

Introduction to Home Energy

COURSE DESCRIPTION

Using a “whole-house,” performance-based approach, this training program will prepare students for the Building Performance Institute’s (BPI) Building Analyst and Envelope Professional online and field tests and will provide a new way of thinking about residential buildings. While focusing on building envelope diagnostics, participants will come to understand how the house works as a system, why some homes fail, and how to use the latest building science technology to help resolve residential heating, cooling, base load and building air leakage problems. Students will also utilize the latest computer simulation tools to configure realistic energy efficiency and health and safety scenarios to be diagnosed and addressed. By using the “whole-house” performance-based approach, a comprehensive range of interrelated building issues are addressed. Course is approved by the Building Performance Institute for continuing education credits.

Prerequisites:

- Basic Math and Reading Skills (grade 8-9 level)
- Basic Building Science background is strongly recommended

Schedule:

The Introduction to Home Energy Course consists of 32 hours of classroom instruction and 8 hours of field training for a total of 40 instructional hours. The course is also supported by INTERCAZ™ by Interplay Energy, a comprehensive Combustion Appliance Safety training simulation program.

NYSERDA's Workforce Development Program offers energy efficiency and building science courses through training partners across New York State. This training is recognized by the Building Performance Institute (BPI) and prepares students for BPI certification exams.

The curriculum for the training courses was developed under contract and is the property of NYSERDA. This popular curriculum is available to other training entities through licensing agreements with NYSERDA. Schools, energy service providers, private industry and public entities have used this curriculum, saving them time and money and giving them the ability to begin training programs immediately.

**For more information, please contact
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COURSE DESCRIPTION *(continued)*

Training Topics:

- Health and Safety Issues
- Moisture Measurements and How They Affect Your Workscope
- Fundamentals of Building Science
- Energy Consumption and Analysis
- Analyze Buildings Using “Blower Door” Technology and Other Diagnostic Equipment
- Assess Building Tightness, Mechanical and Distribution Systems, and Combustion Safety for a “Whole-House” with a Performance-based Approach
- Building Airflow Standard and Advanced Pressure Diagnostic Applications
- Treating the Thermal Envelope
 - Insulation Techniques and Installation Standards
 - Air Sealing and Installation Standards
- Heat Loss Calculations For Existing and Improved Conditions
- Practical Application of “Blower Door,” Combustion Safety Testing, and Other Diagnostics for Assessing Air Leakage and Efficiency In Buildings
- Forced Air Distribution System Overview
 - Visual Inspection of the Duct System
- Diagnostic Testing for the Forced Air Distribution System
 - Duct Blower and Duct Leakage Measurement
- Treating the Forced Air Distribution System
- Mechanical Ventilation
 - Fan Sizing Calculations
 - Installed Fan Measurement
 - Controls and Fan Cycling
- Building System Interrelationships and Final Workscope Development
- Field Practical

