
Competency Models In Action:

The Center for Energy Workforce Development Uses Energy Competency Model as Foundation for Career Pathways Model

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Introduction

Competency models outline the skills, knowledge, and abilities needed to perform successfully in a given industry or occupation. They can be used as a framework for broad-based training and development, focusing on competencies that will be useful in a wide range of jobs.

The Employment and Training Administration (ETA) collaborates with industry partners to develop competency models for industries that are vital to the American economy. The goal is to promote an understanding of the competencies needed to make the American workforce globally competitive.

Formed in 2006, the Center for Energy Workforce Development (CEWD) is a non-profit consortium of electric, natural gas, and nuclear utilities and their associations. CEWD helps utilities' associations, contractors, and unions work together to develop solutions to the anticipated workforce shortage in the energy industry.

In 2007, CEWD partnered with ETA to develop a competency model for the generation, transmission, and distribution sector of the energy industry. Designed to evolve along with changing skill requirements, the competency model provides a consistent definition of the competencies required to work and succeed in the energy industry. CEWD is using the competency model as the framework for a career pathways model, a roadmap for entry into skilled energy technician positions.

The Workforce Need

CEWD's focus is on the sector of the energy industry that provides energy services, including the generation of electricity, and the transmission and distribution of electricity, natural gas, and water. Recently, the combination of retirement-related worker shortages and increased demand for new energy infrastructure has led to a growing demand for skilled workers.

According to the Bureau of Labor Statistics, "almost half of the utilities workforce will be nearing retirement age within the next 10 years." Moreover, as the number of experienced workers declines, the industry sees demand for electricity and natural gas increasing. Increased demand for energy and new investments in energy efficiency, renewable energy, and clean energy generation contribute to expanded infrastructure work. These growing infrastructure needs and pending baby boomer retirements require the energy industry to bring new workers into the pipeline.

CEWD is addressing these workforce challenges through systematic approaches to recruitment and training. CEWD's objectives include creating energy career awareness, identifying workforce needs, and replicating successful workforce development models to meet the industry's demand for qualified workers. They work to develop industry-level solutions that regions and state energy consortia can tailor to address their local workforce issues.

The Get Into Energy campaign was created to increase awareness among students, parents, dislocated workers, and educators of the energy industry's need for skilled technical workers. The campaign provides information about the jobs in the industry, and education opportunities that can lead to employment. The intent is to provide guidance to individuals in choosing and preparing for a career path that matches their interests and abilities.

Solution: Energy Career Pathways Model Linked to Stackable Credentials

As part of the Get Into Energy campaign, CEWD developed the Get Into Energy Career Pathways Model based on the Energy/Generation, Transmission, and Distribution (Energy) Competency Model. The pathways model focuses on the needs of three stakeholder groups: students and potential applicants, educators, and employers. By structuring the career pathways system in a way that addresses the needs of multiple stakeholders, CEWD ensures that interested and able candidates learn about the industry, receive training targeted to the skill and competency needs of the industry, and receive preparation for the jobs that are in demand.

The Get Into Energy Career Pathways Model separates education and training into three categories. These categories align with the tiers of the Energy Competency Model: Basic Training (Tiers 1-3), Industry Fundamentals (Tiers 4-5), and Job Specific Skills and Credentials (Tiers 6-8). Grouping the skills in this way allows for the development of common curriculum and education requirements that correspond to the Get Into Energy Career Pathways model. By organizing training in this way, CEWD believes educators can train more people more efficiently. The certificates awarded upon successful achievement of competencies at each level result in a system of 'stackable credentials'. For example, a technician with successful attainment of Basic and Industry competencies will have the foundation to take additional training for a specific job skill, such as wind or smart grid technologies, without having to start over entirely. This system of stackable credentials provides an academic foundation for new entrants into the workforce and supports their continued career development. Training can evolve, as jobs and new technologies evolve, to maintain a skilled and flexible workforce.

To ensure that educators and training providers are training to the key competencies identified by the industry, CEWD is mapping existing industry credentials and curriculum to the competencies in the model. By using the Energy Competency Model as the framework for uniform training and development, CEWD can help focus curriculum development to address the specific needs of industry. Doing so reduces program overlap and duplication of effort among education and training providers. CEWD's efforts to create a uniform curriculum framework serve to align education and training with the needs of the industry.

In combination with Get Into Energy outreach efforts and state consortia-led employer and labor union collaboration, the competency-based career pathways curriculum and stackable credentials enable CEWD to grow the energy utility workforce pipeline. This provides the opportunity for experienced workers to transfer their knowledge and skills before they leave the industry. The Energy/Generation, Transmission and Distribution Competency Model plays a key role in the industry's workforce development efforts, because, for that knowledge transfer to be successful, potential candidates must first understand the competencies required to work in the industry.

Related Links

Get Into Energy Career Pathways for Skilled Utility Technicians
<http://www.cewd.org/documents/pathwayswhitepaper.pdf>

Get Into Energy Web Site
<http://www.getintoenergy.com/>

Energy/Generation, Transmission, and Distribution Competency Model
<http://www.careeronestop.org/CompetencyModel/pyramid.aspx?NRG=Y>