1.1 Building Energy & Controls Apprenticeship (BECA) Program

Source: BECA

Location:	Year Founded:	Focus Area:
Eugene, OR	2019	Green Economy

Description

Lane Community College (LCC) and the University of Oregon (UO) are partnering to establish a new workforce development pipeline intended to train highly qualified graduates with hands-on experience in improving building energy efficiency. BECA will be recognized across state boundaries and will be accessible to students regardless of their geographic location.

Completers of BECA will be qualified to take the Association of Energy Engineers (AEE) ANSI 17024 Accredited Certified Energy Management (CEM) Certification exam. They will also have earned their associates of applied science (AAS) degree, and will have opportunities to sit for the Building Operator Certification (BOC) exam and the forthcoming Association of Controls Professionals (ACP) certification exam.

Target Population

Diverse populations in the Western U.S. **40%** of the total number of students will be underserved and non-traditional energy employees (women and BIPOC). Numerous other area businesses also serve as customers

Collaborators

Lane Community College (administrator), University of Oregon (partner), Department of Energy (funder), Energy Trust of Oregon (funder; serves as the non-profit entity managing Public Benefit dollars for the Oregon private utilities).

Funding Structure

A Department of Energy grant provided **$499,844** of funding (Advanced Building Construction FOA Award), with a cost share of **$142,600**.

Goals & Objectives

To increase the numbers, preparedness, and diversity of the building energy & controls workforce by creating the first of-its-kind Building Energy and Controls Apprenticeship Program. Graduates will be able to reduce energy use in typical buildings by at least **30%**, through recommissioning and identifying opportunities to improve HVAC, lighting, and other energy consuming building systems.

Key Learnings

1. **Addressing Workforce Diversity:** The BECA program recognizes the importance of promoting diversity in the building energy and controls

workforce. By actively targeting underrepresented populations, such as women and BIPOC individuals, the program aims to create inclusive opportunities for traditionally marginalized groups.

2. **Collaborative Partnerships:** The success of the BECA program is attributed to the collaboration between Lane Community College, the University of Oregon, the Department of Energy, and the Energy Trust of Oregon. These partnerships leverage resources from multiple sources to create a more impactful and sustainable initiative.

3. **Industry-Relevant Skills and Certifications:** The BECA program focuses on providing students with industry-specific skills and certifications that are in high demand. By offering training in energy management, building controls, and certifications like CEM and BOC, the program equips graduates with the recognized certifications needed to enhance employability.

4. **Practical, Hands-on Experience:** The BECA program prioritizes hands-on training to ensure graduates are equipped with practical skills and experience. By engaging students in real-world projects and simulations, the program prepares them to identify energy-saving opportunities, improve HVAC systems, and optimize building performance.

5. **Sustainable Funding Models:** The BECA program secured funding through a Department of Energy grant, with a cost-share component. This funding structure ensures the program's financial sustainability and supports its long-term operations.

6. **Geographic Accessibility and Online Learning:** The BECA program aims to overcome geographical barriers by leveraging technology and making the program accessible to students regardless of their location.

Metrics & Outcomes

» Hits on BECA website **(>100)**
» Enrollment and interest forms received **(150)**
» Student recruitment for enrollment **(48)**
» Portion of enrolled students meeting underrepresented population target **(40%)**