

Energy - Docket Optical System

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

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California Energy Commission

DOCKETED

15-BSTD-01

TN # 75380

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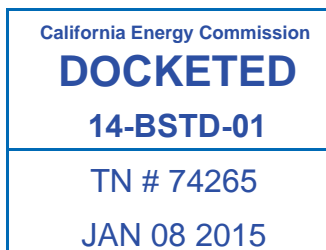
From: Thomas A. Enslow <TEnslow@adamsbroadwell.com>
Sent: Thursday, January 08, 2015 11:38 AM
To: Energy - Docket Optical System
Cc: Oglesby, Rob@Energy; McAllister, Andrew@Energy
Subject: Docket No. 14-BSTD-01; IBEW-NECA LMCC Comments on Tit 24 Part1 Lighting Control ATTCP regulations
Attachments: 2698-046j - LMCC Proposed Amendments to ATTCP admin regulations (1-7-14).pdf

Please docket the following comments submitted on behalf of the California State Labor Management Cooperation Committee for the International Brotherhood of Electrical Workers and the National Electrical Contractors Association which propose amendments to the California Building Energy Efficiency Standards to strengthen and clarify the Title 24, Part 1, Section 10-103-A Lighting Control Acceptance Test Technician Certification Provider regulations.

Regards,

Tom Enslow

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January 8, 2015

Via Email

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 14-BSTD-01
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.ca.gov

Re: IBEW-NECA Labor Management Cooperation Committee Proposed
Amendments to Title 24, Part 1, Section 10-103-A Lighting Control
Acceptance Test Technician Certification Provider regulations: **Docket
No. 2014-BSTD-01**

Dear Docket Office:

I am writing on behalf of the California State Labor Management Cooperation Committee for the International Brotherhood of Electrical Workers and the National Electrical Contractors Association ("LMCC") to submit the attached proposed amendments to the California Building Energy Efficiency Standards for consideration by the Commission. The proposed revisions strengthen and clarify the Title 24, Part 1, Section 10-103-A Lighting Control Acceptance Test Technician Certification Provider ("ATTCP") regulations.

The LMCC has followed the Commission's application of the current ATTCP regulations to the first few ATTCP applicants over the past year. As the application process unfolded, the LMCC identified a number of requirements that are unclear or lack sufficient specificity to ensure ATTCP certification programs are reliable and effective.

For instance, Section 10-103-A requires an ATTCP to describe its quality assurance, oversight and accountability measures, but fails to provide clear guidance to the ATTCPs on what that means. This lack of clarity has delayed the

submittal and review of ATTCP applications and has resulted in substantial differences in the quality of the oversight, quality assurance and accountability measures proposed by applicants. At least one ATTCP applicant has been approved without even following standard industry practices for validating its tests for rigor, reliability and lack of bias. The prequalification requirements and certification employer oversight requirements contained in the ATTCP regulations are also vague and confusing, resulting in substantially different interpretations of these requirements by applicants.

The attached proposed amendments to Section 10-103-A would resolve these concerns and provide clearer direction to ATTCP applicants. We urge the Commission to adopt these amendments as soon as possible.

I. RIGOROUS AND RELIABLE ACCEPTANCE TEST TECHNICIAN CERTIFICATION PROGRAMS ARE CRITICAL TO ENSURING THE RELIABILITY AND INTEGRITY OF ACCEPTANCE TESTS

The LMCC has a strong interest in ensuring the success and effectiveness of the new certification requirements for lighting control acceptance test technicians. As an industry, we have spent significant time and resources complying with the 2013 Energy Code's Lighting Control Acceptance Test Technician certification requirements. More than 300 NECA contractors and IBEW electricians have been trained and certified as Lighting Control Acceptance Test Technicians.

Moreover, properly installed and functioning advanced lighting controls are an essential component to meeting California's energy efficiency goals. Lighting accounts for almost 40% of a commercial building's electrical use. This is double the energy used for cooling. Lighting control acceptance tests performed by trained and experienced technicians will ensure that advanced lighting controls are installed and operating correctly so they can achieve their desired energy saving potential.

Training, certification and quality control of acceptance test technicians are necessary to ensure that the Commission's acceptance test requirements are cost-effective, meaningful and reliable. High quality certification programs are particularly important for nonresidential acceptance test technicians because, in contrast with residential HERS raters, nonresidential acceptance test technicians may be employed by the project architect or contractor. Because of timing and cost restraints, the LMCC strongly supports allowing contractors to use their own employees to perform acceptance tests. However, the success of such an approach requires the Commission to adopt regulations that ensure its approved ATTCPs

have enacted sufficiently rigorous and reliable certification procedures and requirements and have demonstrated the capability to operate and oversee a reliable certification program.

II. AMENDMENTS PROPOSED AT THE NOVEMBER 3, 2014 STAFF WORKSHOP ARE INSUFFICIENT AND A STEP BACKWARD

As part of its November 3, 2014 Staff Workshop on Draft Language for the Residential and Nonresidential Building Energy Efficiency Standards and Associated Documents, the Commission proposed some initial draft amendments to the ATTCP regulations. The amendments, as a whole, do not go far enough to ensure high standards are applied to all ATTCP applicants. Moreover, a few of the amendments proposed at the Workshop would inadvertently weaken the standards and should not be adopted.

In particular, the LMCC opposes the following amendments to Section 10-103-A proposed at the November 3, 2014 Workshop on the grounds that they reduce the Commission's ability to ensure that ATTCP programs will be effective and reliable:

A. Opposition to Proposed Change to Section 10-103-A (c)(3)(A)

The LMCC opposes this amendment because it deletes the requirement that ATTCP's demonstrate that their training ensures technicians will have the ability to apply acceptance testing "to a comprehensive variety of lighting control systems and networks that are reflective of the range of systems currently encountered in the field." The intent of the current language is to ensure that technicians are not trained on only one type of system, but rather are able to apply their training to the comprehensive variety of systems he or she may encounter in the field. This is a critical requirement to ensure the success of the acceptance test technician certification program and should not be deleted.

B. Opposition to Proposed Change to Section 10-103-A (c)(3)(B)(iii)

The LMCC opposes this amendment because it deletes the requirement that an applicant's professional experience in lighting controls and systems must be relevant and verifiable and deletes the requirement to disclose the criteria and review process used by an ATTCP for determining relevant experience. An applicant's professional experience in lighting controls and systems should be verified in order to ensure that he or she has the experience necessary to fully

understand and successfully apply the acceptance test training. Furthermore, the criteria and review process used by an ATTCP should be disclosed by the ATTCP applicant so that the staff and the public can assess its adequacy and fairness.

C. Opposition to Proposed Change to Section 10-103-A (f)

The LMCC opposes this amendment because it eliminates the discretion of the Commission to assess the merits of the application or the rigor or effectiveness of the proposed certification program when approving an ATTCP. The proposed change would bar the Commission from refusing to approve an ATTCP applicant for reasons other than failure to submit a complete application. Under this change, the Commission would not have discretion to assess the merits of the application or the rigor or effectiveness of the proposed certification program. The Commission should retain full discretion to deny approval to low quality certification programs.

III. SUMMARY OF ADDITIONAL AMENDMENTS NEEDED TO CLARIFY AND STRENGTHEN ATTCP REQUIREMENTS

The attached proposal provides a more comprehensive alternative amendment to Section 10-103-A in order to improve the usability and effectiveness of the ATTCP requirements. These revisions strengthen the certification program and provide additional clarity to ATTCP applicants by:

A. Clarifying employer training requirements when an employer has multiple offices - Section 10-103-A, subd. (c)(2).

The current regulations do not address the situation where a large contractor has multiple offices across the state. The attached proposal ensures at least one manager in each office has taken the required webinar for employers.

B. Ensuring that employers maintain general liability insurance and comply with applicable licensing and safe practices requirements - Section 10-103-A, subd. (c)(2).

ATTCPs should not be allowed to certify employers that are not insured or that violate applicable licensing and safety requirements.

C. Clarifying the training and testing requirements for technician certification - Section 10-103-A, subd. (c)(3)(A).

This amendment clarifies that ATTCP's may not certify a technician unless the technician has completed both the training and testing requirements.

D. More clearly defining the three years of professional experience required to enroll in the certification classes - Section 10-103-A, subd. (c)(3)(B)(iii).

A pre-existing background in lighting controls and systems is necessary to ensure that applicants are capable of successfully understanding and implementing the acceptance test certification training and applying it to the wide variety of lighting control systems that may be encountered in the field. The proposed amendment more clearly defines the three years of professional lighting control 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, or commissioning advanced lighting controls.

Currently, Section 10-103-A, subd. (b)(2) recognizes the following professions as providing verifiable professional experience and expertise in advanced lighting controls systems: (1) electrical contractors; (2) certified general electricians; (3) professional engineers; (4) controls installation and startup contractors; and (5) certified commissioning professionals. (Section 10-103-A, subd. (b)(2).) Commission staff have held this list is not exclusive, but the regulations provide no guidance to ATTCPs that may wish to expand this list.

The proposed regulations clarify that an ATTCP may expand this list of qualified professionals as long as it presents evidence that the proposed additional professional degrees or certifications provide training and work experience in designing, installing, or commissioning advanced lighting controls.

In addition, the LMCC proposes deleting the "controls installation and startup contractor" category and replacing it with "lighting control manufacturer representatives." Section 10-103-A, subd. (b)(2) currently includes a professional designation identified as a "controls installation and startup contractor." It is unclear what this designation means. A controls installation and startup contractor is not a contractor category that is recognized or licensed by the State of California. Because there is no industry wide definition of a controls installation and startup

contractor, it should be deleted and replaced with a designation for lighting control manufacturer representatives.

E. Clarifying that ATTCPs must follow standard industry practices and federal guidelines for validating tests for rigor, reliability and lack of bias; and requiring ATTCPs to use multiple versions of tests to ensure test security and reliability - Section 10-103-A, subd. (c)(3)(B)(v).

This proposed amendment requires validation of certification exams and multiple versions of tests. It is standard industry practice to require professional certification tests to be validated. For example, California requires certification examinations for electricians to “be validated by an independent test validation organization.” (Cal. Code Regs., tit. 8, § 291.3(b); see also U.S. Department of Labor, Testing and Assessment: An Employer’s Guide to Good Practices (2000), available at http://www.onetcenter.org/dl_files/empTestAsse.pdf.) The ISO/IEC 17024 Standard, which is expressly recognized in the ATTCP regulations, also requires tests and test procedures to be professionally evaluated for reliability, validity and lack of bias.

A key component to evaluating certification exams is to conduct pilot testing and to have test assessment professionals (i.e., psychometricians) statistically analyze the test results to ensure reliability, validity and lack of bias. Such evaluations identify poor-quality questions that may not otherwise be readily evident, ensure reliability by checking response option frequency and other measurements of consistency, and ensure validity and rigor by evaluating question difficulty and justifying passing scores and performance standards. If a large percentage of the candidates answer a particular question correctly, it suggests that the item is too easy or is written in a way that allows people who do not know the training content to answer correctly. For items with a difficulty score of greater than .90% (90% of respondents answered the item correctly) or lower than .40 (40% or less of the respondents answer the item correctly), the item should be rewritten. Tests for reliability or consistency of a test look for a high level of internal consistence (e.g. Cronbach’s alpha greater than .70). Calculating the reliability of a test can be complicated and generally requires statistical software.

Pilot testing and statistical analysis are also necessary to ensure lack of bias in certification exams. Certification exams are considered an employment selection procedure and are thereby governed by the federal laws, rules and regulations regarding the use of selection tests (e.g., Civil Rights Act of 1964, Equal

Employment Opportunity Act of 1972, and Uniform Guidelines on Employee Selection Procedures). These federal laws prohibit employment practices which discriminate on grounds of race, color, religion, sex and national origin. Under federal regulations, the use of any selection procedure which has an adverse impact on the employment opportunities of any race, sex, or ethnic group will be considered discriminatory unless the procedure has been validated in accordance with the Uniform Guidelines on Employee Selection Procedures. (Equal Employment opportunity Commission, Civil Service Commission, Department of Labor & Department of Justice, *Uniform Guidelines on Employee Selection Procedures* (1978) Federal Register, 43(166), 38290-38315.)

In addition, to the initial testing and statistical review of certification exams, standard industry practice also requires multiple test versions and continuing statistical review of exams to identify any previously unidentified problem questions and to ensure exam security. The LMCC's proposed amendments require ATTCPs to use multiple versions of tests and to regularly re-validate test questions to ensure continuing exam security and reliability.

Test validation is critical to ensuring a fair, reliable and valid certification process. The Commission should not approve any provider until it demonstrates its exams have been validated by a test validation professional.

F. Requiring a higher percentage of technician oversight audits during the first 3 to 5 years of a provider's operation in order to ensure that any initial issues with noncompliance are identified and addressed - Section 10-103-A, subd. (c)(3)(F).

This amendment requires higher levels of audits during the first three to five years of a provider's operation.

The American Institute of CPA ("AICPA") has developed guidelines for ensuring statistically reliable method of quality assurance. These guidelines are published in the AICPA document "Audit Sampling Considerations of Circular A-133 Compliance Audits." In the "Audit Sample" chapter, AICPA states that, "generally, samples for control tests are designed to achieve a 90% to 95% confidence level." However, for new programs, AICPA recommends requiring a 95 to 98 percent confidence level at first to ensure that any initial issues with noncompliance are identified and addressed.

The LMCC supports the CALCTP approach to quality assurance as representative of industry best practices and urges the Commission to adopt their audit rates as mandatory for all Lighting Control ATTCPs. Consistent with the AICPA guidelines, CALCTP requires random audits at an initial rate that will provide a 98 percent confidence level that all acceptance test assessments are done correctly. As the program becomes more established and the certified acceptance test technician workforce becomes more experienced, these quality assurance visits will decrease and move to a 95% confidence level in years 3-5 and then a 90% confidence level when the program is established in year 5 and beyond.

To meet these confidence levels, technicians will be subject to 6% paper audits and 6% random field inspections during the first three years of the program, dropping down to 4% paper audits and 4% random field inspections in years 4-5 and 2% paper audits and 2% random field inspections after that.

Time Period	Confidence Level	Anticipated % of Projects Audited	Paper Audits	On-Site Audits
Years 1-3	98%	12%	6%	6%
Years 4-5	95%	8%	4%	4%
Year 5+	90%	4%	2%	2%

The Commission's current proposal to require only 1% random field inspections and 1% random document inspection is not supported by any evidence that this will provide a statistically reliable level of quality assurance. At a minimum, this number should be significantly higher during the first few years of any new ATTCP's operation.

For comparison, the Commission's HERS program requires random field inspections at a rate of 1% where the HERS raters are third party inspectors. Because nonresidential Lighting Control Acceptance Test Technicians are not required to be independent third parties from the contractor, the number of random field inspections should be higher than for HERS raters, at least for the first few years of a Provider's certification program. As long as a Provider ensures adequate prequalification requirements, adequate training and sufficient quality assurance audits, there should be no need to require Lighting Control Acceptance Test Technicians to be third party.

G. Requiring an ATTCP to disclose what constitutes a failed audit; and requiring additional random audits of the next few jobs after a failed technician oversight audit - Section 10-103-A, subd. (c)(3)(F).

The LMCC proposes requiring an ATTCP to disclose what will trigger a finding that a technician has failed a quality assurance audit and what remedial response will be taken. Section 10-103-A currently does not require an ATTCP to define what constitutes a failed audit or what further action will be taken when a failed audit occurs. Without such a description, it is impossible to determine if an ATTCP's proposed audits will have any meaning.

Any failed paper audit or field audit should trigger additional random field inspections within the next few jobs. Under the current regulations, however, the Commission has approved one ATTCP that responds to a failed audit by increasing the number of random field inspections for a technician from 1% to just 2% of the next 100 jobs. This is inherently inadequate. Since the field inspections are randomly determined, two random audits out of the next 100 jobs means that a technician who failed an audit could potentially perform 97 jobs before the next random field inspection. To address this issue, the regulations should be amended to require an ATTCP to perform two random additional audits over the next four jobs after a failed technician quality assurance audit.

H. Clarifying that an ATTCP must have an ethics policy and equipment maintenance policy - Section 10-103-A, subd. (c)(3)(F).

This amendment requires an ATTCP applicant to maintain an ethics policy and equipment policy for its certified Acceptance Test Technicians and Employers. The equipment policy shall ensure that a certified Employer or self-employed Acceptance Test Technician possesses and properly maintains sufficient diagnostic equipment to perform lighting control acceptance tests.

I. Requiring an ATTCP applicant to have sufficient qualifications and experience to demonstrate a likelihood of success - Section 10-103-A, subd. (c)(4) [New Section].

In order to ensure the success and reliability of the certification program, the Commission should only approve certification providers that have demonstrated sufficient experience, reputation and success in running similar programs.

J. Requiring ATTCPs to provide the Commission a summary of all failed audits and the resultant remedial actions - Section 10-103-A, subd. (d).

This amendment requires ATTCPs to provide the Commission an annual summary of all failed audits and the resultant remedial actions.

K. Clarifying the grounds for the Commission's approval of an ATTCP - Section 10-103-A, subd. (f).

This amendment clarifies that the Commission's approval is based not just on submittal of a complete application, but also 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.

L. Providing currently approved ATTCP's with a 180 day grace period for complying with any newly enacted ATTCP requirements - Section 10-103-A, subd. (f) [New Section].

This provides currently-approved ATTCPs a 180 day grace period after the effective date of any new ATTCP requirements in which to demonstrate compliance.

IV. PROPOSED AMENDMENTS SHOULD BE MADE EFFECTIVE IMMEDIATELY IN ORDER TO ENSURE A SMOOTH AND EFFECTIVE ROLL OUT OF THE CERTIFICATION REQUIREMENTS

In order to provide ATTCPs needed clarity as they commence administration of the new acceptance test certification requirements, the proposed amendments should be adopted and made effective immediately by the Commission, rather than waiting for the effective date of the 2016 Code. The ATTCP regulations at issue are contained in Part 1 administrative section of the California Building Standards Code. Because these are administrative regulations related to the Commission's process for approving certification bodies, they are not building standards as defined under Public Resources Code section 18909. Accordingly, the proposed amendments may be adopted outside of the normal California Building Standards Code update process.

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V. CONCLUSION

The LMCC respectfully requests adoption of the attached amendments to Section 10-103-A. These amendments provide needed clarity and specificity to ensure that high standards for this program are maintained and that any new ATTCP applicants are provided a more transparent and predictable path to approval. Thank you for your consideration of this proposal.

Sincerely,

A handwritten signature in blue ink, appearing to read "Thomas A. Enslow", followed by a long horizontal flourish.

Thomas A. Enslow

TAE:lj1

cc: Commissioner Andrew MacAllister
Robert Oglesby, Executive Director

Attachment

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

- A. AMEND TITLE 24, PART 1, SECTION 10-103-A, 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 Lighting Control 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 practices requirements.]

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

A. Training Scope. The scope of the training shall include Bboth 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 lighting control systems and networks that are 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 that ATTCP's may not certify a technician unless the technician has completed both the training and testing requirements.]

C. **AMEND TITLE 24, PART 1, SECTION 10-103-A, 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, or commissioning lighting controls as defined by Section 100.1 of Part 6~~as determined by the Lighting Controls ATTCPs, to demonstrate their ability to understand and apply the Lighting Controls Acceptance Test Technician certification training.~~ Installing and repairing "lighting fixtures" does not constitute experience with lighting controls or systems. 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, or commissioning lighting controls as a (1) California licensed electrical contractor; (2) California certified general electrician; (3) California licensed professional engineer; (4) lighting control manufacturer representative; or (5) a commissioning professional certified by 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, or commissioning advanced lighting controls.

[This amendment more clearly defines the three years of professional lighting control 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, or commissioning advanced lighting controls. Lighting controls are defined to be consistent with the definition of lighting controls contained in Part 6 of the Code.]

D. AMEND TITLE 24, PART 1, SECTION 10-103-A, 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.]

E. AMEND TITLE 24, PART 1, SECTION 10-103-A, 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 130.4. Independent oversight may be demonstrated by accreditation under the ISO/IEC 17024 standard.

(i) Technician Audits. The ATTCP shall require its Certified Acceptance Test Technicians 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 lighting control 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 6% of each Technician's completed compliance forms, and shall perform randomly selected on-site audits of no less than 6% of each Technician's completed acceptance tests. For years four and five, an ATTCP shall review a random sample of no less than 4% of each Technician's completed compliance forms, and shall perform randomly selected on-site audits of no less than 4% of each Technician's completed acceptance tests. After five years of operations, 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. Field audits shall be performed by an organization with sufficient infrastructure, personnel and capability to provide field audits on one-day notice anywhere in the state and with 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 lighting control Acceptance Test Technicians is required under Title 24, Part 6, Section 130.4; 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 lighting control acceptance tests, including, but not limited to, an illuminance meter and a digital millimeter capable of reading current power.

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

F. ADD NEW SECTION - TITLE 24, PART 1, SECTION 10-103-A, 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 lighting, electrical, commissioning, or energy efficiency field.

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

G. AMEND TITLE 24, PART 1, SECTION 10-103-A, 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. The annual reports shall include a summary of all failed paper and field audits, and the resultant remedial actions.

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 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 requires ATTCPs to provide the Commission a summary of all failed audits and the resultant remedial actions.]

H. AMEND TITLE 24, PART 1, SECTION 10-103-A, 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-A(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 complete 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.]

I. ADD NEW TITLE 24, PART 1, SECTION 10-103-A, 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-A 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 provides currently-approved ATTCPs a 180 day grace period after the effective date of any new ATTCP requirements in which to demonstrate compliance.]