everblue

Related Technical Instruction (RTI) Outline for the Energy Auditor Apprenticeship Program

Sponsor Name	
RTI Provider Name	Everblue
RTI Provider Address	8720 Camberly Road, Huntersville, NC 28078
RTI Contact Name	Lesley Baulding
RTI Contact Phone	(800) 460-2575
RTI Contact Email	training@support.goeverblue.com
Total Hours of Instruction	164

Course	BPI Building Science Principles	**Hours**	16

- The “house-as-a-system” approach to home performance
- How to identify potential building performance problems in a home
- How to improve the safety, comfort, and health of building occupants
- Why you should focus on energy efficiency before solar
- How to educate clients about potential building performance problems

Course	BPI Building Analyst Technician	**Hours**	40

- Principles of Energy
- Basics of Heat, Moisture & Airflow
- Building Structural Elements
- Types of Insulation
- Building Mechanical Elements
- Blower Door & Pressure Diagnostics
- Combustion Safety
- Common Problems & Solutions
- The Energy Audit Process
- Health & Safety

Course	BPI Building Analyst Professional	Hours	10

- Construction Math
- Principles of Heat, Moisture & Airflow
- Building Structural Elements
- Analysis of Data Collection
- Energy Modeling
- Work Scope Development
- Common Problems & Solutions
- The Energy Audit Process
- Health & Safety

Course	BPI Infiltration & Duct Leakage	Hours	10

- Construction Math
- Airflow
- Blower Door & Pressure Diagnostics
- Tightness Verification
- Duct Testing
- Duct Tightness Verification

Course	HEP Energy Auditor	Hours	48

- Professional energy audit conduct
- How to collect information about a building for an energy audit
- Energy audit process
- How to evaluate the collected energy audit data
- Compliance with the program or project requirements
- Educate homeowner on energy usage, mold, lead, and ventilation
- Address homeowner’s concerns and use of the home

Course	HEP Quality Control Inspector	Hours	15

- In-process quality assurance inspections
- Post-work visual and sensory inspections
- Post-work diagnostic inspections for health and safety
- Worker professionalism assessments
- Compliance with program or project requirements
- Evaluating customer satisfaction

Course	Weatherization Installer Badges	Hours	25

- Work Lead-Safe
- Air Seal Attic Floor
- Seal & Dam High-Temp Heat Sources in Attic
- Prep Attic Floor for Insulation
- Treat Attic Hatch
- Insulate Attic Floor & Pass Inspection the 1st Time
- Insulate Ceiling of a Manufactured Home
- Seal and Insulate Knee Walls
- Install Dense-Pack Sidewall Insulation
- Insulate Mobile Home Walls
- Install Weatherstripping & Sweep Set on Exterior Door
- Air Seal & Insulate Walls of a Conditioned Subspace
- Air Seal Floor Above an Unconditioned Subspace
- Insulate the Floor Above an Unconditioned Subspace
- Insulate the Belly of the Manufactured Home
- Install or Repair Vapor Retarder in a Subspace
- Vent Clothes Dyer to the Exterior
- Install Ducting for a Bath or Kitchen Range Fan
- Air Seal Ducted Distribution System
- Insulate Ducted Distribution System
- Install Window or Exterior Door
- Repair/Replace Cracked or Broken Glass
- Insulate a Water Heater Tank & the First 6 Feet of Pipes
- Install Low-Flow Faucet Aerators or Showerhead
- Install Exterior Roof Penetration

Office of Apprenticeship
U.S. Department of Labor

Work Process Schedule

Energy Auditor And Analyst	
Job Description: Conduct energy audits of buildings, building systems, or process systems. May also conduct investment grade audits of buildings or systems.	
RAPIDS Code: 2005CB	**O*NET Code:** 47-4011.01
Estimated Program Length: 2000 hours	
Apprenticeship Type: ☒ Competency-Based ☐ Time-Based ☐ Hybrid	

Suggested On-the-Job Learning Outline

Identify opportunities to improve operational efficiency.		
Competencies	**Date Completed**	**Initial**
A. Identify and prioritize energy-saving measures.		
B. Identify opportunities to improve the operation, maintenance, or energy efficiency of building or process systems.		

Analyze energy usage data.		
Competencies	**Date Completed**	**Initial**
A. Calculate potential for energy savings.		
B. Collect and analyze field data related to energy usage.		
C. Measure energy usage with devices such as data loggers, universal data recorders, light meters, sling psychrometers, psychrometric charts, flue gas analyzers, amp probes, watt meters, volt meters, thermometers, or utility meters.		
D. Analyze energy bills, including utility rates or tariffs, to gather historical energy usage data.		
E. Quantify energy consumption to establish baselines for energy use or need.		
F. Determine patterns of building use to show annual or monthly needs for heating, cooling, lighting, or other energy needs.		
G. Compare existing energy consumption levels to normative data.		

Analyze risks related to investments in green technology.		
Competencies	**Date Completed**	**Initial**
A. Identify any health or safety issues related to planned weatherization projects.		

Calculate data to inform organizational operations.		
Competencies	**Date Completed**	**Initial**
A. Calculate potential for energy savings.		

Prepare financial documents, reports, or budgets.		
Competencies	**Date Completed**	**Initial**
A. Prepare audit reports containing energy analysis results or recommendations for energy cost savings.		

Inspect facilities or equipment to ensure specifications are met.		
Competencies	**Date Completed**	**Initial**
A. Inspect or evaluate building envelopes, mechanical systems, electrical systems, or process systems to determine the energy consumption of each system.		
B. Inspect newly installed energy-efficient equipment to ensure that it was installed properly and is performing according to specifications.		

Assess the cost effectiveness of products, projects, or services.		
Competencies	**Date Completed**	**Initial**
A. Analyze technical feasibility of energy-saving measures, using knowledge of engineering, energy production, energy use, construction, maintenance, system operation, or process systems.		

Evaluate condition of properties.		
Competencies	**Date Completed**	**Initial**
A. Examine commercial sites to determine the feasibility of installing equipment that allows building management systems to reduce electricity consumption during peak demand periods.		

Advise others on business or operational matters.		
Competencies	**Date Completed**	**Initial**
A. Recommend energy-efficient technologies or alternate energy sources.		

Research issues related to the environment or sustainable business practices.		
Competencies	**Date Completed**	**Initial**
A. Collect and analyze field data related to energy usage.		

Correspond with customers to answer questions or resolve complaints.		
Competencies	**Date Completed**	**Initial**
A. Educate customers on energy efficiency or answer questions on topics such as the costs of running household appliances or the selection of energy-efficient appliances.		

Develop technical specifications for systems or equipment.		
Competencies	**Date Completed**	**Initial**
A. Prepare job specification sheets for home energy improvements, such as attic insulation, window retrofits, or heating system upgrades.		

Test characteristics of materials or structures.		
Competencies	**Date Completed**	**Initial**
A. Perform tests such as blower-door tests to locate air leaks.		

Oversee business processes.		
Competencies	**Date Completed**	**Initial**
A. Oversee installation of equipment such as water heater wraps, pipe insulation, weatherstripping, door sweeps, or low-flow showerheads to improve energy efficiency.		

Verify application data to determine program eligibility.		
Competencies	**Date Completed**	**Initial**
A. Verify income eligibility of participants in publicly financed weatherization programs.		

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	BPI Building Analyst Professional	10
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Total		164