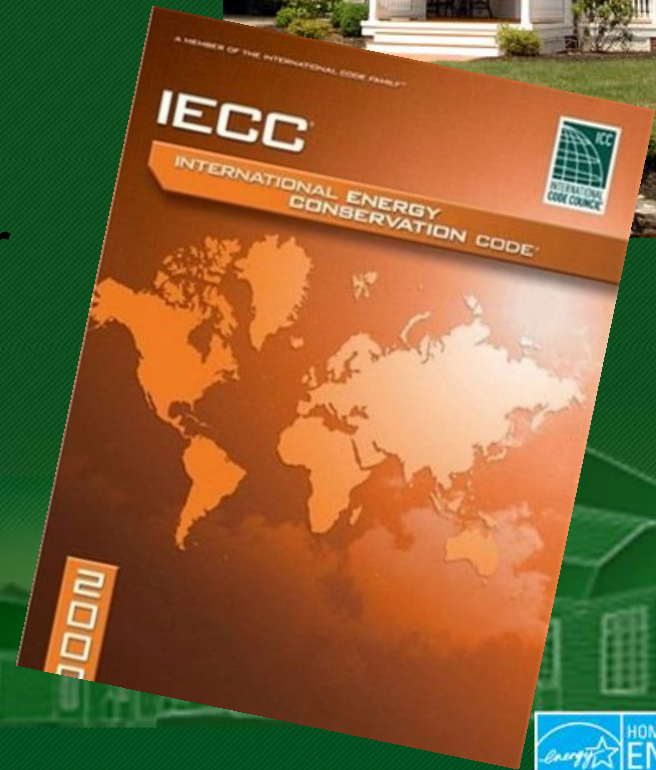


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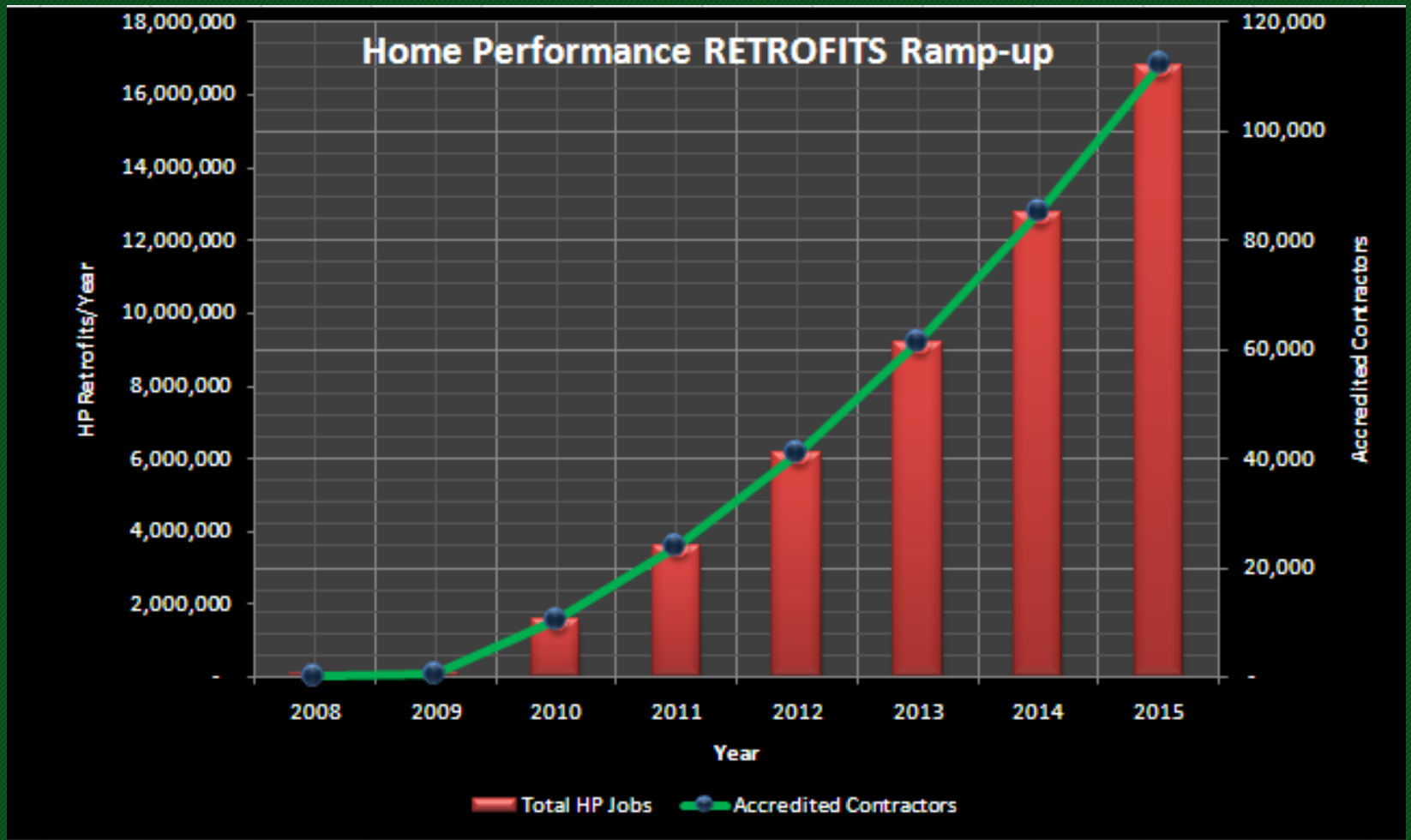
Residential Energy Retrofit Industry

- Current Potential
 - 130 million existing homes
 - 1/3 over 45 yrs old
 - 1/3 25 – 45 yrs old
- At current pace approximately 1000 yrs or more to retrofit



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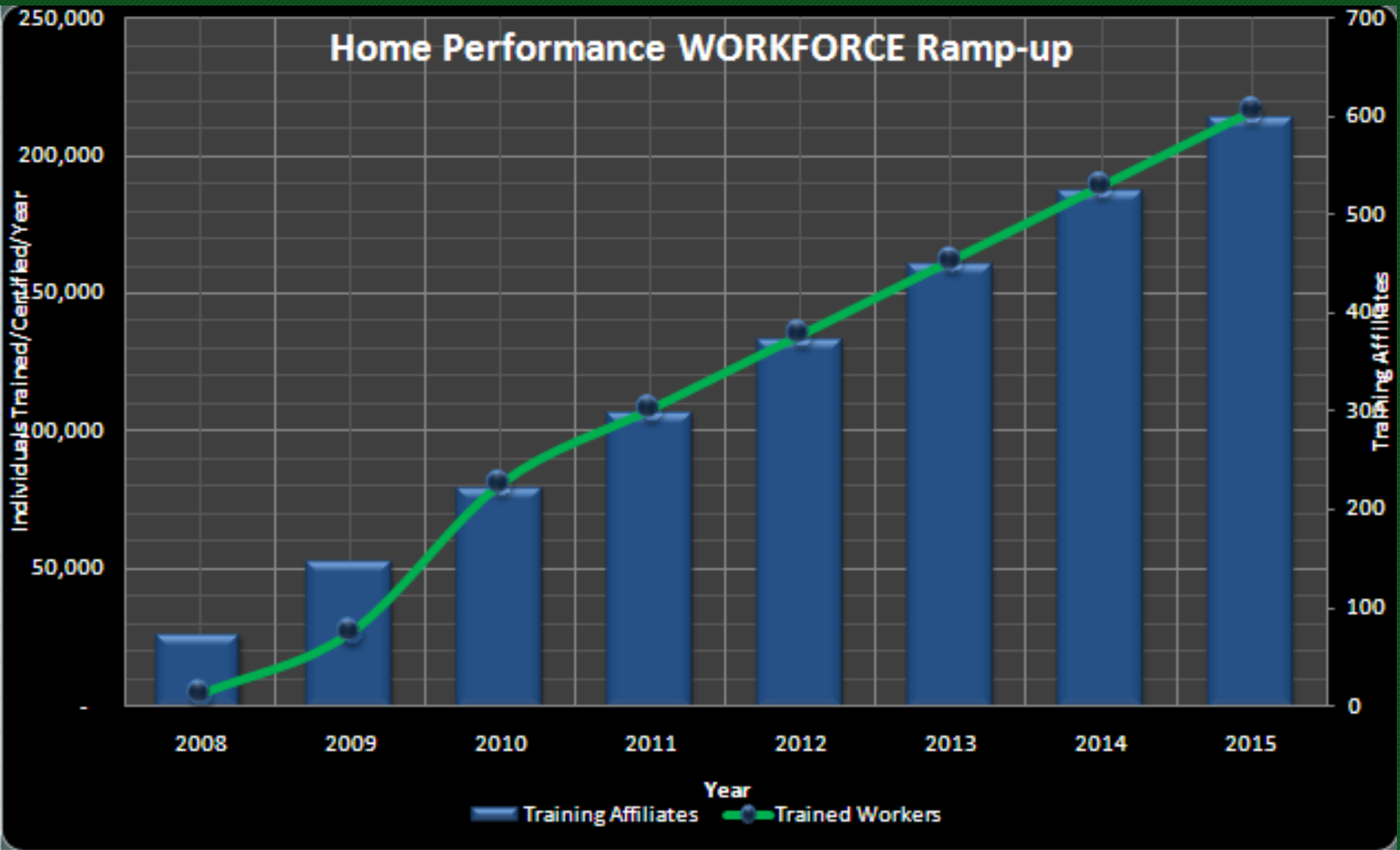




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Home Performance WORKFORCE Ramp-up



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Residential Energy Retrofit Industry

- Current Workforce
 - Many older workers
 - Transient workers
 - Very small pool of backfill

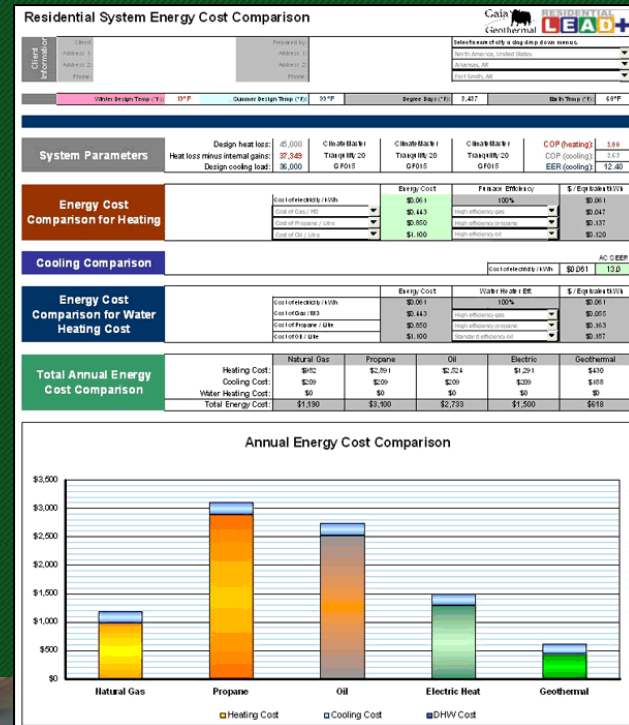


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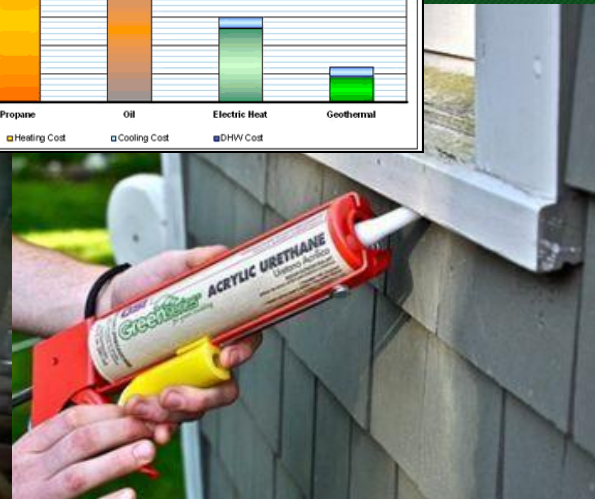
PERFORMANCE WITH
ENERGY STAR

Residential Energy Retrofit Industry

- Current Skills
 - Air sealing
 - Insulation
 - Other Shell measures
 - Limited Energy modeling
 - Limited HVAC



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Residential Energy Retrofit Industry

- Current Supportive Infrastructure
 - Weatherization Programs
 - Community College Continuing Ed
 - Other private training



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Where do we go from here??



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Industry Standards and Certifications, Standard Work Specifications

- Industry is asking for them
- Programs and homeowners are demanding a higher level
- Installers want guidance
- Need to be able to verify “good” vs. “bad”



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What is Needed?

Career Path for Home Performance

- Introduction – Basic Building Science Certificate
- Installer Certification
- Diagnostic Tester/BA Certification
- Crew Chief/Leader Certification
- Energy Auditor Certification
- Quality Assurance Inspector Certification



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**Best Practices
Identified
Standards
Developed**



**Certification of
Competency**

**Curriculum Developed & Training
Provided by Independent Organizations**



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Building Performance Institute Standard Work Requirements



2 - ATTIC INSULATION PREP DETAIL: ATTIC ACCESS HATCHES & DOORS

DESIRED OUTCOME(S):

- 1) Air does not enter or exit the house through attic access hatches and doors.
- 2) Complete insulation coverage exists throughout the ceiling plane.

REQUIREMENTS		DESIRED OUTCOME(S)
<u>INSULATION DAM</u>	<ol style="list-style-type: none"> 1) A rigid dam (wood or better) having a height greater than insulation shall be constructed to assure insulation doesn't fall into the access opening. OR 2) If attic space does not allow for a rigid dam, insulation batt can act as insulation dam. 	Keep insulation in place.
<u>SEALANTS & WEATHER-STRIPPING</u>	<ol style="list-style-type: none"> 1) Sealant shall be used on all gaps and cracks adjacent to the attic access hatch or door on the house side. 2) All access hatches and doors shall be weather-stripped. 	<ol style="list-style-type: none"> 1) Adhesion of the sealant to all surfaces to be sealed. 2) All sealants and weather-stripping will block air flow.
<u>INSULATION</u>	<ol style="list-style-type: none"> 1) Hatch shall be insulated to the same R-value as surrounding surface (e.g. attic or knee wall). 2) Insulation must be permanently attached and in complete contact with hatch. 	Achieve continuous thermal barrier that is durable.

Revision Date
3.12.2010



What is BPI Certification?

A professional credential awarded by BPI to individuals who successfully demonstrate competency in “whole house” building performance.



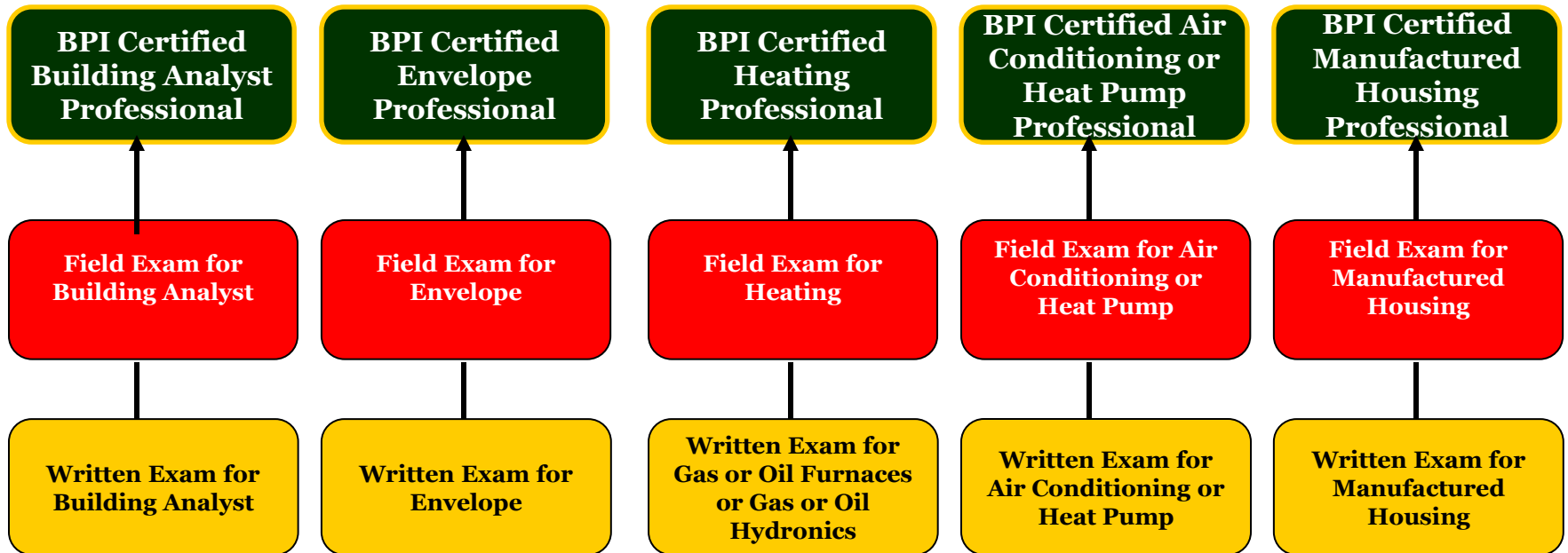
**CERTIFIED
PROFESSIONAL**



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BPI Certification Model



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New Certifications

- Residential Building Envelope Whole House Air Leakage Control Installer
- Residential Building Envelope Whole House Air Leakage Control Crew Chief



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Standards Development Process

- Standards Management Board (Five members including one from DOE) – Oversees that standards development follows ANSI protocols
- Standards Technical Committee (11 members including two DOE National Laboratories) – Commissions working groups to develop and maintain standards. Oversees public comment process.



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Certification Development Process

- Certification Management Board (Five members) Oversees that certification development follows ANSI protocols
- Certification Scheme Committee (consists of members representing sectors impacted by certification) – Commissions working groups to develop and maintain certifications.



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Training Infrastructure

- 280+ Independent Training Organizations
- 48 community and state colleges
- Additional 90 colleges offer EE training aligned with BPI



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Independent Training in Mass.

- Center for Ecological Technology-CET

320 Riverside Drive, Northampton, MA, 01062

(413) 586-7350 x240 Heather Lohr www.cetonline.org

- Conservation Services Group, Inc.

40 Washington Street, Westborough, MA, 01581

(508) 836-9500 x13029 Shannon Meserole www.csgrp.com

- Green Stamp

184 Riverview Avenue, Waltham, MA, 02453

(781) 899-3618 Benjamin Marshall www.greenstampco.com



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Independent training in Mass.

- HeatSpring Learning Institute

220 Concord Avenue, Cambridge, MA, 02138

(800) 393-2044 x44 Brian Hayden www.heatspring.com

- North Shore Community College

100 Cummings Center, 121E, Beverly, MA, 01915

(978) 236-1200 Nancy Plante www.northshore.edu

- YouthBuild U.S.A.

58 Day Street, Somerville, MA, 02144

(617) 741-1285 Eva Blake, Green Initiative Director www.youthbuild.org

Visit www.bpi.org for complete list



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It boils down to what needs to happen?

- Recognize and strongly promote this industry
- Develop a clear career path for individuals both secondary and post-secondary
- Work with State and US DOL to develop job classifications
- Need one-stop career centers linked with local employers
- Establish apprenticeship programs with willing contractors
- Link training to requisite certifications (BPI, RESNET, NATE)
- Accredit training programs and certify trainers



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Thank You
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