ADAMS BROADWELL JOSEPH & CARDOZO

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

520 CAPITOL MALL, SUITE 350
SACRAMENTO, CA 95814-4721

TEL: (916) 444-6201
FAX: (916) 444-6209

tenslow@adamsbroadwell.com

DANIEL L. CARDOZO
THOMAS A. ENSLOW
PAMELA N. EPSTEIN
TANYA A. GULESSERIAN
MARC D. JOSEPH
ELIZABETH KLEBANER
RACHAEL E. KOSS
ROBYN C. PURCHIA
ELLEN L. TRESCOTT

OF COUNSEL
THOMAS R. ADAMS
ANN BROADWELL

SO. SAN FRANCISCO OFFICE

601 GATEWAY BLVD., SUITE 1000
SO. SAN FRANCISCO, CA 94080

TEL: (650) 589-1660
FAX: (650) 589-5062

July 20, 2012

VIA E-MAIL AND OVERNIGHT MAIL

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 10-BSTD-01
1516 Ninth Street
Sacramento, CA 95814
PublicAdvisor@energy.ca.gov

Karen Douglas
Commissioner
California Energy Commission
1516 Ninth Street, MS-33
Sacramento, CA 95814

Andrew McAllister
Commissioner
California Energy Commission
1516 Ninth Street, MS-33
Sacramento, CA 95814

Re: Comments on Proposal for Certification of Acceptance Testing Field Technicians for Lighting Controls and HVAC Systems (Docket No. 10-BSTD-01)

Dear Commissioners and CEC Staff:

The following comments are submitted on behalf of the California State Labor Management Cooperation Committee and Bernie Kotlier, co-chair of the California Advanced Lighting Controls Training Program ("CALCTP") and on behalf of the Joint Committee on Energy and Environmental Policy ("JCEEP") in response to the proposed regulations regarding certification of acceptance testing field technicians for lighting controls and mechanical systems. CALCTP and the

JCEEP have been working with California Energy Commission ("CEC") staff for over eight months to develop effective certification and training requirements for acceptance testing field technicians for lighting controls and heating ventilation and air conditioning ("HVAC") systems. The proposal put forth at the July 16th web workshop, however, bears little resemblance to the proposals that we have spent months fine tuning based on feedback received from staff and the comments and concerns that were raised during the prior workshop on this issue.

At the outset, the overarching objective of this proposal was to ensure that acceptance testing requirements would be meaningful and reliable and would contribute to advancing the State's energy efficiency goals. Because advanced lighting and commercial HVAC systems are highly complex systems, it takes substantial skill, training and experience to properly test, adjust and verify these systems in the many permutations found in the field. Accordingly, certification standards must be sufficiently rigorous and substantive to be effective.

Title 24 requires acceptance testing and documentation of advanced lighting controls and HVAC systems in order to ensure that systems have been installed correctly and perform efficiently. Title 24, however, does not currently require acceptance testers to have any qualifications, expertise or demonstrated competence in performing these tests and verifying that the systems have been installed and perform as designed. Moreover, California Commissioning Collaborative research on acceptance testing enforcement and effectiveness found that code officials, contractors and engineers are not clear on the acceptance testing procedures and form documentation. As a result, it appears that incomplete or incorrectly executed acceptance tests and forms are currently the norm rather than the exception. This finding is consistent with the Commission's repeated findings that appropriate training and certification is needed for both lighting and HVAC systems in order for California to realize its energy efficiency goals.

To address this issue effectively and efficiently, it was recognized that a certification program for commercial installation needed to be more rigorous and to provide better quality assurance than provided under the HERS program. It was also recognized that the fastest, most cost-efficient and most reliable way to create an effective and reliable certification program was to utilize existing programs that already have been privately developed rather than having the CEC create a brand new program. After extensive review, the only certification entities identified as having existing programs capable of ensuring that acceptance testers have the necessary experience, knowledge, and competence were CALCTP for advanced

lighting system controls, and the Associated Air Balance Council (AABC), the National Environmental Balancing Bureau (NEBB) and the Testing Adjusting and Balancing Bureau (TABB) for HVAC systems.

Not only do the proposed regulations not take advantage of the existing CALCTP program and NEBB, TABB and AABC programs, they also failed to include any meaningful and effective standards for becoming a certification agency. The current proposal would allow anybody to create a test that covers the stated subject area and become a certifier even without any demonstrable experience, training, competence or expertise in the industry. In addition, the proposals fail to require any education, pre-qualification or experience requirements for persons seeking to be certified. Instead, all the proposal requires is that acceptance testers demonstrate the ability to pass a test. Anyone can be taught to pass a specific test; this doesn't provide any assurance that they can actually perform when encountering real world conditions. The proposed regulations also fail to incorporate key quality control provisions that were identified as critical to ensuring certifications are reliable and effective. Without such provisions, this program will simply create a new bureaucracy without providing the intended offsetting benefits. Simply put, the current proposal would not appreciably contribute to meeting California's energy efficiency objectives.

I. THE PROPOSED REGULATIONS FAIL TO INCORPORATE AND LEVERAGE EXISTING LIGHTING CONTROL AND HVAC SYSTEM TESTING CERTIFICATION BODIES

Because the State of California is pressed for resources and the Governor has made clear that he does not want to add any more layers of bureaucracy, existing advanced lighting control and HVAC system testing certification programs were identified that could be utilized and leveraged to form the backbone of any new acceptance tester certification requirements. But instead of utilizing these existing, qualified mechanical and advanced lighting testing certification bodies and leveraging their current infrastructures for oversight, quality control, and enforcement, the proposed regulations completely ignore these existing resources and instead require the creation, from scratch, of brand new certification bodies.

Using CALCTP and TABB, AABC and NEBB to form the initial backbone of a commercial acceptance tester certification program would not exclude any other qualified certification programs. In the approximately eight months that staff has

been reviewing these proposals, CALCTP and TABB, AABC and NEBB are the **only** entities that have demonstrated current, up and running programs capable of providing an effective and reliable certification program for Title 24 acceptance testers. While other organizations have suggested that they could potentially develop the capability to be an Acceptance Tester Certification Agency in the future, no other organizations have demonstrated or even asserted that they currently have the infrastructure, developed curriculum, experience and capability to provide such certifications now or in the immediate future.

Moreover, during the eight month review, CEC staff never questioned the credentials, expertise, or capabilities of these organizations. The only additional step that was identified as necessary was for these organizations to add a training unit to their certifications that specifically covered the requirements of Title 24 acceptance testing documentation forms. Each of these organizations has already committed to adding such training to their current California programs and to also provide this training to their currently certified technicians.

Despite the obvious benefits and efficiencies from utilizing these pre-existing programs, the proposed regulations are written as if these programs do not exist. The proposal utterly fails to recognize, utilize or build upon these pre-existing programs.[1] This is directly contrary to the key underlying premise of our discussions with staff and Commissioners over the last year. While creating a path for new entities to also become certification agencies is fine, the regulations need to initially build on what currently exists. Existing entities that have been proven

[1] The resistance to utilizing these existing programs to form the initial backbone of a commercial acceptance tester certification program appears steeped in staff's misconception that the use of the existing certification agencies (CALCTP, TABB, AABC and NEBB) somehow gives union workers an advantage over non-union workers. We have demonstrated again and again that this is false. TABB, NEBB and AABC provide certification for all sectors of the mechanical industry, including both union and non-union sectors and including contractors, engineers and other mechanical industry professionals. NEBB and AABC's members, for example, are mostly non-union and they provide TAB certification for any qualified applicant, regardless of their specific profession. CALCTP's installation training certification process has been embraced and supported by the entire lighting industry because it was created by a coalition of industry interests including the ISOs, SMUD, the California Lighting Technology Center at U.C. Davis, manufacturers and both union and non-union contractors. The CALCTP program expressly certifies both union and nonunion workers and provides training at both union training facilities and community colleges. Simply put, the use of these existing certification agencies will provide no advantage to union shops. The only persons that it will disadvantage are those who are not qualified or competent enough to pass rigorous and meaningful certification training and testing programs.

effective should be utilized and leveraged. Otherwise, the program will be inefficient, ineffective, more expensive, more burdensome on state resources, and subject to greater delay in implementation.

II. THE PROPOSED REGULATIONS FAIL TO INCORPORATE KEY QUALITY ASSURANCE PROVISIONS

A. Failure to Ensure Quality Control of Acceptance Tester Certification Agencies through Third Party Oversight or Accreditation Requirements

In addition to failing to utilize the existing CALCTP and TABB, AABC and NEBB certification programs, the proposed regulations fails to incorporate existing independent, private, third party oversight options for ensuring that Acceptance Tester Certification Agency certification programs are sufficiently rigorous and effectively managed. In order to ensure the capability and qualifications of Acceptance Tester Certification Agencies, we had proposed that an Acceptance Tester Certification Agency's certification and certification process must be (for mechanical) accredited under ISO/IEC 17024, or (for lighting controls) reviewed and overseen by the California Investor-Owned Utilities and the California Lighting Technology Center at U.C. Davis.[2] By failing to take advantage of the organizations that already have expertise and experience in reviewing and overseeing these types of programs, the proposed regulations unnecessarily increases the costs and burdens of this program on the State and would likely delay implementation. Moreover, given the State budget issues, it is unlikely that CEC staff will have the capability or resources to effectively take on these oversight and review responsibilities themselves.

B. Failure to Require Applicants to Provide Sufficient Information to Adequately Assess the Quality of a Proposed Certification Program

The proposed regulations state that Acceptance Tester Certification Agencies must submit an "application" to become an approved certification agency, but fails to set forth any minimum information that must be submitted as part of the

[2] Part of the underlying problem with the proposed regulations appears to be an intent by staff to create one single set of regulations to cover both lighting control acceptance tester certification agencies and HVAC acceptance tester certification agencies. Because these systems each have their own complexities, each have their own unique pre-existing industries, and each currently rely on different types of quality control bodies, the regulations for HVAC and lighting control system acceptance tester certification agencies need to be addressed separately. Such an approach would be consistent with the acceptance tests themselves, which provide for separate and distinct testing requirements and documentation for each system.

application. When read in context with the rest of the proposed regulations, it appears that an Acceptance Tester Certification Agency applicant need only provide a mere list of specific program components. This does not provide sufficient information to adequately assess the quality of a certification program.

At a minimum, an application for approval of an Acceptance Tester Certification Agency should require: (1) provision of all training and testing procedures, manuals, handbooks and materials; (2) a detailed explanation of how the certification program meets the regulatory goals and requirements; (3) a detailed explanation of how the efficacy of the training curriculum content and methods was evaluated and verified; (4) detailed information regarding ownership, partnership or corporate structure, including any by-laws, partnership agreements or articles of incorporation; and (5) an independent, third party review of the certification program by a qualified entity.

The last requirement is critical to ensure that certification programs are rigorous and effective. Moreover, third party entities already exist with the qualifications to provide CEC staff with an independent review of these programs. For lighting, the entities that have currently been identified with the experience, knowledge and qualifications to meaningfully review, assess and oversee proposed lighting certification programs are U.C. Davis Lighting Technology Center and the IOUs. For mechanical acceptance testing certification bodies, accreditation under ISO/IEC 17024 should be required.

In addition, the proposed regulations do not set forth whether staff or the Commission shall make the final decision as to whether an applicant should be certified as an Acceptance Tester Certification Agency. The proposal also provides no opportunity for interested parties to submit comments on the application. Without an opportunity for public comment or for Commission review, no quality control will exist over approval of Acceptance Tester Certification Agencies.

C. Failure to Ensure Effective Quality Control of Acceptance Tester Technicians through Certification Requirements for Acceptance Tester Employers

The proposed regulations also fail to include a requirement for certification of acceptance tester *employers*. Certification of acceptance tester employers is critical in order to ensure quality control and appropriate supervision and support for the certified acceptance tester technicians. By putting the employer's certification on

the line in addition to the certified tester, you ensure that the tester is provided sufficient equipment, resources and time to correctly perform the job. Pressure on the certified tester to quickly test and pass a system is reduced and a high level of accountability and quality control is achieved. The quality control and accountability created by requiring certification of both employers and technicians is particularly important since independent third party testing is not required.

D. Failure to Ensure Acceptance Tester Technicians Have Sufficient Verifiable Professional Experience and Expertise to Ensure Capability to Meaningfully Understand and Apply Certification Training in Real World Settings

The proposed regulations ensure only that acceptance testers are able to be trained to pass a test. The proposal provides no assurances that acceptance testers have sufficient experience or qualifications to actually apply the limited certification training to real life situations that will not always fall neatly within the parameters of what is taught in the classroom.

Initially, we had advocated for the inclusion of specific training, education and experience prequalification requirements equivalent to those provided by electrical or mechanical apprenticeship programs. After discussions with staff regarding their desire to be as inclusive as practical, we proposed that participation in certification programs be limited more generally to persons who the Acceptance Tester Certification Agency deems has sufficient, verifiable professional experience, education and/or expertise to demonstrate an ability to understand and apply the certification training.

Staff, however, has rejected even this more general requirement to ensure that acceptance tester certification applicants possess at least the bare minimum of base-knowledge and/or experience necessary to make their acceptance tester certification meaningful. Not only did the proposed regulations fail to include any sort of prequalification requirements, at the July 16th web workshop, staff expressly stated that it was their *intent* not to require any qualifications for acceptance testers other than the ability to pass a test.

Because of the complexity of these systems, simply teaching a lay person a generic "acceptance test" is not sufficient to ensure the real world ability to properly test and adjust advanced lighting systems or commercial HVAC systems. Acceptance testing training necessarily builds upon the knowledge and experience

base possessed by electrical or mechanical system professionals. There are, for example, dozens of different lighting control manufacturers, hundreds of different advanced lighting control products and thousands of different configurations for these systems. No test is going to be able to cover every permutation. Accordingly, most persons without a basic knowledge and experience base in these systems would be unable to effectively apply this training in complex real world situations, even if they were able to successfully pass a classroom test. To ensure effective acceptance testing, it is critical to ensure that acceptance testers have the underlying background and experience in these systems to be able to adjust to the complexities and permutations that a tester will encounter out in the field.

Under the proposed regulations, however, a high school drop out with no training or experience in electrical or HVAC systems could be taught to the test through a certification mill, yet have no real skills or ability to properly perform the acceptance testing in the real world. Performance of advanced lighting system and mechanical system acceptance testing by persons who do not have the requisite training, experience, competence, oversight and accountability is counter to the Commission's goal to achieve maximum energy efficiency and will lead to results that fall short of design and specification standards.

III. FAILURE TO PROVIDE AN EXPEDITED PATH FOR CERTIFICATION OF TECHNICIANS WHO ALREADY HAVE OBTAINED RELEVANT, VERIFIABLE TRAINING FROM CALCTP, TABB, NEBB OR AABC

During this regulatory process, CALCTP and TABB, NEBB and AABC were the only organizations identified as currently certifying technicians capable and qualified to provided advanced lighting and HVAC system acceptance testing. In order to expedite the availability of sufficient numbers of acceptance testers and in order to reward early-adopters of advanced testing and adjusting training, regulations should provide that persons certified by CALCTP, TABB, NEBB or AABC prior to approval of these agencies' California Acceptance Tester Certification programs may qualify as certified acceptance testers upon completion of a class or webinar on Title 24 Acceptance Forms. The proposed regulations, however, fail to recognize or utilize the current certified technicians of these organizations at all.

IV. CONCLUSION

In order to ensure that Title 24 requirements for reducing the energy demand of commercial HVAC and lighting systems will result in actual real world energy savings, it is critical that acceptance testing and documentation of these systems be performed accurately and completely. CALCTP and TABB, NEBB and AABC are the only identified certification entities that currently have programs capable of ensuring that acceptance testers have the experience, knowledge, and competence to consistently and properly perform the required acceptance testing in unpredictable real world settings. Without proper training and certification, acceptance testers will not provide the intended assurance that the cost of complying with Title 24 energy saving requirements will actually result in expected energy savings.

The failure to utilize and leverage existing certification programs and failure to ensure quality control over providers and acceptance testers renders the proposed program a sham. What will result are fly-by-night Acceptance Tester Certification Agencies that simply teach to a test without actually ensuring that certified testers have the requisite experience, knowledge base and competency to ensure that systems have been installed and perform as designed.

As written, the proposed certification regulations either need to be completely overhauled or the entire acceptance testing and documentation program should just be abandoned. Anything in between would simply create additional work and costs without any verifiable countervailing energy-saving benefits.

We appreciate your consideration of these comments. We would be happy to work with staff in an attempt to resuscitate this proposal.

Sincerely,

Thomas A. Enslow

TAE:ljl

2698-003j