Occupational Outlook

What Home Energy Auditors Do

Home Energy Auditors identify and prioritize energy saving measures to improve the operation, maintenance, or energy efficiency of a building. They inspect or evaluate building envelopes, mechanical systems, electrical systems or process systems to determine the energy consumption of each system and audit reports are prepared with the energy analysis results and recommendations for energy cost savings. They perform tests such as blower-door test to locate air leaks. Job specification sheets for home energy improvements such as attic insulation, window retrofits or heating system upgrades are prepared. They educate customers on energy efficiency or answer questions on topics such as the costs of running household appliances or the selection of energy efficiency appliances.

Work Environment

Home Energy Auditors usually travel to homes to conduct tests using specialized equipment such as carbon monoxide detectors, infrared cameras, multimeters, blower doors, smoke pens and duct probe velometers. Some continue for an Associate's degree.

Education

Most Home Energy Auditors require training in a certification program such as the Building Performance Institute suite of certifications.

Pay

The median annual wage for home energy auditors was $66,170 in 2015. Entry-level wages are often lower than the median.

Skills

- Oral Expression – the ability to communicate information and ideas in speaking so others will understand.
- Problem Sensitivity – the ability to tell when something is wrong or likely to go wrong.
- Written Comprehension – the ability to read and understand information and ideas presented in writing.

Work Activities

- Identify opportunities to improve operational efficiency.
- Assess the cost effectiveness of products, projects or services.
- Inspect facilities or equipment to ensure specifications are met.
- Analyze risks related to investments in green technology.
- Prepare financial documents, reports or budgets.

Job Outlook

Projected job growth from 2014-2024 is 5% to 8%.

Source: onetonline.org

BUILDING PERFORMANCE INSTITUTE INC. BPI ™

CERTIFIED PROFESSIONAL

BUILDING SCIENCE & ENERGY EFFICIENCY

BPI BUILDING SCIENCE PRINCIPLES CERTIFICATE OF KNOWLEDGE

Are you considering a career in green buildings, sustainability or energy efficiency? Do you already work in the residential building trades? If so, basic building science knowledge is critical to your success. Earning the Building Science Principles certificate is your first step into the world of energy efficient home performance. Building science demonstrates how various components of the home interact to affect the home's overall performance. Understand the relationship between the building envelope, heating, A/C, insulation, mechanical ventilation, lighting, appliances and other systems of the home. Learn how all of these systems affect the comfort, health and safety of occupants and durability of the home. Discover why improving the energy efficiency of the home is the first step toward solar, geothermal or other renewable energy improvements. Fee includes an online exam and textbook.

DCB 2097-01	**ONLINE**		**Open Enrollment**		**$299**

BPI BUILDING ANALYST - INTRODUCTION TO HOME ENERGY AUDITING

Prepares students to perform "whole-house" energy assessments, identifying a building's problems at the root cause and prescribing and prioritizing solutions based on building science principles. Upon successful completion of the written and field exams, students receive Building Analyst Certification.
Prerequisite: Basic building science background strongly recommended
Reference textbook: *Residential Energy, ISBN: 9781880120231*

DCB 1842-49	**M–F**	**1/30-2/3**	**8am–5pm**	**SRC, Kelder**	**$995**

Class on Friday is from 9-11am and is held at the KSU in Kingston.

DCB 1842-50	**M–F**	**2/27-3/3**	**8am–5pm**	**SRC, Kelder**	**$995**

Class on Friday is from 9–11am and is held at the KSU in Kingston.
Approved for 8.5 BPI CEUs.

BPI BUILDING ANALYST WRITTEN EXAM

DCB 1025-49	**F**	**2/3**	**11am–1pm**	**KSU**	**$200**
DCB 1025-50	**F**	**3/3**	**11am–1pm**	**KSU**	**$200**
DCB 1025-51		**By Appointment**		**KSU**	**$200**

BPI BUILDING ANALYST FIELD TEST

Subject to a $200 non-refundable fee. To register call 845-339-2025.

DCB 1143-20		**By appointment**		**SRC, Kelder**	**$400**

BPI FIELD TEST PREP CLASSES

By appointment SRC, Kelder $250 each. To register call 845-339-2025.

DCB 1883-13	**BPI Building Analyst Field Test Prep**
DCB 1890-09	**BPI Envelope Field Test Prep**
DCB 1891-08	**BPI Heating Field Test Prep**
DCB 1893-09	**BPI A/C Heat Pump Field Test Prep**

BPI ENVELOPE PROFESSIONAL

Learn to quantify "whole-house" performance and prescribe improvements to help tighten the building envelope (shell), stop uncontrolled air leakage, install needed insulation, and optimize comfort, durability and HVAC performance. Prerequisite: BPI Building Analyst training.

DCB 1843-27	**M–R**	**4/3-6**	**8am-5pm**	**SRC, Kelder**	**$975**

Class on Thursday is from 9-11am and is held at the KSU. *Approved for 8.5 BPI CEUs*

BPI ENVELOPE PROFESSIONAL WRITTEN EXAM

DCB 1026-28	**R**	**4/6**	**11am–1pm**	**KSU**	**$200**
DCB 1026-29		**By Appointment**		**KSU**	**$200**

BPI BUILDING ENVELOPE FIELD TEST

Subject to a $200 non-refundable fee. To register call 845-339-2025.

DCB 1149-14		**By Appointment**		**SRC, Kelder**	**$400**

BUILDING SCIENCE & ENERGY EFFICIENCY

BPI HEATING PROFESSIONAL

Learn how to optimize the performance of heating equipment to help save energy and ensure occupant comfort, health, and safety. Prerequisite: BPI Building Analyst training. **Instructor: N. Jen**

DCB 1036-16	**M–F**	**4/24-28**	**8am-5pm**	**SRC, Kelder**	**$1,300**

Approved for 8.5 BPI CEUs

BPI HEATING PROFESSIONAL WRITTEN EXAM

DCB 1635-16	**F**	**4/28**	**11am–1 pm**	**KSU**	**$200**
DCB 1635-17		**By Appointment**		**KSU**	**$200**

BPI HEATING PROFESSIONAL FIELD TEST

Subject to a $200 non-refundable fee. To register call 845-339-2025.

DCB 1150-17	**By Appointment**		**SRC, Kelder**	**$400**

BPI A/C HEAT PUMP PROFESSIONAL

Learn how A/C Heat Pump systems work within the whole house and how to diagnose and correct problems properly to achieve peak performance. **Instructor: R. Creter.** *Approved for 8.5 BPI CEUs*

DCB 1256-08	**5/8-12**	**8am-5pm**	**SRC, Kelder**	**$1,300**

BPI A/C HEAT PUMP WRITTEN EXAM

DCB 1262-09	**5/12**	**11am-1pm**	**KSU**	**$200**

BPI A/C HEAT PUMP FIELD EXAM

Subject to a $200 non-refundable fee. To register call 845-339-2025.

DCB 1270-10	**By Appointment**		**SRC, Kelder**	**$400**

HVAC DUCT TESTING: STANDARDS & HANDS-ON DEMO

This workshop will provide an overview of the NYS Energy Conservation Code requirements and technical standards for centrally ducted distribution systems in residential construction, both new and existing homes. Includes a hands-on demonstration of duct leakage testing. **Instructor: P. Strocchia**

DCB 2089-01	**W**	**3/29**	**7:30–10am**	**SRC, Kelder**	**$59**
DCB 2089-02	**T**	**4/20**	**7:30–10am**	**SRC, Kelder**	**$59**

Approved for 1.25 BPI CEUs.

RETROFITTING FOR RESILIENCY

This course will provide contractors and builders an in-depth overview of design strategies, features and materials to implement Resilient Retrofits. The presentation will be based on two case studies and will focus on the integration of resilient features into energy efficiency improvement projects and Deep Energy Retrofits to make existing homes substantially more durable under severe weather conditions.

Instructor: P. Strocchia. *Approved for 1.25 BPI CEUs.*

DCB 2090-01	**R**	**2/2**	**7:30–10am**	**SRC, Kelder**	**$59**

NEW! RESIDENTIAL INFILTRATION TESTING UNDER 2015 INTERNATIONAL RESIDENTIAL CODE

With the adoption of 2015 IRC, New York State now mandates infiltration testing in many major construction projects. This opens new opportunities for qualified individuals who are interested in providing blower door testing services. Testing, however, "shall be conducted in accordance with ASTM E 779 or ASTM E 1827" and other specific guidelines. This workshop explores how to conduct blower door testing in compliance with 2015 IRC. Prerequisite: BPI or similar certification and familiarity with blower doors

Instructor: N. Jen *BPI CEUs Pending.*

DCB 2091-01	**M**	**2/13**	**8am-noon**	**SRC, Kelder**	**$99**

OSHA 10-HOUR CONSTRUCTION SITE SAFETY

Course provides workers with a general awareness to recognize and prevent hazards at the work site.

HIS 1359-03	**ONLINE**	**Open Enrollment**	**KSU**	**$49**

BUILDING SCIENCE & ENERGY EFFICIENCY

NEW! BLOWER DOOR WORKSHOP IN THE KELDER HOUSE

This workshop is an intermediate-level workshop for individuals already familiar with basic blower door set up and use. We explore some of the advanced functions on the Energy Conservatory BD-3 blower door including automated testing and logging. We also explore zonal pressure diagnostics in detail using Kelder House as a working "test house." A fun hands-on experience for all! Prerequisite: familiarity with Energy Conservatory blower doors. **Instructor: N. Jen**

DCB 2092-01	**W**	**3/8**	**8am-noon**	**SRC, Kelder**	**$99**

Approved for 2.0 BPI CEUs.

NEW! STRATEGIES FOR COMPLIANCE WITH IRC 2015 DUCT LEAKAGE TESTING

2015 IRC now calls for much more stringent duct leakage testing, presenting new challenges to HVAC contractors. This seminar discusses the new 2015 IRC requirements and discusses strategies for complying with this new standard. This is intended for HVAC contractors and individuals providing duct leakage testing services. Prerequisite: familiarity with ducts and duct leakage testing. **Instructor: N. Jen**

DCB 2093-01	**W**	**3/15**	**8am-noon**	**SRC, Kelder**	**$99**

Approved for 1.14 BPI CEUs.

NEW! 2016 NYS ENERGY CODE: THE ENERGY RATING INDEX (ERI) PATHWAY

This course will provide building professionals an understanding of how the ERI Compliance Path of the 2016 NYS Residential Energy Code can be a cost-effective approach to meeting the energy standard when building new homes. The presentation will address both single-family and low-rise multi-family buildings. *Approved for .71 BPI CEUs.* **Instructor: P. Strocchia**

DCB 2094-01	**R**	**2/9**	**7:30–10am**	**SRC, Kelder**	**$59**

NEW! ZERO-ENERGY BUILDING

This course will provide contractors and builders an in-depth overview of design strategies, features and materials to build Net-Zero Energy Homes. The presentation will be based on case studies of newly constructed homes that perform have been designed to achieve Net-Zero Energy performance.

Approved for 1.25 BPI CEUs. **Instructor: P. Strocchia**

DCB 2095-01	**R**	**2/16**	**7:30–10am**	**SRC, Kelder**	**$59**

BUILDING AIR-TIGHTNESS, VENTILATION & IEQ

In this half-day workshop, students are presented with the critical relationship between energy efficiency and the need for ventilation within homes for both new construction and existing homes. The workshop focus includes the NYS Code requirements for energy efficiency as well as the national standards for ventilation. Real-world examples of condensation issues and other impacts are provided. The course also provides attendees with the necessary information to make proper design and HVAC product selections to enhance indoor environmental quality. The course has been designed specifically for building professionals, contractors and tradesmen, code officials and home inspectors. *Approved for 2 BPI CEUs.*

Instructor: P. Strocchia

DCB 1023-18	**W**	**6/7**	**8am-noon**	**SRC, Kelder**	**$99**

NEW! BLOWER DOOR TESTING - STANDARDS & HANDS-ON DEMO

This course is designed for building professionals including home builders, contractors, architects, engineers and code officials. This presentation will provide an overview of the most recently adopted NYS Energy Codes requirements for building tightness as well as a hands-on demonstration of the Building Air-tightness Testing, or more commonly known as Blower Door Testing. *Approved for 1.25 BPI CEUs.*

Instructor: P. Strocchia

DCB 2116-01	**T**	**4/11**	**7:30–10am**	**SRC, Kelder**	**$99**
DCB 2116-02	**R**	**5/18**	**7:30–10am**	**SRC, Kelder**	**$99**

BUILDING SCIENCE & ENERGY EFFICIENCY

NEW! BPI HEALTHY HOME EVALUATOR

Demand is growing for preventative home health assessments and interventions in the public and private marketplace. From identifying asthma triggers and risk of lead poisoning to testing for CO and other health hazards, tremendous opportunity exists to incorporate healthy home measures into home performance assessments. Developed in partnership with the Green & Healthy Homes Initiative (GHHI), this certification builds upon the BPI Building Analyst (BA), Energy Auditor (EA) or Quality Control Inspector (QCI) certifications to verify competencies required to conduct in-depth healthy home environmental risk assessments. The Healthy Home Evaluator assesses home-based environmental health and safety hazards and provides a prioritized list of recommendations to address those hazards.

Prerequisite: Active BPI Building Analyst, Energy Auditor or Quality Control Inspector Certification.

Instructor: N. Jen

DCB 2096-01	**M-W**	**3/20-22**	**9:30am-3pm**	**SRC, Kelder**	**$399**

Note: Class held on W ends at noon and is held at KSU.

NEW! BPI HEALTHY HOME EVALUATION EXAM

DCB 2121-01	**W**	**3/22**	**1-3pm**	**KSU**	**$200**

SUMMER TECHNICAL INSTITUTE

NEW! INSPIRING THE NEXT GENERATION OF SOLAR ENERGY PROFESSIONALS

The Solar Summer Technical Institute is an intensive learning experience that includes presentations from solar professionals, hands-on activities and field visits. The Summer Institute takes place on a college campus where participants work in collaborative teams to assemble a PV system. Students will learn and apply industry best practices and learn how to size and design a basic PV system. This program is geared towards those interested in a career in sustainability, green building maintenance and design, engineering or solar installer. According to O*Net, the projected growth for PV Installers in the US (2014-2024) is expected to be 24%. This 3-credit course is available to those 16 years or older.

Recommended Prerequisite: Electrical Theory or equivalent. **Instructor: J. Novak,** IREC Master Trainer

MFG120	**S/U**	**7/15-30**	**8am–5pm**	**SRC, Kelder**	**$588 (inc. fees)**

Class on Saturday, July 22nd and 29th will end at 6pm.

NEW! BASICS OF BUILDING SCIENCE

The Building Science Summer Technical Institute is an intensive learning experience that includes presentations from Building Science professionals and hands-on activities. The Summer Institute takes place on a college campus where participants will study "whole-house" energy assessments, identify efficiency, moisture and health problems at their root causes, then learn to prescribe and prioritize solutions based on building science principles. Students will be taught by an Energy Coach and will learn and perform hands-on building science activities in the state-of-the-art energy efficiency building science test house used for training professionals in this field. This course is geared towards those interested in a career as an Energy Auditor, Architect, General Contractor as well as those interested in starting their own business. According to O*Net, the projected growth for Energy Auditors in the US (2014-2024) is expected to be 8%. This course is available to those 16 years or older. **Instructor: N. Jen**

DCB 2097-01	**M-F**	**7/24 – 28**	**9am–4:30 pm**	**SRC, Kelder**	**$495**

GREEN BUILDING A.A.S.

GREEN BUILDING MAINTENANCE & MANAGEMENT A.A.S.

61-63 credits

Gain the skills and knowledge needed to maintain and manage high-performance commercial buildings. Learn current theories and get hands-on training to work with evolving technologies like photovoltaic cells, wind generators, geothermal heating, and HVAC systems.