

## Energy - Docket Optical System

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**From:** Ownby, Adrian@Energy  
**Sent:** Friday, March 06, 2015 3:20 PM  
**To:** Energy - Docket Optical System  
**Cc:** Shirakh, Maziar@Energy; Geiszler, Eurlyne@Energy; Strait, Peter@Energy  
**Subject:** Attached files for Docket #15-BSTD-01  
**Attachments:** TN 74259 01-06-15 JCEEP Supplemental Comments on 2016 ATTCP Admin Regulations.pdf; TN 74065 11-24-14 JCEEP Comments on the Proposed 2016 Title24, Part 1 ATTCP Regulations.pdf; TN 73735 09-04-14 JCEEP Comments on 2016 Building Energy Efficiency Standards Pre-Rulemaking Proposals for HVAC Efficiency Requirements.pdf; TN 74265 01-08-15 CA State Labor Management Cooperation Committee - Thomas Enslow's proposed amendments to Title 24, Part 1, Section 10-103-A.pdf

Docket Unit,

The attached files were previously submitted for Docket #14-BSTD-01. Please add the attached files to Docket #15-BSTD-01. You may use this email as a cover sheet for each of the files if necessary. Thanks.

-Adrian

Adrian Ownby  
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California Energy Commission

**DOCKETED**

**15-BSTD-01**

**TN # 75379**

**MAR 06 2015**

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January 6, 2015

*Via Email*

California Energy Commission  
Dockets Office, MS-4  
Re: Docket No. 14-BSTD-01  
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California Energy Commission

**DOCKETED**

**14-BSTD-01**

**TN 74259**

**JAN 07 2015**

Re: **Docket No. 2014-BSTD-01: JCEEP Proposed Amendments to Strengthen and Clarify Acceptance Test Technician Certification Provider Requirements**

Dear Docket Office:

Attached are amendments submitted on behalf of the Joint Committee on Energy and Environmental Policy ("JCEEP") which propose revisions to strengthen and clarify the Title 24, Part 1, Section 10-103-B Acceptance Test Technician Certification Provider ("ATTCP") regulations.<sup>1</sup> JCEEP is made up of the California sheet metal workers' local unions and more than 25,000 technicians working for over 600 contractors throughout California. JCEEP's mission is to promote responsible energy, environmental, and indoor air quality standards and policies as it pertains to and impacts the HVAC industry.

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<sup>1</sup> This comment letter supplements JCEEP's earlier November 24, 2014 comment letter on the amendments to the ATTCP regulations proposed by Commission staff at the November 3, 2014 Staff Workshop on Draft Language for the Residential and Nonresidential Building Energy Efficiency Standards and Associated Documents. As discussed in that comment letter, the proposed draft language did not go far enough to clarify and strengthen the ATTCP regulatory requirements and included several provisions that would water down the ATTCP requirements. This supplemental letter proposes a more comprehensive alternative amendment to Section 10-103-B in order to improve the usability and effectiveness of the ATTCP requirements.

The current ATTCP regulations contain a number of requirements that are unclear or are insufficiently detailed to ensure reliable and effective ATTCP certification programs. For example, the current regulations contain vague and confusing prequalification requirements, fail to provide clear quality assurance guidelines, and fail to require ATTCP applicants to follow standard industry practices for validating tests for rigor, reliability and lack of bias.

To address these issues, JCEEP respectfully requests adoption of the attached amendments. The attached amendments strengthen the certification program and provide additional clarity to ATTCP applicants by:

- (a) Clarifying employer training requirements when an employer has multiple offices;
- (b) Ensuring that employers maintain general liability insurance and comply with applicable licensing and safe practice requirements;
- (c) Clarifying the training and testing requirements for certification;
- (d) More clearly defining the three years of professional experience required to enroll in the certification classes;
- (e) Clarifying that ATTCPs must follow standard industry practices and Federal guidelines for validating tests for rigor, reliability and lack of bias;
- (f) Requiring ATTCPs to use multiple versions of tests to ensure test security and reliability;
- (g) Requiring a higher percentage of oversight audits during the first 3-5 years of a provider's operation in order to ensure that any initial issues with noncompliance are identified and addressed;
- (h) Clarifying that an ATTCP must have an ethics policy and equipment maintenance policy;
- (i) Requiring an ATTCP applicant to have sufficient qualifications and experience to demonstrate a likelihood of success;
- (j) Clarifying the grounds for the Commission's approval of an ATTCP; and

- (k) Providing currently approved ATTCPs with a 180 day grace period for complying with any newly enacted ATTCP requirements.

Certification for Mechanical Acceptance Test Technicians was enacted by the Commission in response to testimony that training, certification and quality control of acceptance test technicians were needed to make the Commission's acceptance test requirements meaningful, reliable and effective. Reliable and effective acceptance testing is an essential component to meeting California's energy efficiency goals. Studies have shown that without proper functional testing and acceptance test documentation, most installations fail to perform as efficiently as required by code.<sup>2</sup>

Training and quality control oversight of certified technicians is the responsibility of the ATTCP. High quality certification programs are particularly important for nonresidential acceptance test technicians because, unlike residential HERS raters, nonresidential acceptance test technicians are not required to be third party. The acceptance test technician may instead be an employee of the architect, engineer or contractor. Under the CEC acceptance test regulations, instead of a third party requirement, the integrity and reliability of these acceptance tests is assured by the training and oversight of the acceptance test technicians that is provided by the ATTCP.

The success of this program thus depends not just on the content of the curriculum, but also upon maintaining high prequalification standards, ensuring rigorous and reliable tests, and establishing meaningful quality assurance requirements. The proposed amendments will help ensure that this happens.

JCEEP respectfully asks the Commission to adopt the attached amendments to Section 10-103-B. Because these amendments are administrative in nature, the Commission has the discretion to adopt these outside of the normal building standards adoption process. JCEEP thus requests the Commission to adopt these amendments immediately in order to provide needed clarity to ATTCPs as they commence administration of the new acceptance test certification requirements. Thank you for your consideration of these comments.

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<sup>2</sup> See, e.g., California Public Utilities Commission, *Decision Providing Guidance on 2013-2014 Energy Efficiency Portfolios 2012 Marketing, Education, and Outreach* (D.12-05-015) (May 10, 2012) §13.2.2 at p. 279.

January 6, 2015  
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Sincerely,

A handwritten signature in blue ink, appearing to read "Thomas A. Enslow", with a long horizontal flourish extending to the right.

Thomas A. Enslow

TAE:lj1

cc: Commissioner Andrew MacAllister  
Robert Oglesby, Executive Director

Attachment

*Joint Committee on Energy and Environmental Policy*

**Amendments to Update and Strengthen Regulatory Requirements for  
Mechanical Acceptance Test Technician Certification Providers**

**I. AMEND TITLE 24, PART 1, SECTION 10-103-B, SUBD. (c)(2) TO ADD SUBDIVISIONS (c)(2)(A) & (B) [REQUIREMENTS FOR CERTIFICATION OF EMPLOYERS]**

**2. Requirements for Certification of Employers.** The ATTCPs shall provide written explanations of how their program includes certification and oversight of Acceptance Test Employers to ensure quality control and appropriate supervision and support for Acceptance Test Technicians.

**A. Multiple Offices.** Employers with more than one office must identify which offices employ Mechanical Acceptance Test Technicians and affirm that at least one mid- or senior-level official per office employing Acceptance Test Technicians has completed the Acceptance Test Employer certification training. Where a change in personnel in an office employing Acceptance Test Technicians results in no official in that office having had completed the Acceptance Test Employer certification training, the Acceptance Test Employer shall ensure that a replacement mid- or senior-level official in that office takes and completes the Acceptance Test Employer certification training within 6 months.

**B. Licensing, Insurance and Safe Practices Requirements.** The ATTCP shall require Acceptance Test Employers to maintain and provide proof of workers compensation insurance, proof of comprehensive general liability insurance with a policy limit of at least \$1,000,000, copies of local business licenses for all offices that are registering to employ acceptance test technicians, and copies of applicant's Injury and Illness Prevention Program and Code of Safe Practices, which meet the minimum requirements of Title 8 of the California Code of Regulations, sections 1509 and 3203.

*[This amendment addresses training requirements when an employer has multiple offices; and ensures that employers maintain general liability insurance and provide proof of compliance with licensing and safe practice requirements.]*

**II. AMEND TITLE 24, PART 1, SECTION 10-103-B, SUBD. (c)(3)(A) [TRAINING SCOPE]**

**A. Training Scope.** The scope of the training shall include ~~B~~both hands-on experience and theoretical training such that Acceptance Test Technicians demonstrate their ability to apply the Building Energy Efficiency Standards acceptance testing and documentation requirements to a comprehensive variety of mechanical systems and controls that is reflective of the range of systems currently encountered in the field. The objective of the hands on training is to practice and certify competency in the technologies and skills necessary to perform the acceptance tests. In order to be certified, all Acceptance Test

Technicians must complete the hands on and theoretical training requirements and pass the practical and written testing requirements.

*[This amendment clarifies the training and testing requirements for certification.]*

**III. AMEND TITLE 24, PART 1, SECTION 10-103-B, SUBD. (c)(3)(B)(iii) [PREQUALIFICATION]**

**(iii) Prequalification.** Participation in the technician certification program shall be limited to persons who have at least three years of documented, verifiable professional experience and expertise in designing, installing, balancing or commissioning the types of mechanical controls and systems listed in Section 10-103-B(c)(3)(B)(i).~~as determined by the Mechanical ATTCPs to demonstrate an ability to understand and apply the Mechanical Acceptance Test Technician certification training~~ The criteria and review processes used by the ATTCP to determine the relevance of technician professional experience shall be described in the ATTCP application to the Energy Commission. Letters from employers or other written evidence shall be required to verify an applicant's experience.

Professional experience means experience designing, installing, balancing or commissioning mechanical controls and HVAC systems as a (1) California licensed mechanical contractor; (2) HVAC system installer; (3) California licensed professional engineer; (4) testing, adjusting and balancing (TAB) certified technician; or (5) a commissioning professional certified by the Testing Adjusting and Balancing Bureau, the Building Commissioning Association, the Association of Energy Engineers, American Society of Heating and Air Conditioning Engineers or other equivalent commissioning certification entities. Upon submission of supporting evidence and concurrence by the Commission, an ATTCP may expand the definition of professional experience to include additional professional occupations that are demonstrated to provide industry-accepted training and work experience in designing, installing, balancing, or commissioning mechanical controls and HVAC systems.

*[This amendment more clearly defines the three years of professional experience required to enroll in the certification class and defines professional experience as experience in professions that provide training and work experience in designing, installing, balancing, or commissioning mechanical controls and HVAC systems.]*

**IV. AMEND TITLE 24, PART 1, SECTION 10-103-B, SUBD. (c)(3)(B)(v) [TESTS]**

**(v) Tests.** The ATTCP shall require an Acceptance Test Technician to pass a comprehensive A-written and practical test that demonstrates each certification applicant's competence in all specified subjects. The ATTCPs shall retain all results of these tests for five years from the date of the test. Examinations shall be validated by subject matter experts for content, and pilot tested and statistically analyzed by qualified psychometricians to identify poor-quality questions or bias that may not otherwise be

readily evident, to ensure reliability by checking response option frequency and other measurements of consistency, and to ensure validity and rigor by evaluating question difficulty and justifying passing scores and performance standards. Exams shall be re-validated at least annually to confirm continued reliability, rigor and lack of bias. Validation for lack of bias shall conform with the *Uniform Guidelines on Employee Selection Procedures* (1978) Federal Register, 43(166), 38290-38315.

ATTCPs shall have and use at least three different versions of tests with random question generation, and have at least twice the number of questions in a validated question bank than are scored on any given test. Technician certification exams shall require a passing score of at least 75% and the validity and reliability of this passing score shall be confirmed by an independent psychometrician or other test development expert on an annual basis.

*[This amendment requires validation of certification exams and multiple versions of tests.]*

**V. AMEND TITLE 24, PART 1, SECTION 10-103-B, SUBD. (c)(3)(F) [QUALITY ASSURANCE AND ACCOUNTABILITY] AND ADD NEW SUBDIVISIONS (c)(3)(F)(i), (ii), and (iii)**

**F. Quality Assurance and Accountability.** The ATTCPs shall describe in their application to the Energy Commission how their certification business practices include quality assurance, ~~independent oversight~~ and accountability measures, including but not limited to such as, independent oversight of the certification processes and procedures, visits to building sites where certified technicians are completing acceptance tests, certification process evaluations, building department surveys to determine acceptance testing effectiveness, and expert review of the training curricula-developed for Building Energy Efficiency Standards, Section 120.5. Independent oversight may be demonstrated by accreditation under the ISO/IEC 17024 standard.

**(i) Technician Audits.** The ATTCP shall require its Acceptance Test Technician and Employers to enter into an audit agreement that defines roles and responsibilities, including a requirement that Technicians submit a notice of completion to the ATTCP or its authorized auditor within 48 hours of completion of a mechanical acceptance test. A copy of this agreement shall be included in the application. For the first three years of operations, an ATTCP shall review a random sample of no less than 3% of each Technician's completed compliance forms, and shall perform randomly selected on-site audits of no less than 3% of each Technician's completed acceptance tests. For years four and five, an ATTCP shall review a random sample of no less than 2% of each Technician's completed compliance forms, and shall perform randomly selected on-site audits of no less than 2% of each Technician's completed acceptance tests. After five years of operations, an ATTCP shall review a random sample of no less than 1% of each Technician's completed compliance forms, and shall perform randomly selected on-site audits of no less than 1% of each Technician's completed acceptance tests. Field audits shall be performed by an organization with sufficient infrastructure, personnel and



capability to provide field audits on a timely basis and with an auditor who has at least three years of experience in providing energy efficiency audits.

The first year of operation, for purposes of compliance with this audit requirement, shall commence when all of the following have occurred: (1) the Commission has approved the ATTCP's application; (2) the use of certified mechanical Acceptance Test Technicians is required under Title 24, Part 6, Section 120.5; and (3) the ATTCP has begun to require random audits at a percentage that meets or exceeds the percentage of audits required under this section during the first year of operation.

The ATTCP application shall describe in detail what constitutes a failed audit and what consequences shall occur to both the Acceptance Test Technician and the Employer upon a failed audit. A failed paper audit or field audits shall trigger at least two additional random field audits within the next four jobs. If either of those additional audits is failed, field audits will be required for 100% of the next four jobs. Acceptance Test Technicians who fail any of those four audits will lose their certification.

(ii) **Ethics Policy.** The ATTCP application shall include a copy of its ethics policy for its certified Acceptance Test Technicians and Employers.

(iii) **Equipment Policy.** The ATTCP application shall include a description of its requirements for ensuring that a certified Employer or self-employed Acceptance Test Technician possesses and properly maintains sufficient diagnostic equipment to perform mechanical control acceptance tests.

*[This amendment requires higher levels of audits during the first 3-5 years of a provider's operation and requires an ATTCP to have an ethics policy and equipment maintenance policy.]*

**VI. ADD NEW SECTION - TITLE 24, PART 1, SECTION 10-103-B, SUBD. (c) (4)**  
**[QUALIFICATIONS AND EXPERIENCE]**

(4) **Qualifications and Experience.** The ATTCPs shall demonstrate sufficient qualifications and experience in operating and overseeing a certification program by either: (1) accreditation under the ISO/IEC 17024 standard or equivalent; or (2) a minimum of three years of experience successfully operating and overseeing a personnel certification program in the HVAC, TAB, or commissioning field.

*[This amendment ensures ATTCP applicants have sufficient qualifications and experience to demonstrate a likelihood of success.]*

**VII. AMEND TITLE 24, PART 1, SECTION 10-103-B, SUBD. (d) [REQUIREMENTS FOR ATTCPs TO PROVIDE ANNUAL REPORTS]**

**(d) Reporting Requirements for ATTCPs to Provide Annual Reports.** The ATTCP shall provide the following reports to the Energy Commission:

1. The ATTCP shall provide an annual report to the Energy Commission summarizing the certification services provided over the reporting period, including the total number of Acceptance Test Technicians and Employers certified by the ATTCP (a) during the reporting period and (b) to date.

2. Six months prior to the effective date of any newly adopted, or amendment to existing, Building Energy Efficiency Standards, ~~The ATTCP shall report to the Energy Commission what adjustments have been made to the training curricula, if any, to address changes to the Building Energy Efficiency Standards Acceptance Testing requirements, adopted updates to the Building Energy Efficiency Standards or to ensure training is reflective of the variety of mechanical equipment and systems lighting controls that are currently encountered in the field, no less than six months prior to the effective date of any newly adopted, or amendment to existing, Building Energy Efficiency Standards.~~

All required reports shall contain a signed certification that the ATTCP has met all requirements for this program.

*[This amendment fixes erroneous reference to lighting controls.]*

**VIII. AMEND TITLE 24, PART 1, SECTION 10-103-B, SUBD. (f) [APPLICATION REVIEW AND DETERMINATION]**

**(f) Application Review and Determination.** The Energy Commission shall review Acceptance Test Technician Certification Provider applications to determine whether the information required by Section 10-103-B(c) has been provided and is sufficiently rigorous and detailed to demonstrate a strong likelihood of success and reliability.

1. Energy Commission staff will review and validate all information received on Acceptance Test Technician Certification Provider applications, and determine whether that the application is complete and contains sufficient information to be approved and demonstrates the ability to provide a rigorous and reliable certification program with sufficient quality assurance oversight.

2. The Executive Director may require that the applicant provide additional information as required by staff to fully evaluate the Provider application. The Executive Director shall provide a copy of its evaluation to interested persons and provide a reasonable opportunity for public comment.

3. The Executive Director shall issue a written recommendation that the Energy Commission designate the applicant as an authorized Acceptance Test Technician Certification Provider or deny the Provider application.

4. The Energy Commission shall make a final decision on the application at a publicly noticed hearing.

*[This amendment clarifies that the Commission's approval is not just based on submittal of a completed application, but is also based on the Commission's determination that the content of the application is sufficiently rigorous and detailed to demonstrate a strong likelihood of success and reliability.]*

**IX. ADD NEW TITLE 24, PART 1, SECTION 10-103-B, SUBD. (h) [UPDATES TO ATTCP REQUIREMENTS]**

**(h) Updates to ATTCP Requirements**

ATTCPs that have already been approved by the Commission shall have 180 days from the effective date of any substantive changes made to the requirements for approval as an ATTCP under Section 10-103-B to submit a report demonstrating compliance with the changes. ATTCPs that do not amend or update their certification program within the required time period shall be suspended until such time as they meet the new requirements.

*[This amendment clarifies that any ATTCPs that have already been approved will have to demonstrate that they comply with the new amendments to the ATTCP application requirements. This gives currently-approved ATTCPs 180 days to demonstrate compliance.]*