

Building Technologies Office Peer Review Meeting



BENEFIT

(Buildings Energy Efficiency Frontiers & Innovation)
Grant Program

Training the Next Generation of Heat Pump HVAC Technicians

Held in Arlington, VA
April 25, 2023



Project Summary



Objective and outcome

- Create HP design, installation, and maintenance curriculum to train HVAC technicians
- Develop a pool of technicians trained in the latest heat pump technologies
 - Train at least 250 technicians
- Disseminate findings to allow for replication and scaling of project's successes



ICAST Team and Partners

Ravi Malhotra – President and Founder
Audrey Knox – Workforce Training Manager
Dan Golden – Senior Grants Manager

Partners

- EEBC (Energy Efficiency Business Coalition)
- SFCC (Santa Fe Community College)

Advisory Board

- SMEs from manufacturers, distributors, workforce & HVAC associations

Stats

Performance Period: 10/1/2021 to 3/31/2025

- BP1: 10/21/2021 to 9/30/2023
- BP2: 10/1/2023 to 3/31/2025

DOE award: \$700,000 and Cost Share: \$37,000

- ✓ Milestone 1: Advisory Board (AB) - Established
- ✓ Milestone 2: Outreach Plan - Developed
- ✓ Milestone 3: AB Feedback - Completed

Problem



There is a growing need for HVAC workers who can install heat pumps

- Additional momentum and incentives generated from IRA
 - Expected to fund 2.5M retrofits for LMI households through the High Efficiency Electric Home Rebate program
- Existing HVAC workers will need upskilling in newer ccASHPs
- Help meet the DOE's goals of a net-zero building sector by 2050

Individuals from disadvantaged communities need access to career training pathways that provide opportunities for upward economic mobility

- Average annual salary for HVAC workers in 2022 was \$54,690, and the pay scale for HVAC workers is projected to grow “much faster than the average for all occupations”, according to the latest Department of Labor statistics.

Alignment and Impact



The program aims to train at least 250 individuals in new ccASHP technologies that will:

- Support the acceleration of building electrification goals by preparing a workforce to meet the growing need for HP installs
- Provide training for jobs that provide good wages in a growing industry
- Build career training pathways for Energy Efficiency jobs
- Upskill the existing HVAC workforce in newer HP technology
- Build career training pathways for individuals entering the Energy Efficiency workforce

Approach



- **Develop and pilot new ccASHP curriculum**
 - Reviewed by SMEs and industry stakeholders
 - Update material based on their feedback
- **Understand and address challenges for trainees**
 - Time constraints: provide online, self-paced courses
 - Barriers: identify resources to overcome training challenges for both employers and trainees
 - E.g., identifying local organizations who may provide bus passes, day care, and stipends
- **Design and facilitate career training pathways**
 - Inspire workers to be early adopters of new energy efficient technologies
 - Develop sought after skills in the growing green construction marketplace
 - HVAC as a thriving industry that provides a living wage and career mobility

Progress



Accomplishments:

- Developed ccASHP curriculum: Installation, Design, and Service & Maintenance online courses
 - Conducted three phases of review by SMEs and two initial training cohorts
- Enrolled ~ 57 trainees
- Connected graduates with job opportunities with employer partners

Lessons learned:

- Incentives are useful to engage employees in upskilling training
- Must incorporate alternative training for different learners – online, in person, or hands-on

Learning Pathways for HVAC Workers

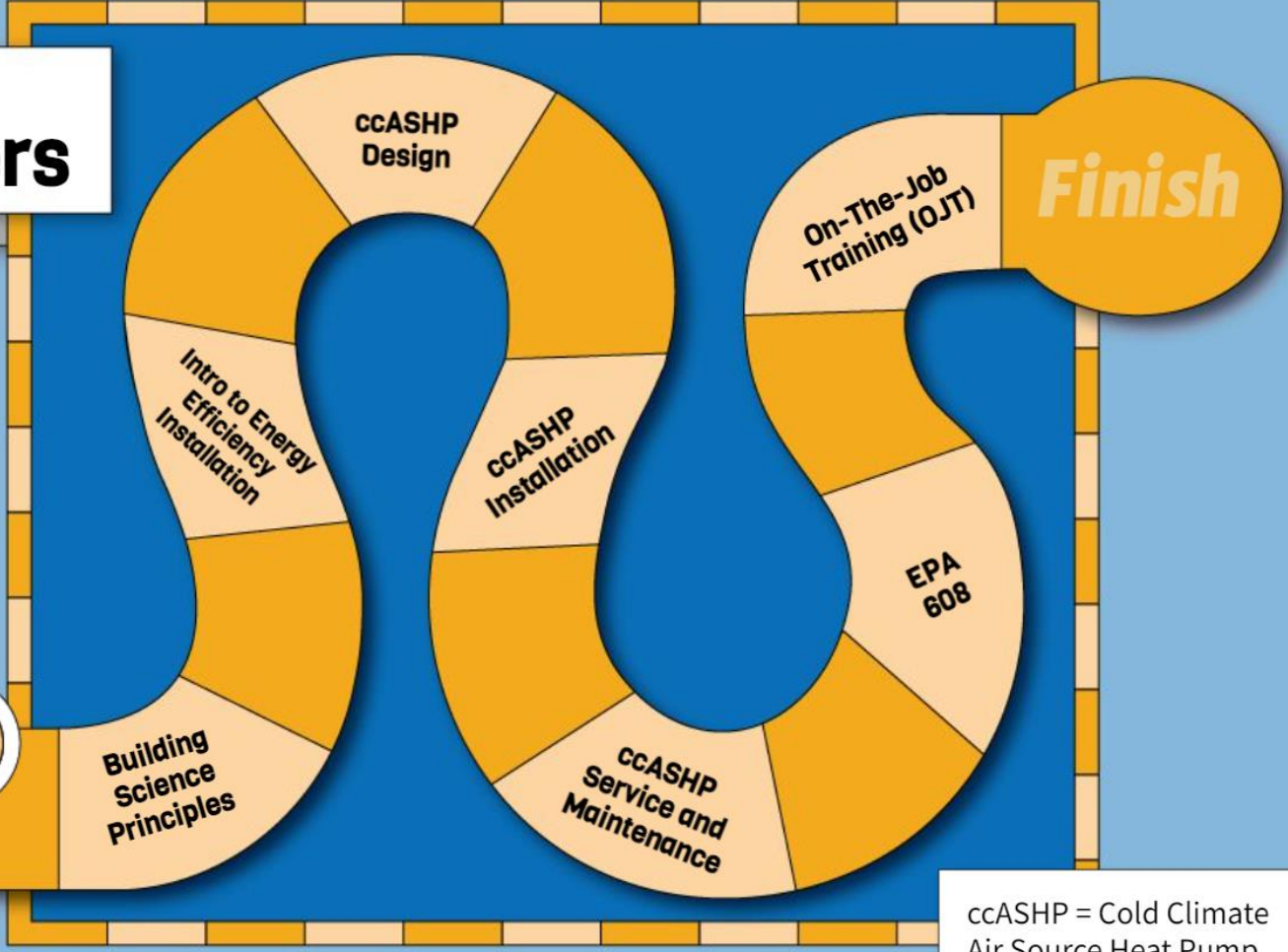
What level are you?

 **Entry**
you are new to HVAC, seeking to gain skills and begin a career pathway

 **Intermediate**
you have some HVAC experience, and you're seeking to upskill

Start



ccASHP = Cold Climate Air Source Heat Pump

Future Work



Future efforts:

Continue developing partnerships with employers to align the training program with their needs

- Partnering with Building Performance Institute (BPI) to include their future Heat Pump Certificate of Knowledge
- Disseminate project findings to allow for replication and scaling of project's successes

Thank You

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