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July 12, 2013

California Energy Commission

**DOCKETED**  
**12-EBP-1**

TN 71613

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Written Comments for Docket 12-EBP-1

Attn: Dockets Unit

California Energy Commission

From: Barbara Hernesman, Director of Workforce Development

RE: Comments on Draft Action Plan for Comprehensive Energy Programs for Existing Buildings

(Please see general comments on other CalCERTS submittal)

The following information supports the identified gaps and additional supportive comments and resources.

#### **No Regrets Strategy 4: Foundational Workforce Resources**

The Draft Action Plan identifies a “Vision for Workforce Education and Training”. The vision is to “Create a highly-skilled workforce that will properly and safely implement energy efficiency and demand-side practices and technologies in existing buildings to ensure optimal energy savings across California”.

The Draft Action Plan also sites a study by Carol Zabin, Karen Chapple and Ellen Avis, et.al. titled *California Workforce Education and Training needs Assessment: For Energy Efficiency*, funded by CPUC (2010-2011) that asked the following question.:

“What are these [CEWTP] programs’ core competencies and specific assets and how can these best be leveraged for both energy savings and workforce development goals?”

One finding from this study was that

- “While third party certification is present in this market place, it is still nascent, and is thus having a limited effect on training differentiation and quality assurance.”

A second finding in the study was that

- “Clearer requirements from policymakers regarding third party certification and training accreditation would enhance training quality.”

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More fully stated, the question is, “How do we fill the needs of the Clean Energy Workforce adequately and appropriately for incorporating energy efficiency upgrades; high performance HVAC systems; energy efficient lighting, better performing insulation; high performance roofing; water efficiencies; and renewable energy relating to all construction trades and all housing market professionals?”

### **Industry response:**

Some industry stakeholders already working on this are the Department of Energy, (DOE); the National Renewable Energy Labs, (NREL); the American National Standards Institute, (ANSI); and the Interstate Renewable Energy Council, (IREC). For example, *U.S. DOE’s/NREL Guidelines for Home Energy Professionals* identifies four (4) Job Classifications advancing professional relevant training, addressing the market’s needs to ensure high quality results supported by quality control which builds consumer confidence.

DOE, NREL, ANSI and IREC all agree that Standard Work Specifications and Standardized accredited certificate training programs will provide the pathway to an efficient, safe and appropriately skilled Home Energy Professional Workforce.

DOE/NREL’s skill standards and job categories in residential retrofit have the potential for improving quality and creating certainty for contractors and its potential employable workforce.

The four DOE/NREL job classifications identify specific Job Tasks Analysis (JTA’s) and Knowledge Skills and Abilities (KSA’s) per each job occupation:

1. Energy Technician
2. Energy Auditor
3. Crew leader
4. Quality Control Inspector

While these Home Energy Professional standard work specifications must be passed on to the workforce, it is vitally important that the training created insures standardization and quality. The industry-recognized way to achieve this is through accredited training programs such as the ANSI-IREC 14732:2012 Standard, *Accreditation for Energy Efficiency and Renewable Energy Certificate Programs*.

“Program accreditation ensures organizations maintain conformance to the highest quality and standards of training and provides the tools needed in today’s competitive and ever-changing landscape”, according to Pat Fox, the Director of Credentialing Development at IREC.

These Accredited Certificate Training Programs require learner goals and objectives, quality assurance of training delivery, skill achievement, measurement, verification, data collection for job placement and ongoing program evaluation.

## Workforce Investment Board Involvement:

An article for Federal Workforce Investment Policymakers & Practitioners, authored by Robert T. Mejia, Employment Service Manager of the South Bay Workforce Investment Board titled, “What’s Old is New *Green Jobs* & What America’s Federal Workforce Investment System Can Do *Now* to Develop a *Green Workforce*”, (2009), the following characteristics and recommendations, among others:

### Workforce Derivative Occupations:

- It is important that workforce developers understand: 1) traditional jobs/occupations; 2) traditional jobs/occupations and skill sets employed in a more sustainable manner;
- A clean energy workforce job or occupation could refer to a business opportunity for an *independent contractor or entrepreneur*; one’s self-identified profession, or an employer-employee relationship. When performed by an employee in an exchange for pay, a job consists of duties, responsibilities, and tasks that are (1) defined and specific, and (2) can be accomplished, quantified, measured, and rated.
- Jobs/occupations require traditional knowledge, skills and abilities (KSAs) that can be applied to achieve sustainable product/service outcomes. A new curriculum will have to be devised to impart the required KSA’s. Once the KSAs have been mastered, the worker will be more productive and add more value to the business’ goods and services; and the employees’ productivity gains (in terms of efficiency or value-added) shall warrant the notions of family supporting, livable wage jobs with upward mobility.
- Recommendations for the Federal Workforce Investment System:  
Provide funding for education and training of incumbents, economically dislocated, and other economically disadvantaged workers who have the desire, propensity, and aptitude to work in Science, Technology, Engineering, and Math (STEM)-related occupations/fields. Although STEM can open doors to *gender neutral* quality education and high-paying career opportunities Science, Technology, Engineering and Math, STEM does not include Building Science. Such as:
  - ✓ Improving data collection and dissemination
  - ✓ Building the skilled mentor pool
  - ✓ Encouraging research-based STEM teaching
  - ✓ Broadening access to online/mobile STEM skills and training

CalCERTS continues to support the CEWTP goals of “building cross-sector partnerships and relationships to ensure training relevant with building standards and job specifications.” The ARRA funded (2009-2011) CEC-Clean Energy Workforce Training Program model importantly formulated collaborative community partnerships that included business, private industry, labor, Community Colleges, IOU’s and Federal, State and local governments. This model fostered opportunities to identify industry and educational best practices, learner-skill gaps, and provide an evaluation and quality assurance.

We believe it will be necessary to “subsidized the next generation” by developing “Apprenticeable” Occupations that will accommodate “learn-as-you-earn” training models that incorporate:

- Standardized accredited certificate training programs that utilize a measurement tool such as the Analysis, Design, Development, Implementation and Evaluation (ADDIE) model of all training and educational development and delivery
- Instructional partnerships consisting of business, industry, and educational systems developing and supplying an appropriately skilled workforce that advances the mastery of personal and workplace effectiveness and readiness
- Blended learning to provide academic competencies, technical hands-on-lab training, on-the-job-occupational training, and added value business/construction project management knowledge
- Next generation industry specific non-technical skills development and industry-relevant continuing education such as marketing & sales, project management, estimating software, apps-technology, real estate and investment finance.
- Preparing workers for a career in the construction and energy efficiency trades, which include opportunities for advancing up the career ladder with wage increases and portability.
- These Private Industry and Community Colleges instructional and educational partnerships must be tailored to develop “next generation” entry-level, intermediate-level and existing workforce competencies that are necessary to provide for employer needs for a ready workforce, and the opportunity for business scalability and promoting market growth.
- Building Inspector Technology Certificate Program education and training systems that advance them academically along the pathway to promote efficient use of energy, distributed generation, energy upgrades/construction remodeling incorporating the California Building Energy Efficiency Standards.
- Consumer awareness in both new and existing housing markets by adding mandatory property-valued home energy rating systems at the point-of-sale, or at other trigger points.
- Industry specific “Instruct-the Instructor” training that leads to proficiency in Adult Learning Principals, Lab and hands-on training facilitation and Industry measured best practices.

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- Industry specific mentoring programs that work through hands-on labs', on-the-job experiences, and project-specific mentoring provided by accredited certificate training programs providers

In as much as the Draft Action Plan speaks to making “mid-course” changes, depending on feedback from various programs and efforts, it is also essential that the credentialed workforce maintain education and training that coincides with the new and developing technologies; aligns with best practices that are constantly being evaluated and developed from analysis of the data acquired; and that the credentialed workforce be able to demonstrate current relevance to consumer’s needs and expectations. To achieve these objectives, CEU’s should be standardized, relevant, readily available, and delivered with the same credibility as the original credential training through accredited training organizations.

