



The Board of Governors of the California Community Colleges

PRESENTED TO THE BOARD OF GOVERNORS

DATE: January 17-18, 2017

SUBJECT: Zero Net Energy Workforce Development		Item Number: 3.6	
		Attachment: No	
CATEGORY:	Workforce & Economic Development	TYPE OF BOARD CONSIDERATION:	
Recommended By:	 Van Ton-Quinlivan, Vice Chancellor	Consent/Routine	
		First Reading	
Approved for Consideration:	 Eloy Ortiz Oakley, Chancellor	Action	
		Information	X

BACKGROUND: Major workforce upskilling is required to meet the energy efficiency requirements of California Senate Bill 350, the Clean Energy and Pollution Reduction Act of 2015. An insufficient number of properly trained workers is currently a significant barrier to meeting the law’s mandates for “Zero Net Energy” in 50% of commercial buildings by 2030.

An example of the pressing workforce needs exists in the Heating, Ventilation, and Air Conditioning (HVAC) industry, in which less than one-third of incumbent workers hold a certificate or degree from an accredited institution and more than 85% of HVAC systems are improperly installed and maintained. Additionally, 50% more new HVAC workers are needed annually from community colleges, apprenticeship programs, and private training institutions.

The Zero Net Energy Workforce Initiative

Upgrading half of the state’s commercial building stock - 9 billion square feet - to Zero Net Energy by 2030 requires a comprehensive approach to workforce competencies that maps directly to the Senate Bill 350 mandates. **(Background cont.)**

RECOMMENDATION: This item is presented to the board for informational purposes.

(Background cont.)

Using HVAC as a focal point, the Energy, Construction, and Utility (ECU) industry sector team under the *Doing What Matters for Jobs and Economy* framework launched a faculty-driven Zero Net Energy workforce initiative in Southern California. As a first step, five colleges benchmarked their HVAC programs against an industry-recognized credential that:

- Creates a “built to industry standards” benchmarking process through which employers can easily identify qualified job candidates.
- Enables student portability among the five colleges committed to promoting stackable certificates across the Los Angeles, Orange, Riverside, and San Bernardino county economic region.

This benchmarking process was accomplished in less than six months. A consultant worked with interested faculty to index student learning outcomes at the five colleges against competencies in an industry credential recommended by the Western HVAC Performance Alliance (WHPA).

Four more elements are in development as part of this initiative:

- A four-tier approach to assessing and upgrading HVAC programs that will drive higher levels of consistency, launch work experience programs, and accelerate development of stackable certificates that align with the many specialized HVAC credentials.
- Integration of employer priorities for soft skills into the HVAC competency model for faculty use in curriculum development.
- Further development of the southern California “employer ecosystem” to facilitate employment, internships, externships, and continuing refinement of credentialing requirements.
- Application of research from the University of California, Davis and the RP Group to attract and retain likely completers into HVAC programs.

HVAC is one of five strategic occupations for which the Energy, Construction, and Utility industry sector team is assisting faculty in new responses to Senate Bill 350. Professional learning communities labelled “Expert Networks” provide structure to statewide initiatives for each of these occupations.

The Energy, Construction, and Utility industry sector team has also partnered with multiple apprenticeship programs, the major utilities, and industry associations, plus social justice and environmental advocates to map agendas and funding with the Senate Bill 350 mandates. This informal coalition meets frequently to inform California Public Utilities Commission and California Energy Commission policy for implementing Senate Bill 350.