



NYSERDA

Exploring Clean Energy Professional Development and Training Opportunities

Rebecca Hughes, NYSERDA Project Manager

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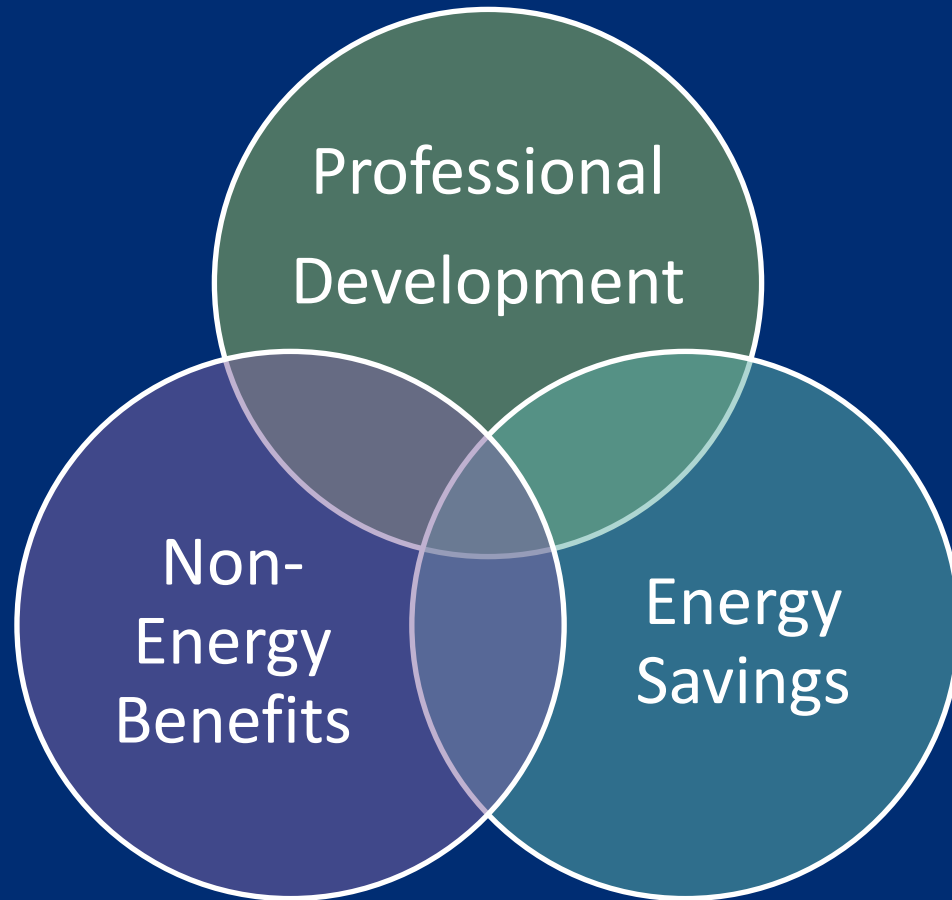
NYSERDA Overview

Mission Statement

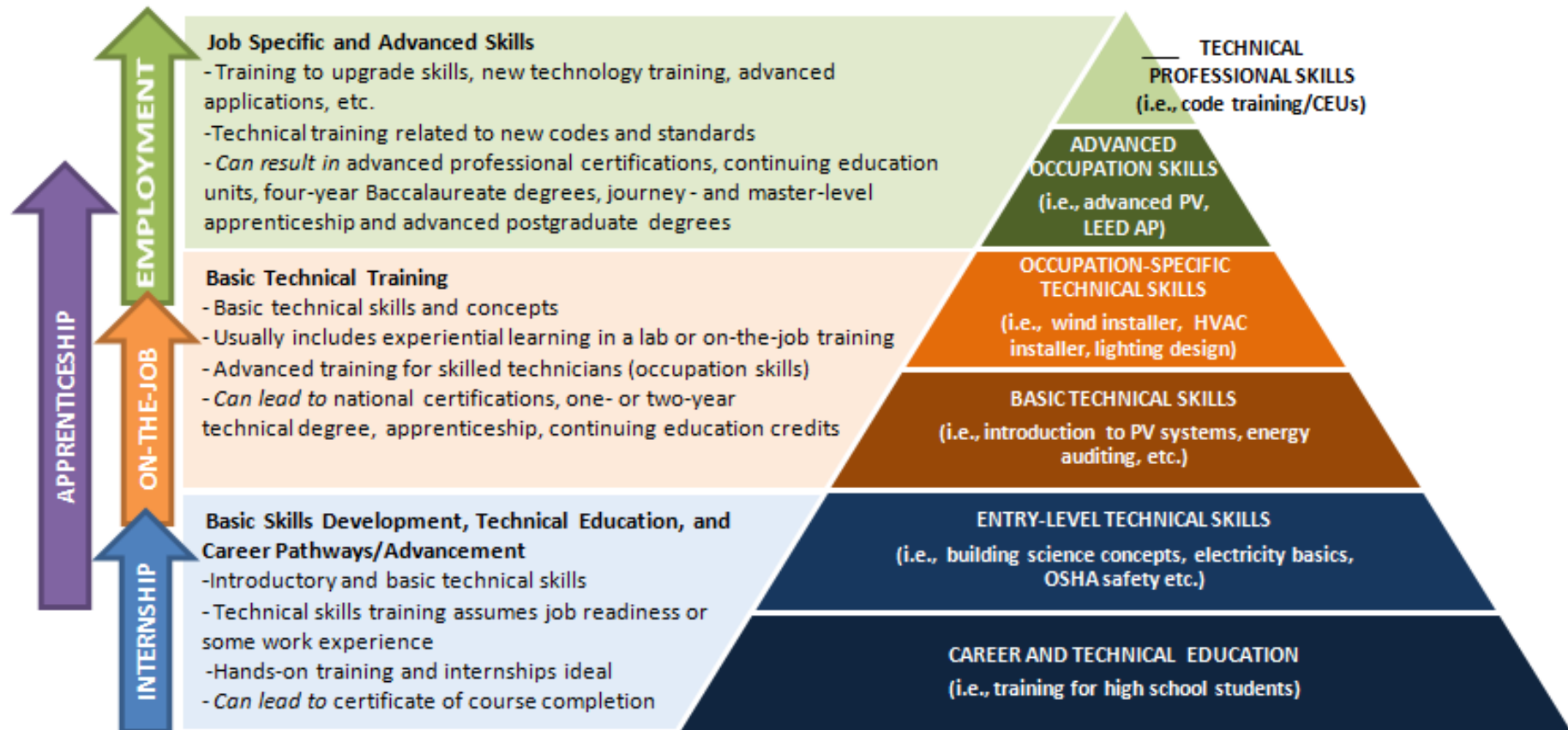
Advance innovative energy solutions in ways that improve New York's economy and environment.

Vision Statement

Serve as a catalyst – advancing energy innovation, technology, and investment; transforming New York's economy; and empowering people to choose clean and efficient energy as part of their everyday lives.

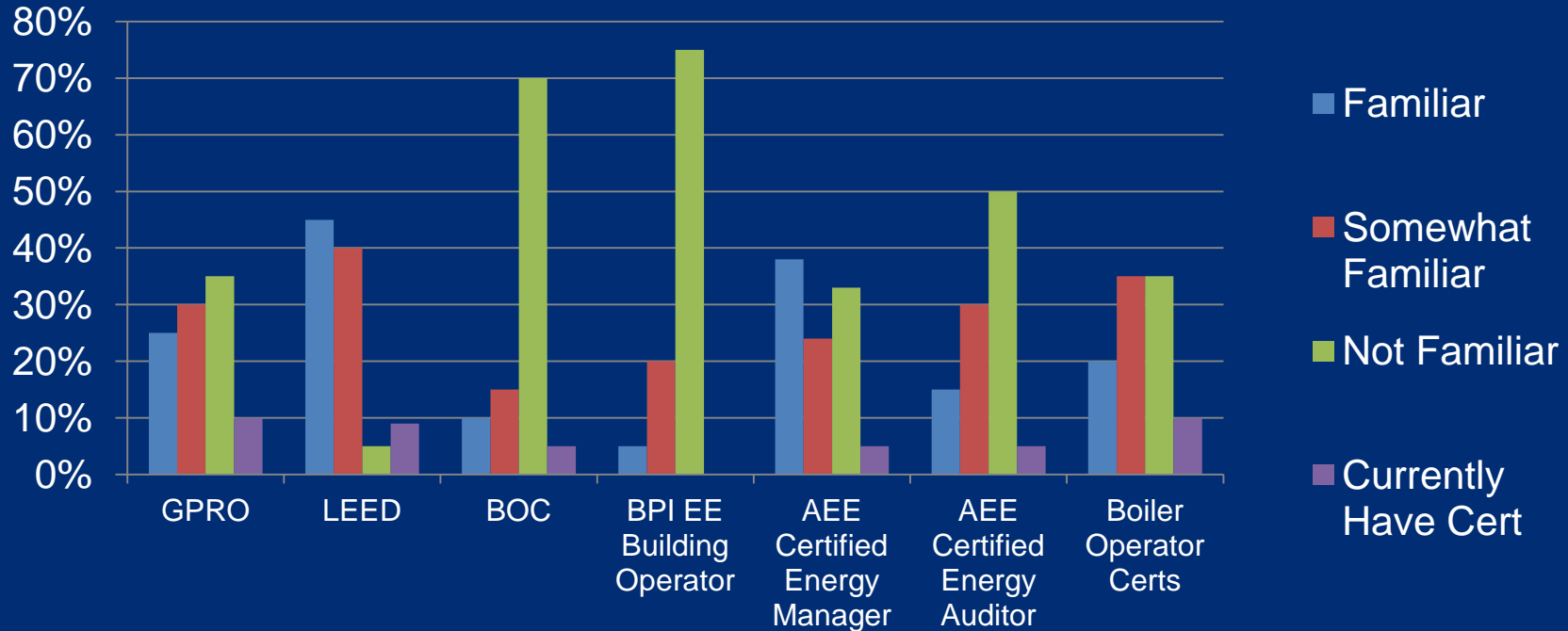


CLEAN ENERGY SKILLS, TRAINING, AND CAREER STEPS

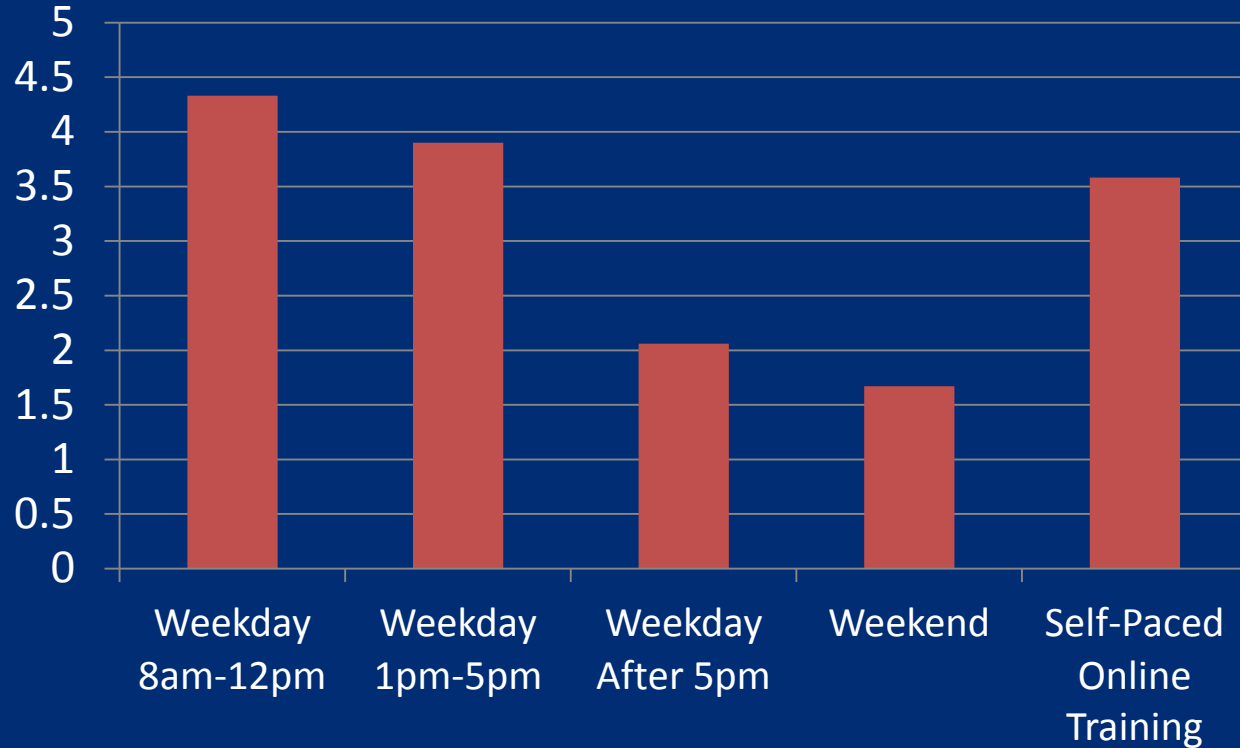


Clean Energy Survey: Summary of Findings

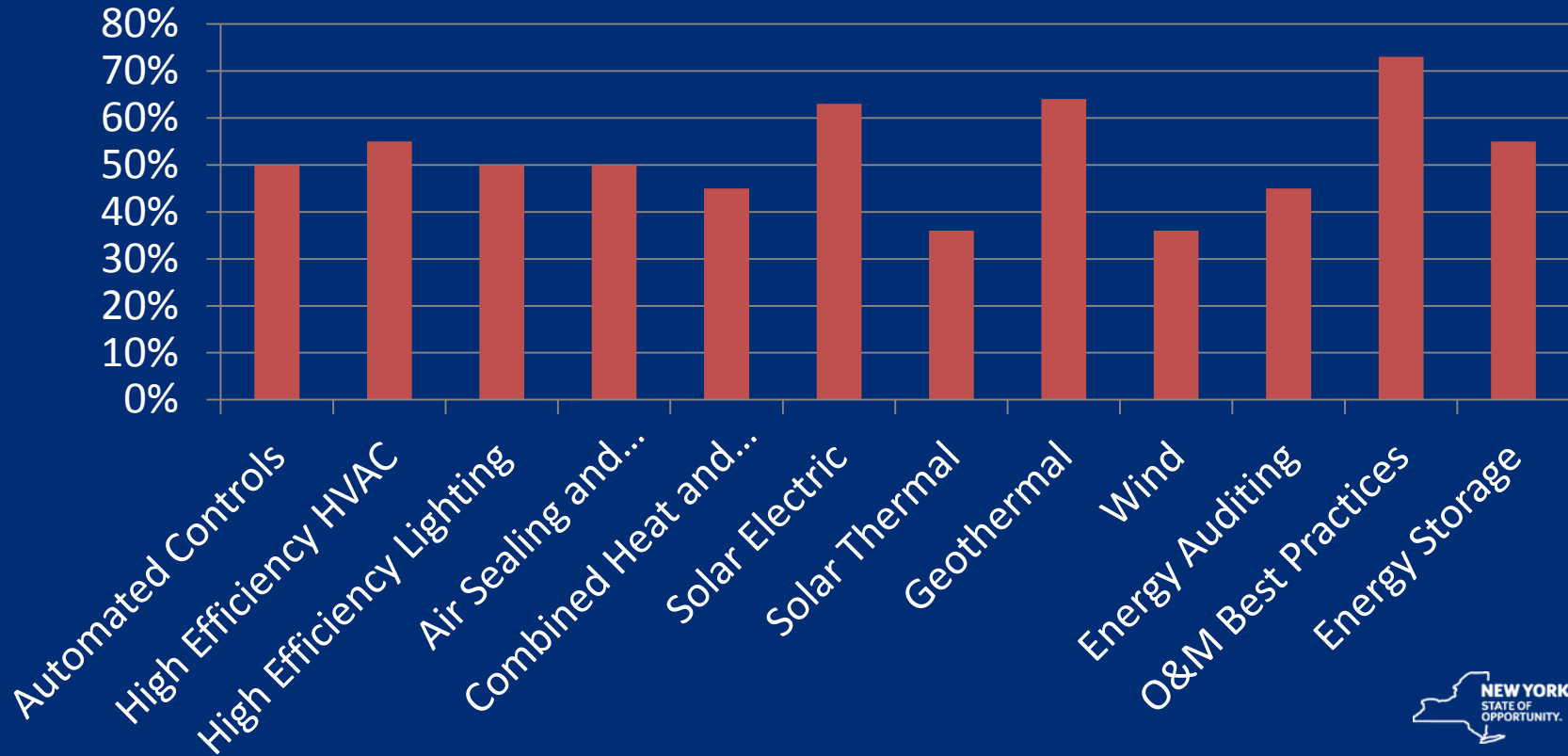
How familiar are you with these certifications?



When do you prefer to take training?



What topics are you interested in learning more about?



Clean Energy Training: An Overview of Opportunities



NY-Sun

NY-Sun PV Trainers Network

Audience	Workshop
Code Officials & Inspectors	<ul style="list-style-type: none"> - Solar PV Permitting and Inspection Methods - Streamlining Solar Permitting
First Responders	Safety and Fire Considerations for Solar PV
Plan Examiners, Engineers, & Architects	Solar PV for Engineers and Architects
Municipal Administrators	<ul style="list-style-type: none"> - Intro to Solar Policy - Solar Procurement for Local Governments - Streamlining Solar Permitting - Creating and Implementing a Solarize Campaign - Expanding Commercial Solar with a PACE Program
Planners	<ul style="list-style-type: none"> - Land Use Planning for Solar - Zoning Solar Energy



Solar PV for Engineers and Architects

Description: Provides basic design and installation instruction for engineers and architects for PV systems including National Electric Code, International Fire Code, and International Building Code considerations.

Who should attend? Architects, engineers, and installers (in some instances)

Continuing Education Units: DoS BSC, AIA, NYSED, and NABCEP

Cost: Free or \$15 administration fee for PEs seeking professional development hours

For more information

Visit: <https://training.ny-sun.ny.gov>

Contact us: info@training.ny-sun.ny.gov

CITY UNIVERSITY OF NEW YORK

BUILDING PERFORMANCE LAB

Workforce Training Offerings in Energy Efficient Building Operations for O&M personnel

BOC (Building Operator Certification) Level 1	BOC Level 2	BRT (Building Re-Tuning)
60-hour program, provides a foundation in building systems and equipment and energy management principles.	75-hour program, provides advanced training in equipment troubleshooting and industry best practices in O&M.	15-hour program, provides instruction in the PNNL Building Re-Tuning protocol for ongoing commissioning.
<ul style="list-style-type: none">• Classroom training• 4 facility-based projects• 4 exams• Supplemental reading assignments	<ul style="list-style-type: none">• Classroom training• 5 facility-based projects• 5 exams• Supplemental reading assignments	<ul style="list-style-type: none">• Classroom training• Weekly reading assignments• Final project (facility-based re-tuning write-up)

Course descriptions and learning outcomes

BOC 1	BOC 2	BRT
<p>Students will learn how to reduce energy costs, calculate energy & demand savings, determine equipment replacement priorities, improve system & equipment performance, recommend specific system improvements, and manage occupant comfort.</p>	<p>Course provides major emphasis on HVAC controls, electrical system testing and load control, and O&M best practices including planned & predictive maintenance and third-party certifications such as LEED EBOM.</p>	<p>Trainees gain an improved awareness of inefficient building operating conditions, ability to work with building data including setup of BAS trend-logs and graphs, improved monitoring of system and equipment functioning over time, troubleshooting and action planning based on data observations, and better operating conditions.</p>
<ul style="list-style-type: none">• Successful trainees are eligible for the BOC-1 national certification.• 60 contact hours toward certification/ license renewal.	<ul style="list-style-type: none">• Successful trainees are eligible for the BOC-2 national certification, supersedes BOC-1.• BOC-1 or equivalent is required for taking BOC-2.• 75 contact hours toward certification/ license renewal.	<ul style="list-style-type: none">• Participants are required to work with and have access to a BMS/BAS.• 15 contact hours toward certification/ license renewal.



“Solar One’s Green Building O&M training helped me see my building in a whole new way. If you’re serious about saving energy and improving operations, you and your staff should take this course!”

– Joe De Jesus
Building Maintenance Supervisor
Ridgewood-Bushwick Management

- ✓ Green hard skills training for building staff
 - Green building operations and maintenance
 - Green construction (carpentry, electrical, plumbing)
 - Energy efficiency & building performance
 - Industry certifications
 - Building Performance Institute (BPI)
 - Green Professional (GPRO)

- ✓ Training Lab located in Queens/LIC
 - Energy Efficient Boilers
 - Energy Efficient Hot Water Heaters
 - Control Room with demand management
 - Lighting demos
 - Insulation hopper
 - Bathroom demo

BPI Multifamily Building Operator Certification (7 days)

- Fundamentals of high-performance buildings
- Heating and cooling system operations and maintenance, including airflow and ventilation management and preventative maintenance
- Electric energy efficiency
- Water conservation
- Green cleaning, recycling and integrated pest management

GPRO Operations and Maintenance Certificate (2 days)

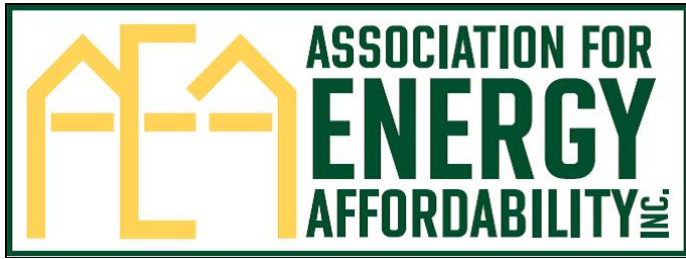
- Building metrics to improve performance
- Energy efficient lighting
- Improving the building envelope
- Efficient and cost effective heating and cooling systems
- Reducing water use



GPRO Electrical Certificate (2 days)

- Electrical systems within the “whole-building” approach
- Green vs. conventional electrical products & practices
- Improving efficiencies in lighting and HVAC
- Using benchmarking and other tools to maintain building performance
- Retrofitting existing buildings with energy-efficiency

Green Construction (Carpentry, Electrical, Plumbing) (5-10 days)



www.aea.us.org

“The key to persistent energy savings in buildings is education of those individuals directly responsible for the day-to-day building operations”

Course Name: Energy Efficient Building Operations Specialist

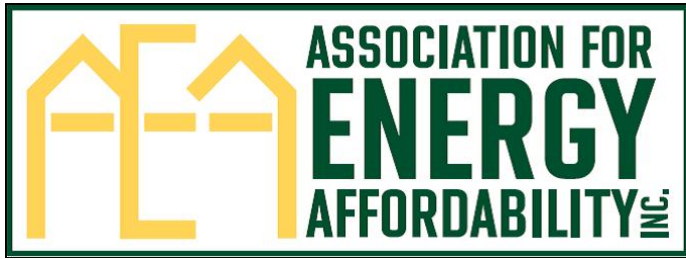
Course Duration: 5-Days

Certification Entity: Building Performance Institute (BPI CEU: 7.5)

Learning Outcome:

Establish operation and maintenance practices that promote energy efficiency, water conservation, building durability, and resident health and safety.





www.aea.us.org

Course Name: Multifamily Building Analyst

Course Duration: 5-Days

Certification Entity: Building Performance
Institute (BPI CEU: 7.5)

Learning Outcome:

Perform a comprehensive assessment of multifamily buildings that identifies health and safety hazards and all reasonable opportunities for energy and water conservation savings, including equipment and system retrofits and replacement, and operation and maintenance improvements.

"Deepen your knowledge of multifamily assessments, and expand your opportunities through high quality training delivered by industry-leading practitioners"





GPRO certificate program teaches principles of sustainability & green construction to the people who build and operate buildings.

Operations & Maintenance Essentials:

- Metrics and improving building performance
- Improving heating and cooling systems, indoor air quality
- Minimize energy use while ensuring occupant satisfaction

Private classes available

60% NYSERDA discount until June 30th

gpro@urbangreencouncil.org





Conquering the Energy Code

2015 International Energy Conservation Code

Architects and Engineers will:

- **Understand the structure** and rationale of the energy code
- **Differentiate** between various compliance pathways
- **Sharpen communication** and coordination skills to improve compliance
- **Understand interdependence** of building systems /impact on energy use
- Private classes available
- 7 CEUs / \$75
- For more information: www.bit.ly/energycode or ecode@urbangreencouncil.org



Thank you!

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