



Contractor Quality Assurance & Home Performance with Energy Star

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City of Greensboro
Greensboro, North Carolina
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Partnership Objective



- ▶ **Ensure Consistency in Quality According to Home Performance with Energy Star Standards (HPwES)**
- ▶ **Address the varying levels of experience among pre-approved contractors**
- ▶ **Maximize opportunity for optimal customer service**
- ▶ **Contribute to the creation of a market of quality energy efficiency contractors & service providers**



Through a competitive process
BetterBuildings for Greensboro solicited firms
with the HPwES designation equipped to
provide the proper training for quality service
and increased customer satisfaction.

Qualifications of BetterBuildings for Greensboro Contractors

- ▶ **Application**
- ▶ **BPI Certified (Analyst)**
- ▶ **Minimum 3 client referenced**
- ▶ **Bank References**
- ▶ **Business License**
- ▶ **BBB Verification**
- ▶ **Certificate of Insurance**

Program Quality Assurance Standards

- Air Tightness
- Ventilation and Moisture Management
- Insulation, Windows & Doors
- HVAC Sizing and Installation
- Fixtures and Appliances
- Combustion Safety

Job Report Review Process for QA of Qualified Contractors



- Upon successful completion of training, a program contractor become known as a HPwES contractor

- Contractor Must Complete:
 - House Characterization Form
 - HPA Summary Report
 - Scope of Work
 - Test-Out Form

- Pass Probationary Period

- Property Owner Receives HPwES Certificate

Home Performance with ENERGY STAR®

Summary of Energy Improvements Performed



Home Address:

Homeowner
1234 Main St
Anytown, USA 12345

Work Performed by:

Any Home Performance, Inc

Work Verified by:

Advanced Energy

Work Completed on:

5/19/2011

Home Performance Improvements:

- Perform attic air sealing
- Insulate attic to R38
- Insulate skylight to R15
- Perform subfloor air sealing
- Perform duct sealing
- Install outdoor thermostat on heat pump
- Install 2 LED light fixtures

Daniel J. Lutz



HOME PERFORMANCE WITH
ENERGY STAR

Home Performance with ENERGY STAR® offers a comprehensive, whole-house approach to home improvement that results in better energy efficiency, greater comfort, and lower energy bills.

ENERGY STAR is a voluntary partnership sponsored by the U.S. EPA and U.S. DOE to protect the environment through superior energy efficiency.



Thank You



Community Power Works

Better Buildings Conference

Andrea Petzel, Project Manger – CPW for Home



What is Community Power Works?

Seattle's Home Energy Upgrade Program

- Upgrade 2,000 homes Achieve 15% energy savings/home
- Develop affordable financing options
- Reduce the cost of upgrades with new incentives
- Community High-Road Agreement
 - Negotiated with stakeholders
 - Mayor's Advisory Group



Elements of the High-Road Agreement

High-Road Commitments:

- BPI Certification
- Wage Rates
- Targets for Business Ownership:
 - 80-100% small business
 - 100% local business
 - 30% minority
 - 10% women
 - Increase opportunities for veterans
- Training Requirements
- Hiring Standards from Qualified Training Providers
- Goals for hiring new, entry-level targeted workers



Piloting a New Approach to Training

Current Training Programs couldn't meet contractor needs:

- Lack of quality entry-level workers
- Outdated model for training
- No contractor involvement in the training process
- Limited support for graduates



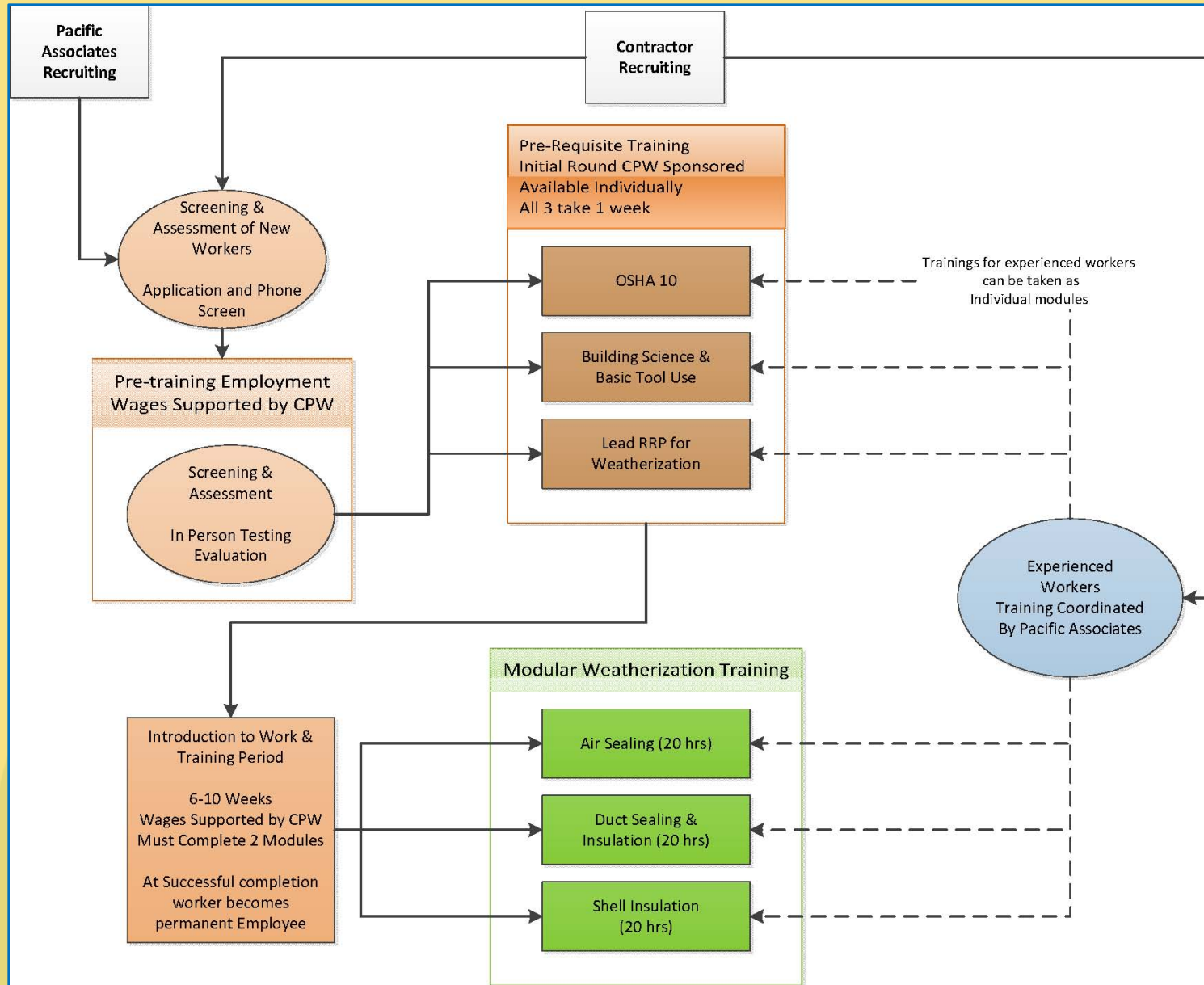
Piloting a New Approach to Training

Creating a Community Around Training:

- Partnership with S. Seattle Community College and NW EcoBuilding Guild
- Option to hire first, train second
- Active participation by contractors
- Available to entry-level workers and more experienced workers
- Free!



Training Process & Modules





More Information

Andrea Petzel

Project Manager

Community Power Works for Home

206.233.0079 or andrea.petzel@seattle.gov

www.communitypowerworks.org

Green Jobs Training Center

ECA Training Courses

- PA Certification Courses – Installer, Crew Chief, Auditors
- Building Performance Institute
- EPA Lead Safety for Renovators
- OSHA 10 & 30
- Spray Foam Insulation and White Roof Coating
- Apprenticeship Program
- Weatherization and Retrofit
- Building Energy Management
- Benchmarking



Green Jobs Training Center

ECA – Community College Partnership

- CCP - provides Certificates, Academic Curriculum, and Middle-States academic accreditation
- ECA - provides Classroom and Hands-on training, Certification and employee guidance
- Together – 2 Apprenticeships approved by US DOL:
 - Weatherization Installer and Technician (WIT)
 - Building Energy Analyst (BEA)

Green Jobs Training Center

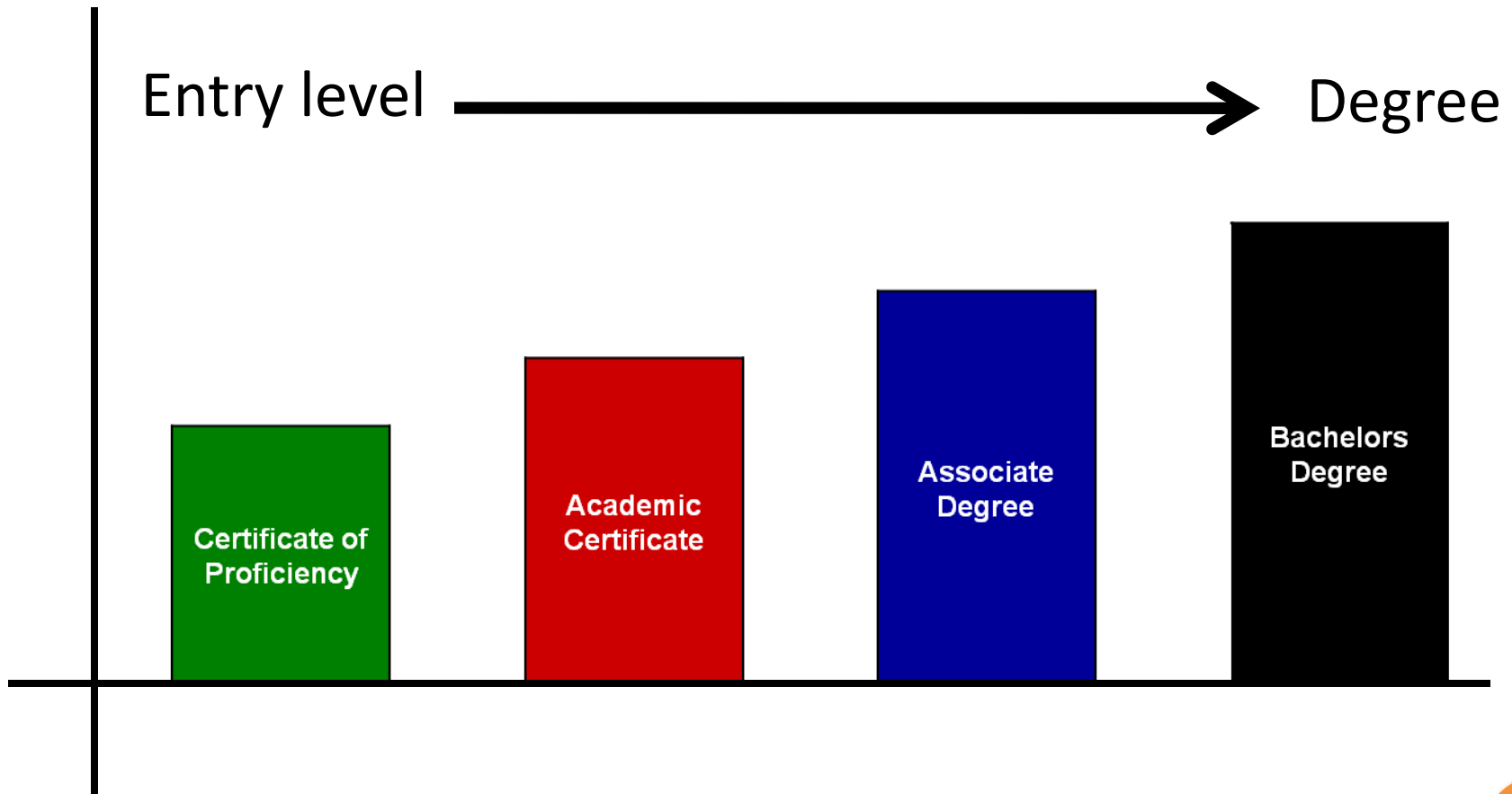
Apprenticeship Program

Developed in partnership with Community College of Philadelphia.
Objective is to build an educational continuum for Energy Conservation
and Building Science.



Green Jobs Training Center

Education Ladder



Green Jobs Training Center

WIT Apprenticeship Program

COURSEWORK SCHEDULE

Fall

ENGL 098	Fundamentals of Writing (if needed by the individual trainee – not for College credit)	45 hrs	(3 cr)
ENGL 099	Fundamentals of Reading (if needed by the individual trainee – not for College credit)	45 hrs	(3 cr)
ADC 103	Basic CAD	90 hrs	3 cr

Spring

ADC 101	Introduction to Design and Construction	45 hrs	3 cr
MATH 017	Elementary Algebra (if needed by the individual trainee – not for College credit)	45 hrs	(3 cr)

Summer

MATH 137	Geometry for Design	45 hrs	3 cr
ADC 136	Construction Safety & Building Codes	60 hrs	3 cr
TOTAL		240 hr	12 cr

WORK PROCESSES SCHEDULE

Introduction to Weatherization and Building Science	360	hrs
Safety Practices	160	hrs
Basic Carpentry	360	hrs
Materials, Tools and Equipment	160	hrs
Insulation	480	hrs
Air Sealing	360	hrs
Other Measures	120	hrs
TOTAL	2000	hrs



Green Jobs Training Center

WIT Apprenticeship Program

At the conclusion of this one year apprenticeship, successful participants will earn:

- Journeyman credential as a Weatherization Installer and Technician*
- Proficiency Certificate in Building Science – Energy Conservation from Community College of Philadelphia
- OSHA 30 hour Safety Certification
- EPA Lead Certification

Green Jobs Training Center

BEA Apprenticeship Program

COURSEWORK SCHEDULE

Fall

ADC 112	Construction Materials & Detailing: Principles	45 hrs	3 cr
ENGL 102	English Composition II	45 hrs	3 cr

Spring

ADC 286	Building Rehabilitation and Energy Retrofit	45 hrs	3 cr
ADC 161	Energy Auditing, Remediation and Monitoring	60 hrs	3 cr

Summer

ADC 146	Construction Supervision and Business Practices	60 hrs	3 cr
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TOTAL **255 hrs** **15cr**

WORK PROCESSES SCHEDULE

Diagnostics	640 hrs
Mechanical Systems	600 hrs
Client Education	120 hrs
Energy Analysis	296 hrs
Principles of Hazardous Materials	200 hrs
Reports	144 hrs
TOTAL	2000 hrs



Green Jobs Training Center

BEA Apprenticeship Program

At the conclusion of this one year apprenticeship, successful participants will earn:

- Journeyman credential as a Building Energy Analyst*
- Academic Certificate in Building Science – Energy Conservation from Community College of Philadelphia
- Building Performance Institute (BPI) certification at the Building Analyst and Envelope levels

Green Jobs Training Center

Associate of Applied Science Degree Program

COURSEWORK SCHEDULE to complete the A.A.S. Degree in ENERGY CONSERVATION

Fall

ADC 212	Construction Materials & Detailing II	3 cr
ADC 163	CAD Building Documentation	3 cr
ADC 247	Construction Business Practices & Supervision	3 cr
EASC 111	Environmental Conservation	3 cr
	Humanities Elective	3 cr

Spring

ADC 237	Construction Cost Estimating II: Cost/Benefit Analysis	3 cr
ADC 261	Construction Management & Scheduling	3 cr
ADC 254	Environmental Systems II – LEED GA Prep	3 cr
ADC 246	Contracts and Specifications	3 cr
	Science Elective	3 cr
	TOTAL	30 cr

Green Jobs Training Center

Associate of Applied Science Degree Program

At the conclusion of this one year (full time) or two year (part-time) Program graduates will earn:

- Associate of Applied Science Degree in Energy Conservation from Community College of Philadelphia
- Certification as a LEED Green Associate
- Ability to transfer to Temple University's or Drexel University's Construction Management Bachelor's Degree Program

Green Jobs Training Center

Potential jobs

without a degree

Entry level Installer Crew Chief, Auditor, Contractor,
Start-up Business, Building Maintenance

with a certificate or degree

Architect, HVAC, Building Science, Energy Engineer

Green Jobs Training Center

ECA's Students

Our Commitment to Diversity

ECA is committed to educate a diverse population that reflects the nation and to break the barriers of education and work silos

Students include:

- Underemployed Worker
- Unemployed Workers
- Veterans
- Incumbent Workers
- Entrepreneurs
- Architects, contractors
- Professionals



Future of ECA and CCP Partnership

- Apprenticeship Program
 - Currently being replicated in Montgomery county and New Jersey
- Access to training facility for CCP students
- A la carte courses within the Apprenticeship program
- Incorporate use of the Training Center
- Develop additional Energy Conservation and Building Science programs

Green Jobs Training Center

Partnerships

- BASF, Dow, St. Gobain
- NCAF/ExxonMobil
- U.S. Department of Labor
- U.S. Department of Energy
- PA Department of Labor and Industry
- PA Department of Community and Economic Development
- Cities of Philadelphia, Camden, Baltimore, Newark
- Conference of Mayor's/ Wal-Mart
- School District of Philadelphia
- National Forest Service
- Contractors, Architects
- Community Based Organizations

