

# Preparing People for Progress in the Energy Efficiency Workforce

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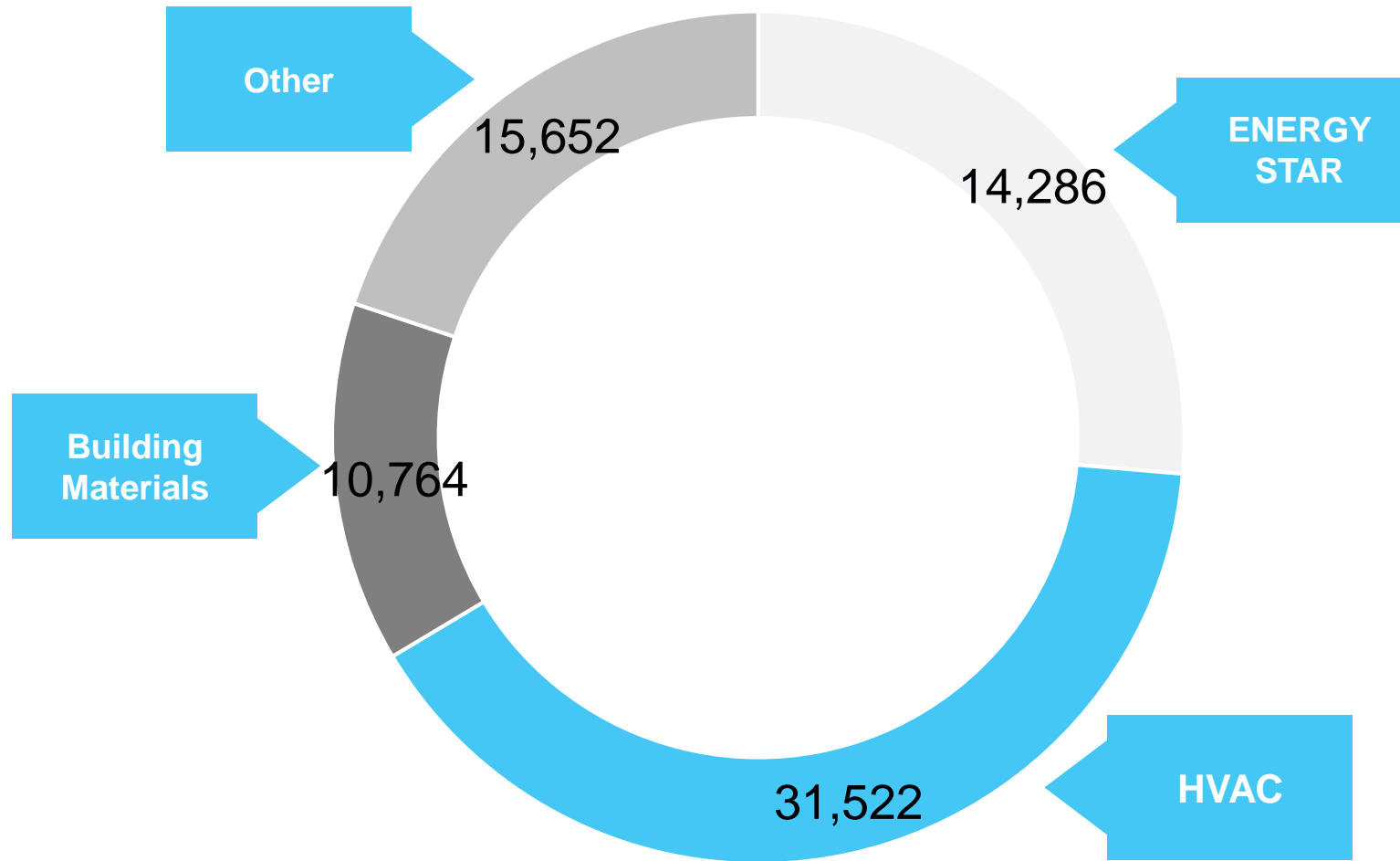


# Virginia is in the Top 10

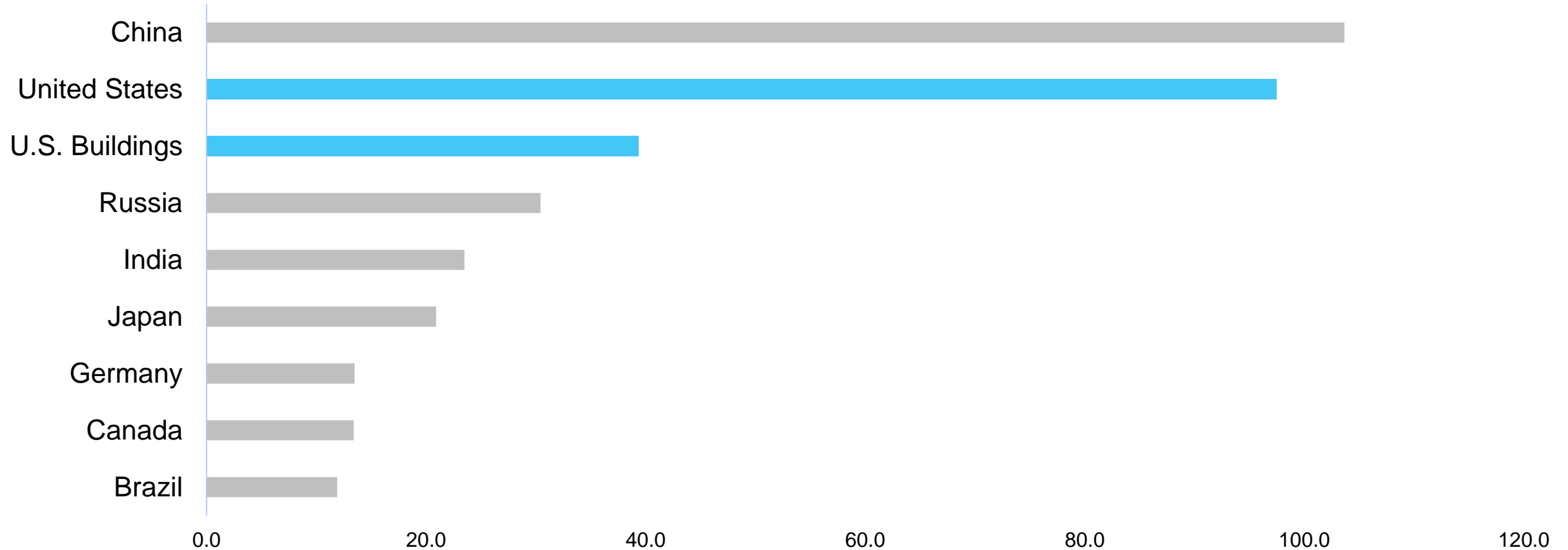
## TOP 10 STATES FOR ENERGY EFFICIENCY JOBS

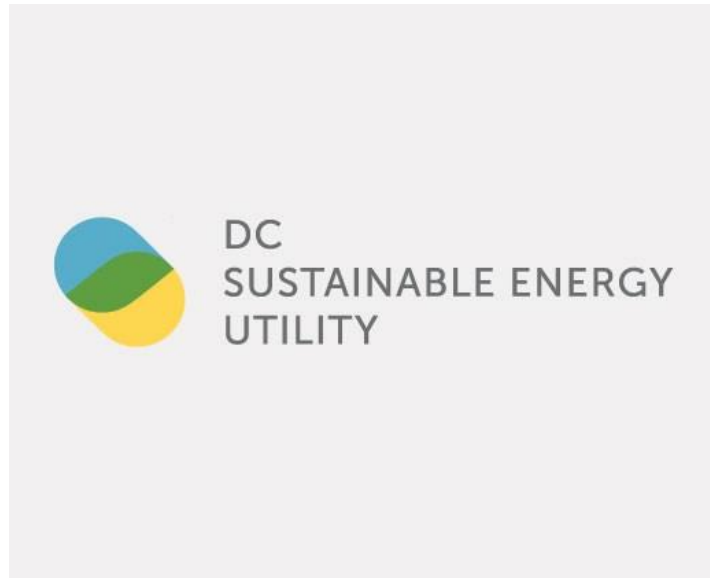
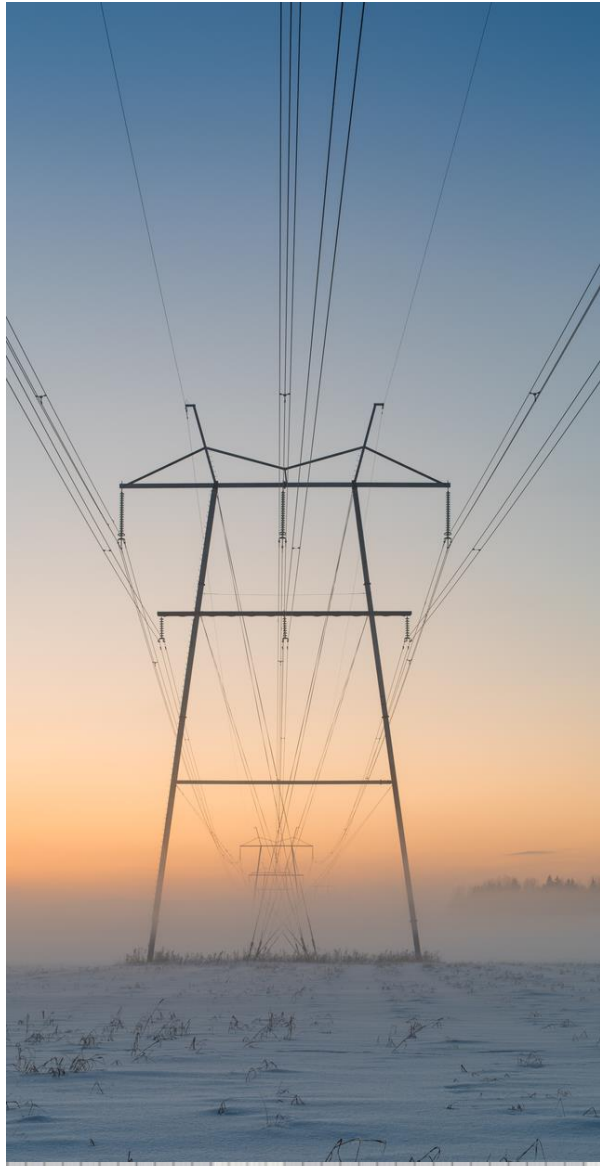
RANK	STATE	TOTAL	ENERGY STAR & EFFICIENT LIGHTING	HVAC, RENEWABLE HEATING & COOLING	ADVANCED BUILDING MATERIALS/INSULATION	OTHER*
1	California	318,542	71,893	187,297	20,074	39,278
2	Texas	162,816	59,650	67,346	21,096	14,724
3	New York	123,292	36,848	69,412	8,244	8,788
4	Florida	118,412	32,499	41,381	31,455	13,077
5	Illinois	89,469	13,311	59,722	7,834	8,601
6	North Carolina	86,559	42,893	32,358	6,222	5,086
7	Massachusetts	86,473	14,494	42,558	11,032	18,388
8	Michigan	85,061	14,775	9,197	47,613	13,476
9	Ohio	81,676	16,290	35,515	19,650	10,221
10	Virginia	78,670	20,733	31,522	10,764	15,652

# The majority of these jobs are focused on HVAC



# Which aligns with our energy needs





# THE DCSEU IS ADDRESSING THIS NEED THROUGH WORKFORCE DEVELOPMENT



**Connect District residents** who are new to the workforce, between jobs, or looking for a career change with local contractors in the **green economy**



Provide **training** and **certification** opportunities aimed at helping workers to obtain green careers



Enhance **economic stability** by focusing on a worker's marketable skills



**Reduce unemployment** in the District



Shape the local **clean-energy labor market** through programs that enhance green jobs' effects on the city's economy



ENERGY  
SOLUTIONS

# Workforce Development

- Training Energy Efficiency Workers Across the Globe -



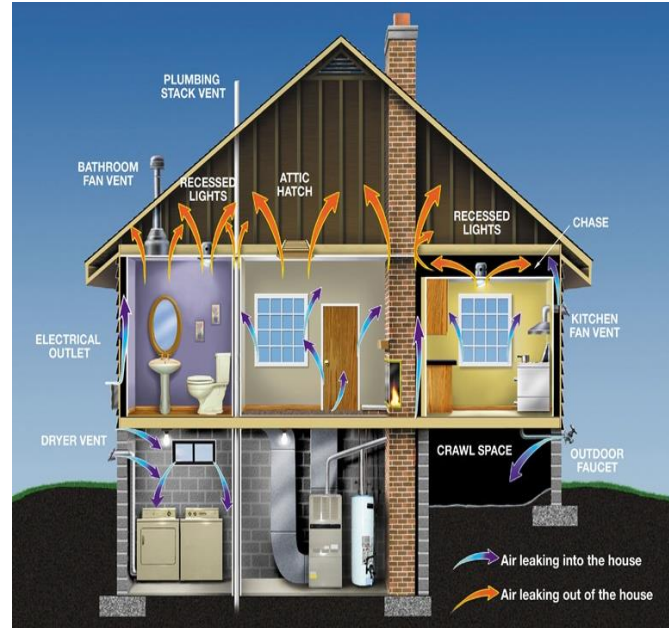
# Energy Efficiency from the Past



(C) InspectAPedia.com courtesy S Bliss Solar Age



# Energy Efficiency & Building Science Now!



# CHP Energy Solutions Research & Training Center

- Trained more than 40,000 students since 1999
- Students from U.S., Canada, Asia, and South America
- Interstate Renewable Energy Council (IREC) Accredited
  - 4 Classrooms
  - Distance Learning Center
  - Media Technology Solutions
  - Sound Studio
  - House of Pressure® Lab
  - HVAC Lab
  - Air Sealing Lab
  - Diagnostic Labs
  - Pressure House
  - Mobile Home
  - Grandma's House



# Workforce Development Courses

- IREC-Accredited BPI Home Energy Professional courses:

- Quality Control Inspector
- Energy Auditor
- Crew Leader
- Retrofit Installer Technician

**Plus over 120 more  
Instructor-led and  
Online courses**

**Additional Courses:**

- Envelope and Duct Leakage Testing
- Prep courses for all BPI Exams
- ASHRAE 62.2
- EPA Certified Renovator
- OSHA 10 & OSHA 30
- Customized Training

**&**

**Hands On Field  
Mentoring**



# A Look Inside.....



# Classroom Learning



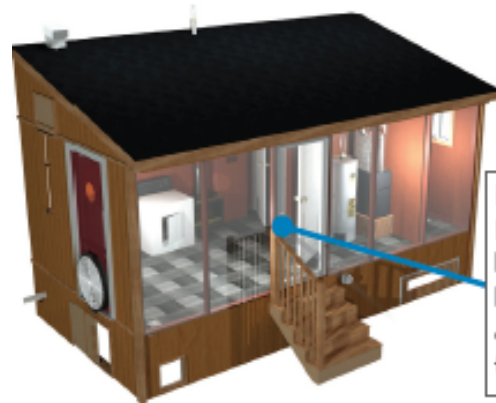
# Hands On Props



**Dense Packing Prop**  
Used to demonstrate and apply appropriate sidewall insulation techniques.

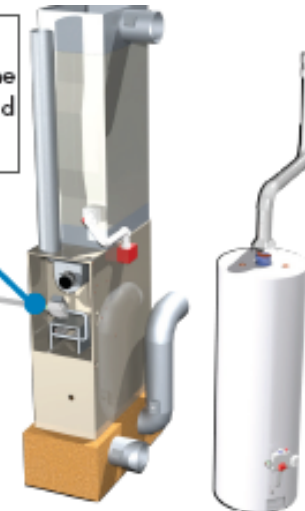


**Large Air Sealing Prop**  
Used to simulate a sample attic and crawlspace to practice air sealing methods and shielding prior to insulation.



**Pressure House**  
Life-size iPad-controlled diagnostic house used to demonstrate house-as-a-system concepts, especially combustion appliance zone testing.

**Gas Furnace and Domestic Water Heater**  
Used to demonstrate worst-case combustion appliance zone testing, CO testing, draft, and other appliance efficiency and health and safety issues.



## **Train and Mentor Core Competencies**

- Knowledge**

- Skills**

- Abilities**



# Standard Work Specifications (SWS)

## Defining the Work

- The Standard Work Specifications (SWS) define the minimum acceptable outcomes for any weatherization or home performance task to be effective, durable, and safe.



# Job Task Analysis (JTA's)

## Validate the Training

- The JTAs for the four major energy upgrade job classifications define what a worker needs to know and do.

The four job classifications are:

- Retrofit Installer Technician
- Crew Leader
- Energy Auditor
- Quality Control Inspector



# Training and Certification

## Certify the Worker

- The Certification Blueprints synthesize the content of the SWS and the JTAs to lay out a road map for robust worker certifications.
- Nationally Recognized Industry Credentials that are Portable and Transferable Between the Public and Private Sectors.



TEST CENTER

# Virginia: A Path to Career Growth

Training / Certification / License Outline for Virginia Weatherization Workers					
	Crew Worker (Retrofit Installer Technician-RIT)	Crew Leader (CL)	Energy Auditor (EA)	Quality Control Inspector (QCI)	
<b>Required By DOE</b>					NATIONAL WAP
OSHA 10 certification or equivalent	X		X	X	
OSHA 30 certification or equivalent		X			
Quality Control Inspector Micro-Credential*				X	
<b>Required by EPA</b>					
Renovate-Repair-Paint certification (RRP)	Only one person needed per jobsite (accessible to the job)				
	Crew Worker (Retrofit Installer Technician-RIT)	Crew Leader (CL)	Energy Auditor (EA)	Quality Control Inspector (QCI)	
<b>Required By VA-DHCD</b> To Be completed within date of hire or in position	6 Mo.	9 Mo.	12 Mo.		VIRGINIA WAP
Lead Safe Weatherization course (LSW)	X	X	X	X	
Retrofit Installer Technician course (RIT)	X	X	X	X	
HVAC Fundamentals course		X	X	X	
ASHRAE 62.2 course		X	X	X	
HEATsoftware course			X	X	
Duct Sizing/Manual J course			X	X	
Energy Auditor course (EA)			X	X	
Quality Control Inspector course (QCI)				X	
Crew Leader course (CL)		X			

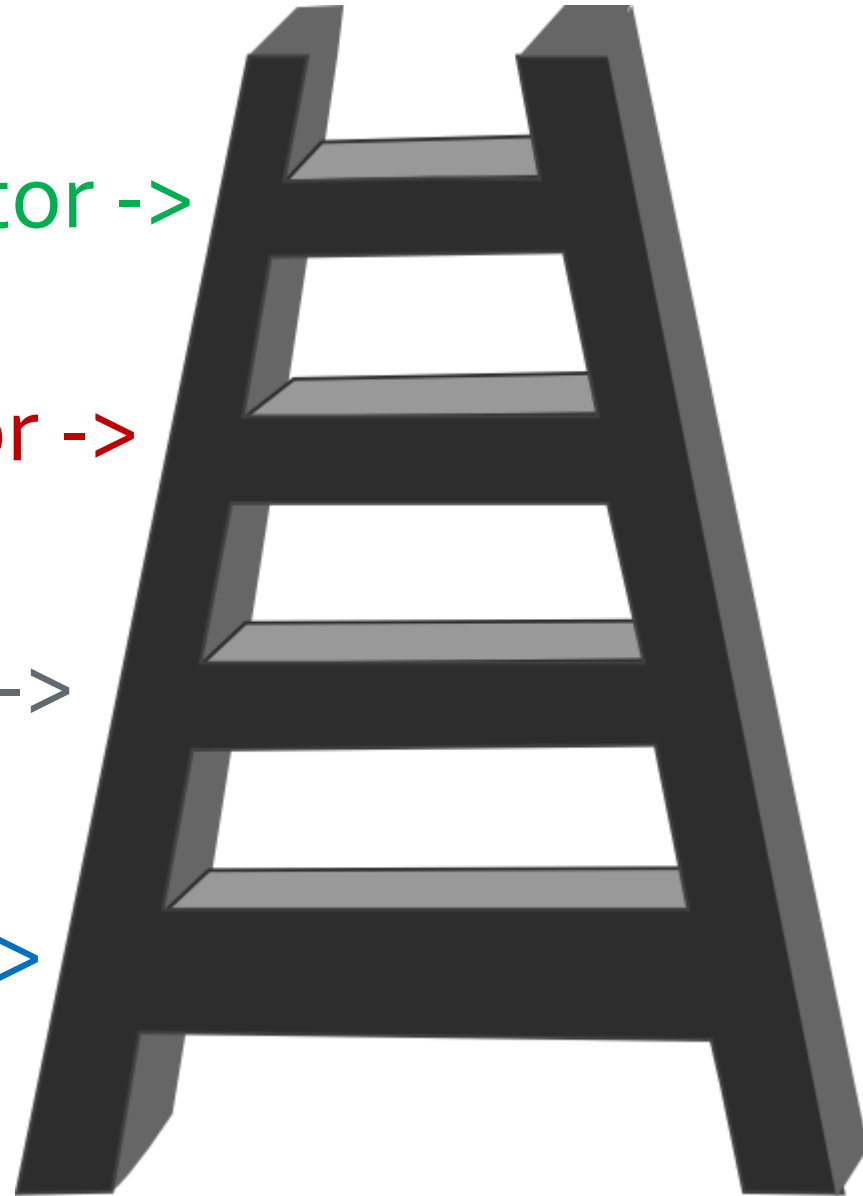
# Home Energy Professional Career Ladder

Quality Control Inspector ->

Energy Auditor ->

Crew Leader ->

Retrofit Installer Tech ->



# Robust Quality Workforce Training!

- Build and Renovate healthier, safer, more durable and energy efficient homes with a greater return on our investment.
- Drive consistency in benefits for clients, consumers and funders Nationally
- Prescribe a national standard of quality for the home performance and retrofit workforce.



# Do It Right The First Time!



Tank wrap is unprofessionally installed.



# Virginia Prescriptive Path to Grow



550 Industrial Drive  
Christiansburg, Virginia 24073  
Phone: 540-260-9081 Fax: 540-260-9084  
[www.CHPTrainingCenter.org](http://www.CHPTrainingCenter.org)



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# Thank You

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