



Title 24 Certification for Non-Residential HVAC Contractors

Facilitated by CalCERTS and the California Community Colleges

Synopsis

CalCERTS and the California Community Colleges have initiated a three phase program for statewide certification of nonresidential HVAC contractors in the 2013 Title 24 Building Energy Efficiency Program. When fully implemented, this program will deliver the following benefits:

- Accelerated compliance with the 2013 Title 24 Code for nonresidential HVAC systems
- A structured approach to contractor proficiency statewide
- A reliable basis for building owners and managers to select competent contractors
- Priority access to new market opportunities for certified contractors

A common approach to contractor certification is being developed by key representatives of BOMA (Building Owners and Managers Association), Southern California Edison, PG&E, CalCERTS, and the California Community Colleges. This group also plans to request support from the Contractor State Licensing Board and California Energy Commission in developing the parameters for a state-recognized certification.

This brief is to inform potential collaborators in this initiative, communicate the rationale, and outline an action plan to make it a reality.

The Need

CalCERTS and industry partners have identified gaps in HVAC industry workforce performance that present barriers to achieving the state's AB 32 mandates¹. These gaps have been acknowledged by both the by the California Energy Commission (CEC)² and California Public Utilities Commission (CPUC)³.

The commercial sector represents 5 billion-plus square feet of highly diverse space — not only office buildings but also retail stores, restaurants, warehouses, schools, hospitals, public buildings and others. Commercial buildings consume more electricity than any other sector in California constituting 38 percent of the state's power use and over 25 percent of natural gas

¹ Western HVAC Performance Alliance, www.performancealliance.org

² California Energy Commission, *Comprehensive Energy Efficiency Program for Existing Buildings – Scoping Report*, August 2012; *Draft Action Plan for the Comprehensive Energy Efficiency Program for Existing Buildings*, June 2013;

³ California Public Utilities Commission, *California Long-range Energy Efficiency Strategic Plan*,

consumption⁴. For HVAC overall – residential, commercial, and industrial/agricultural – the CPUC estimated that poor installation and maintenance may result in lost potential energy savings of 20 to 30 percent. Because of the complexity of commercial systems, it is safe to assume that this sector lost energy savings are at least in that 20 to 30 percent range. The latest CPUC evaluation shows that only 50% of the three-year energy savings target was achieved in the first two years of the reporting cycle, along with only 21% of the natural gas target. These gains cost 69% of the program budget, which indicates room for significant gains in program efficacy⁴.

A comprehensive, replicable, industry-accepted pathway to a credentialed HVAC workforce is needed to bring new and existing nonresidential building stock into compliance with the 2013 Title 24 Building Energy Efficiency Standards. According to the State & Local Energy Efficiency Action Network (SEE ACTION), whose work is facilitated by DOE/U.S. EPA, “developing and maintaining a competent and credible workforce is a critical part of an effective energy policy framework.” SEE ACTION goes on to say, “Workforce training and credentialing are essential to ensure consistent levels of technical expertise and quality of work in the assessment and implementation of energy performance improvements”⁵. This need is reinforced in research completed by the Don Vial Center in collaboration with California’s Investor Owned Utilities and other key stakeholders.⁶

The SEE ACTION article indicates that as state and local governments work to expand building energy policy frameworks, training and credentialing will become increasingly important to grow and sustain the workforce needed to deliver energy performance consistently and credibly at the building level and across entire markets.

Contractors are critical to implementation of the 2013 Title 24 code, and need a qualified workforce to assure code compliance. Certification and credentialing of contractors, and their employees, are key elements in workforce performance that achieves Title 24 compliance.

Competent contractors also need a means of differentiating their firms to address the market opportunities afforded by the 2013 Title 24 Code. Certification provides the means by which differentiation can occur, and encourages contractors to invest in training at all levels of their workforce. Similarly, building owners and managers want to engage competent contractors and need a vehicle to identify those most qualified. Anecdotally, building owners are already seeing price gouging by contractors who claim to be fully competent on the 2013 Title 24 Code without independent validation or certification. A state-approved industry-recognized contractor certification for the 2013 Title 24 Code offers the credibility needed by contractors and building owners alike, encouraging investment and assuring code compliance.

⁴ California Public Utilities Commission, 2010-11 *Energy Efficiency Annual Progress Evaluation Report*, 2012

⁵ SEE ACTION, *Greater Energy Savings through Building Energy Performance Policy: Four Leading Policy and Program Options Existing Commercial Buildings Working Group*, May 2014, “Workforce Training and Credentialing”, May 2014

⁶ Don Vial Center on Employment in the Green Economy, May 2014, <http://irle.berkeley.edu/vial/publications/ca-workforce-issues-energy-efficiency-programs14.html>

Action Plan

Phase 1: Develop the Competency Model and Certification Strategy

Working with a selected community college, CalCERTS is creating the basis for Title 24 contractor certification. This approach integrates the 2013 Title 24 Code into relevant parts of the community college HVAC curriculum and maps the resultant material to the CalCERTS competency model, creating a training and certification platform.

In parallel with this effort, CalCERTS is taking the initial steps to gain support for a new credential that recognizes contractor proficiency in the 2013 Title 24 Code. CalCERTS has opened a dialog with the California Energy Commission, industry stakeholders, and the California Community Colleges to validate the need for this certification and guide development of related training and certification process.

This phase is now underway and is scheduled to complete in the fourth quarter of 2014.

Phase 2: Complete the Certification Plan and Deliver Pilot Training

This phase builds curriculum for nonresidential HVAC contractors, delivers pilot training, and achieves provisional approval for Title 24 certification.

Stakeholder forums will inform the curriculum and identify a pilot cohort for training. Using this information, CalCERTS will manage the process of curriculum development in collaboration with the California Community Colleges. Training is to be offered as a pilot to validate and refine the curriculum. The pilot cohort will be a representative group of contractors in a contract education or fee-based arrangement outside the mainstream community college certificate and degree programs. CalCERTS and the California Community Colleges will assist in arranging funding for contractors to participate in this pilot training.

Working with the CEC, CalCERTS will develop and facilitate provisional approval for nonresidential HVAC contractor certification in the 2013 Title 24 Code. Robust inputs from industry stakeholders will help assure effectiveness of the certification and recognition of its value by building owners and managers.

This phase is expected to begin in fourth quarter of 2014 and complete in first quarter of 2015.

Phase 3: Statewide Expansion

This phase achieves formal approval for the certification and builds a statewide capability for reliable implementation of the 2013 Title 24 Code by nonresidential HVAC contractors.

CalCERTS and the California Community Colleges, in collaboration with the CEC and industry stakeholders, will develop a plan for statewide expansion of the training and certification program. This plan will map out a statewide footprint of training providers – including CalCERTS, community colleges, LMCCs, and others as appropriate – with the capability to meet

regional demands for training and certification. It will also propose the resources and timeline for developing this footprint.

Once approved by stakeholders and acquisition of funding, the expansion plan will be executed statewide according to priorities in the approved plan.

At some point during Phase 3, sufficient evidence will have been developed to justify formal CEC approval of the certification. Such approval, of course, will depend on the outcome of CEC processes necessary for stakeholder comment.

Expansion planning can begin in parallel with Phase 2, or after its completion.

Next Steps

Take the following actions during the second half of calendar year 2014:

1. Continue to build a coalition of supporters who will lead the initiative for nonresidential HVAC contractor training and certification.
2. Develop a robust competency model specific to the 2013 Title 24 Code as applied to nonresidential HVAC contractors.
3. Introduce a plan to CSLB and the CEC to create the certification program.
4. Work with CSLB, CEC, and industry stakeholders to begin the process of refining and adopting the plan.

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