

Supplemental Response to Comments for NLCAA Application to Become a Lighting Controls ATTCP

Date: November 10, 2014

At the Energy Commission's October 7, 2014, Business Meeting, the Energy Commission considered agenda item number 7, whether to approve National Lighting Contractors Association of America (NLCAA) as an Acceptance Test Technician Certification Provider (ATTCP) pursuant to section 10-103-A(f) of the 2013 Building Energy Efficiency Standards.^{1 2} Within the backup materials for the agenda item, Energy Commission staff responded to written comments made prior to October 1, 2014.³ Energy Commission staff's response to comments, as posted on October 1, 2014, in the backup materials for the October 7, 2014, Business Meeting is attached as "Exhibit A," here. This document, titled "Supplemental Response to Comments for NLCAA Application to Become a Lighting Controls ATTCP," serves as a supplemental response to staff's October 1, 2014, response to comments document. This supplemental response contains Energy Commission staff's response to all written comments received between October 1, 2014, and November 10, 2014.

Background

The 2013 Building Energy Efficiency Standards (Standards) established new requirements to ensure that technicians receive training and certification to perform Acceptance Testing. These new Standards allow organizations to apply to the Energy Commission to become an ATTCP.

To be approved as an ATTCP pursuant to section 10-103-A(f), applicants must submit a complete application to the Energy Commission.

Pursuant to section 10-103-A(f), Energy Commission staff is required to review and validate applications from organizations to become an ATTCP and determine whether the application meets the requirements of Section 10-103-A(c) of the Standards.

Two organizations, NLCAA and California Advanced Lighting Controls Training Program (CALCTP), have applied to become ATTCPs.

¹ Cal. Code Regs., tit. 24, pt. 6, and associated administrative regulations in pt. 1, ch. 10; section 10-103-A(f).

² Energy Commission Business Meeting Agenda, 10/7/2014,
http://www.energy.ca.gov/business_meetings/2014_agendas/2014-10-07_agenda.pdf.

³ Response to Comments for NLCAA Application to Become a Lighting Controls ATTCP, 10/1/2014,
http://www.energy.ca.gov/business_meetings/2014_packets/2014-10-07/Item_07_NLCAA/2014-10-07_Item_7_Response_to_Comments.pdf.

Energy Commission staff has reviewed NLCAA's and CALCTP's applications, as explained in each application's respective Staff Evaluation Report.⁴ After consideration of comments received, Energy Commission staff has not changed its conclusion. Energy Commission staff continues to conclude that both NLCAA's and CALCTP's applications meet the regulatory requirements of the Standards. Comments and supplemental information received do not provide a basis to change Energy Commission staff's conclusion that each application meets the requirements.

Several comment letters in support of NLCAA were received between October 1, 2014 and November 10, 2014.^{5 6 7} Energy Commission staff has taken these comment letter into consideration. The comments raised in these letters, while not related to the content of the ATTCP applications, expressed concerns regarding delays in the decision making, or support for NLCAA's full approval.

Some comment letters received between October 1, 2014 and November 10, 2014 were related to the contents of the applications or the application approval process.

On October 6, 2014, the Labor Management Cooperation Committee for the International Brotherhood of Electrical Workers and the National Electrical Contractors Association (Labor Management Cooperation Committee) submitted a comment letter in response to the Energy Commission's consideration of approving NLCAA as a provider at the October 7, 2014 Business Meeting.⁸

⁴ Staff Evaluation Report for NLCAA's application was posted on July 18, 2014.

http://www.energy.ca.gov/title24/attcp/documents/Energy_Commission_Evaluation_Report.pdf.

Staff Evaluation Report for CALCTP's application was posted on August 1, 2014.

http://www.energy.ca.gov/title24/attcp/documents/2014-08-01_CALCTP_Evaluation.pdf.

⁵ A.J. Kirkwood & Associates, Inc. Comments, 10/6/2014, TN# 73822,

http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/AJ_Kirkwood_and_Associates-Morris_2014-10-06.pdf.

⁶ Southland Electrical Contractors Comment RE Approval of Nation Lighting Contractors Association ATTCP, 10/20/2014, TN# 73846,

http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/Southland_Electrical_Contractors-Robinson_2014-10-20.pdf.

⁷ GT Jordan Electric Comment Letter, 10/21/2014, TN# 73852,

http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/GT_Jordan_Electric-Jordan_2014-10-21.pdf.

⁸ IBEW and NECA Comments on Agenda Item 7, 10/6/2014, TN# 73818,

http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/IBEW_NECA-Willson_Buckhorn_2014-10-06.pdf.

On October 16, 2014, NLCAA submitted a comment letter questioning the interim approval of CALCTP as a Lighting Controls ATTCP.⁹

On October 21, 2014, Serrano Electric Inc. submitted a comment letter asking that the Energy Commission provide interim approval to NLCAA to become an ATTCP.¹⁰

On November 8, 2014, NLCAA submitted a comment letter responding to the concerns in the October 6, 2014 comment letter from the Labor Management Cooperation Committee.¹¹

The following is a summary of Energy Commission staff's evaluation of the ATTCP applications with respect to issues raised in the comment letters:

⁹ NLCAA Questions regarding CALCTP Interim Approval Certification, 10/16/2014, TN#73844,
http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/NLCAA-Yapp_2014-10-16.pdf.

¹⁰ Serrano Electric Inc. Comment Letter, 10/21/2014, TN# 73851,
http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/Serrano_Electric-Serrano_2014-10-21.pdf.

¹¹ NLCAA Comment Letter, 11/8/2014, TN#73962,
http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/NLCAA-Yapp_2014-11-07.pdf.

1. Tests: validation of test development and administrative procedures

Summary of Comment

The Labor Management Cooperation Committee's comments assert that:

- NLCAA should have followed standard industry practice in developing test questions. The Labor Management Cooperation Committee's comments reference the following codes, guidelines, and standards to back up their assertion:
 - Cal. Code Regs., tit. 8, § 291.3(b) [regarding electrical contractors' apprenticeship exams]
 - U.S. Department of Labor, Testing and Assessment: an Employer's Guide to Good Practices (2000)
 - ISO/IEC 17024 Standard
 - Uniform Guidelines on Employee Selection Procedures
- A key component of certification exam evaluations 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.
- It is standard industry practice to require multiple test versions, continuing statistical review of exams and the ongoing development of new questions to identify any previously unidentified problem questions and to ensure exam security.
- NLCAA violates the Standards by not including practical hands-on testing.

Regulatory Requirement

Section 10-103-A(c)3B(v) Tests for Certification:

A written and practical test that demonstrates each certification applicant's competence in all specified subjects.

Energy Commission Staff Evaluation Criteria

Energy Commission staff reviewed the exams submitted by both ATTCP applicants to verify that the exams cover the breadth of the information contained in the training material and that the exam questions are relevant to Acceptance Test Technicians and to performance of Acceptance Testing. Passing the tests demonstrates the applicant's competence in all specified subjects. The Standards also do not require an applicant to have multiple versions of tests.

Energy Commission staff has also reviewed the submitted practical hands-on training material to verify that the labs cover the skills and procedures necessary for Acceptance Test Technicians to conduct Acceptance Testing in the field.

Energy Commission staff reviewed the guidelines and regulations provided in the comment to determine if they imposed requirements for developing exams. The regulations cited in the comment impose requirements for validating exams for electrical contractors' apprentices, but do so through explicit requirements in the regulatory language. If the Commission were to impose such specific requirements, it should do so through promulgating similarly-explicit regulatory requirements.

Although the ISO/IEC 17024 standard is cited in the ATTCP regulations, it is provided as an example and as an optional way to assure quality program administration rather than exam development.¹² The other guidelines cited by the Labor Management Cooperation Committee also do not impose mandatory requirements for developing exams.

The comment letter and record before the Energy Commission do not establish that there is a "standard industry practice" for validating exams, that the examples of methods to validate exams provided in the comment are standard practices, or that there is any requirement for ATTCP applicants to meet a purported "industry standard." More importantly, there is no regulatory requirement that an ATTCP follow any "standard industry practice," even if such standards could be identified.

NLCAA has also stated that it will continue to reevaluate its test questions to ensure its tests are rigorous enough for technician applicants to demonstrate competence in the criteria listed in section 10-103-A(3)(c) of the Standards.¹³

In considering the comment, Energy Commission staff looked for guidance to industries similar to the ATTCP program, because it is new and the industry standards are developing. Energy Commission staff reviewed the Energy Commission's HERS Provider training program that has been in place since 2001. This program trains and certifies technicians to test residential and commercial buildings. The HERS program is structured similarly to the ATTCP program and shares similar regulatory language regarding tests. There are no requirements in the HERS regulations for providers to use guidelines, codes, or standards such as those referenced in the comment letter in developing tests. Currently-approved HERS providers do not conduct test validation or use guidelines, codes, or standards when developing their certification tests. Thus, Energy Commission staff does not find the Labor Management Cooperation Committee's comment to provide a basis to deny NLCAA's application.

¹² See section 10-103-A(c)3F.

¹³ NLCAA Response to IBEW NECA LMCC, 8/13/2014, TN# 73958,
http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/NLCAA-Yapp_2014-08-13.pdf

Applicable Material contained in ATTCP Applications

NLCAA

- NLCAA stated it will continually review exam questions and responses to ensure the students' understanding of the subject matter.¹⁴
- In a docketed letter sent on October 15, 2014, by NLCAA to the Energy Commission, NLCAA states that it has a bank of 150 test questions from which multiple versions of exams can be created from.¹⁵
- NLCAA does include hands-on testing as Technicians must successfully pass the 6 hands-on lab sessions, which total 4 hours, and are scored on a pass/fail basis.¹⁶
- There is a final exam with 50 questions and a minimum score of 35 (70%) must be achieved in order to pass.¹⁷

CALCTP

- The Technician final exam is 60 questions requiring a minimum score of 75% to pass, but 10 of these are pilot questions which are not scored and used to collect data on the performance of these items. The exams are drawn from a question bank.¹⁸
- Technicians must successfully pass the 4 “hands-on practical test” lab sessions, which total 4 hours, and are scored on a pass/fail basis.¹⁹

¹⁴ NLCAA Response to IBEW NECA LMCC, 8/13/2014, TN# 73958,
http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/NLCAA-Yapp_2014-08-13.pdf

¹⁵ NLCAA Multiple Test and Bank of Questions, 10/15/2014, TN# 73834,
http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/NLCAA-Yapp_2014-10-15.pdf

¹⁶ NLCAA Application, page 11

¹⁷ NLCAA Application, page 9

¹⁸ CALCTP Application, page 20

¹⁹ CALCTP Application, Attachment B

2. Prequalification: verification of Technician applicant experience

Summary of Comment

The Labor Management Cooperation Committee's comments assert that:

- NLCAA provides no procedures for verifying the work experience claimed by applicants in their applications.
- NLCAA proposes expanding the list of qualified professionals set forth by the Commission in Section 10-103-A(b)2.

Regulatory Requirement

Section 10-103-A(c)3B(iii) Prequalification

Participation in the technician certification program shall be limited to persons who have at least three years of verifiable professional experience and expertise in lighting controls and electrical systems as determined by the Lighting Controls ATTCPs, to demonstrate their ability to understand and apply the Lighting Controls 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.

Energy Commission Staff Evaluation Criteria

Energy Commission staff reviewed prequalification procedures of the ATTCP and how it determined that Technician applicants documented their three years' of experience in lighting controls and electrical systems.

- Energy Commission staff confirmed that the ATTCP had the ability to verify the information provided.
- Energy Commission staff verified that Technicians were required to provide a description of experience in defined lighting control categories (occupancy, photocell, demand response, low/line voltage, etc.).
- Energy Commission staff verified that the Technician is required to provide dates of experience and employment contact information, and submit documentation to verify licenses, certificates, etc.

The Standards require that the information provided by the applicant is verifiable or able to be verified; there is no requirement that the Provider actually verify the information. Energy Commission staff ensured that the ATTCP collect contact information, as appropriate, so that the ATTCP can verify the information to evaluate whether the Technician applicant's credentials are valid, if questioned.

There is no list of individuals who are considered qualified professionals in the Standards. The only requirement is that Technician applicants must have 3 years of verifiable experience in lighting controls regardless of designation, title, or degree. The industry groups listed in Section 10-103-A(b)2 pertain only to the threshold requirement; thus, NLCAA may certify other kinds of professionals as long as they meet the prequalification requirements.

Applicable Material contained in ATTCP Applications

Both NLCAA and CALCTP ask the applicant to describe their experience in lighting control categories (occupancy, photocell, demand response, low/line voltage, etc.). Both applicants ask for the dates of experience, employment contact information, and for the applicant to submit documentation to verify licenses, certificates, etc.^{20 21} CALCTP also requires applicants to submit a signed letter from their current supervisor.²² Neither application describes additional procedures to confirm the information submitted. But, both providers have the ability to verify the experience by contacting a Technician applicant's previous employers to verify work experience.

²⁰ CALCTP Application, Attachment C

²¹ NLCAA Application, page 12

²² CALCTP Application, page 11

3. Quality Assurance: errors, failed audits and disciplinary action

Summary of Comment

The Labor Management Cooperation Committee's comments assert that:

- NLCAA does not describe what errors will trigger further action
- NLCAA does not describe what further action will be taken when a failed on-site audit occurs
- NLCAA's proposed 1% random field inspection rate lowers the bar for quality assurance and has not been demonstrated to provide a statistically reliable level of quality control

Regulatory Requirement

Section 10-103-A(c)3F Quality Assurance and Accountability

The ATTCP shall describe in their application to the Energy Commission how their certification business practices include quality assurance, independent oversight and accountability measures, 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.

Energy Commission Staff Evaluation Criteria

Energy Commission staff reviewed the quality assurance procedures of each ATTCP applicant to verify that all of the requirements of the Standards have been met. This includes QA procedures to review Acceptance Test Technicians' work through field inspections to ensure that Acceptance Tests are completed and performed correctly.

However, despite Energy Commission staff's conclusion, because the ATTCP program is new, Energy Commission staff looked for guidance to industries similar to the ATTCP program. Energy Commission staff reviewed the Energy Commission's HERS Provider training program that has been in place since 2001. This program trains and certifies technicians to test residential and commercial buildings. The HERS Provider program requires a minimum of 1% random field inspections for quality assurance.

Energy Commission staff believes that a minimum of 1% random field inspections is sufficient for providing a quality ATTCP program in addition to other QA procedures which include form audits and disciplinary actions to ensure Acceptance Test Technicians and Employers are conducting Acceptance Tests correctly. As the program moves forward, Energy Commission staff will continue to assess the rate of random field inspections by looking at building

department surveys, evaluating audit failure rates and deficiencies, and interacting with ATTCPs and industry stakeholders.

Applicable Material contained in ATTCP Applications

NLCAA

NLCAA's application does provide a list of reasons or "errors" which may trigger further action through the complaint procedures process.²³

- The complaint procedures process may be initiated against any Acceptance Test Employer and or Acceptance Test Technician holding NLCAA certifications.
- The complaint procedures process may be initiated by NLCAA if a field inspection is deemed unsatisfactory by NLCAA based on the triggers listed in the application.

If a complaint procedure is initiated against an Acceptance Test Employer or Acceptance Test Technician, NLCAA will review the complaint and determine appropriate disciplinary action. Disciplinary actions are described in NLCAA's application²⁴ and can range from additional form reviews and field inspections up to certification revocation.

NLCAA's quality assurance process is comprised of multiple parts. NLCAA conducts random field inspections at a rate of 1% of completed jobs. If a random field inspection is deemed unsatisfactory by NLCAA, the rate of random field inspections increases to 2% and NLCAA may also initiate the complaint procedures process and further disciplinary action.

In addition to random field inspections, NLCAA also conducts scheduled field inspections which occur after a Technician has completed a certain number of jobs. During a scheduled field inspection, NLCAA can observe the Acceptance Test Technician to ensure Acceptance Tests are completed and performed correctly. The total number of field inspections, which include random and scheduled field inspections, is greater than 1%.

NLCAA also requires technicians to use NLCAA's proprietary Acceptance Test software. The Acceptance Test Technician enters all required data directly into the application's database. The software will generate all Acceptance Test forms, perform the required calculations which help eliminate mathematical errors, and ensure entered values are within a range that is reasonable.

Energy Commission staff believes that NLCAA's QA program as a whole, which consists of random and scheduled field inspections, random form audits, audit procedure process, complaint procedures process, proprietary Acceptance Test software, expert review of training material,

²³ NLCAA Application, page 22.

²⁴ NLCAA Application, page 21.

and independent oversight, meets the requirements of the Standards and is sufficient for providing a quality Acceptance Test Technician Certification Provider program.

CALCTP

CALCTP's quality assurance procedure consists of both random field audits and random paper audits to verify technicians' work and ensure that Acceptance Tests are completed and performed correctly.²⁵ CALCTP's quality assurance program is administered by an independent third party, ICF International.

- During years 1 to 3, ICF will conduct 6% random field audits and 6% random paper audits.
- During years 4 to 5, ICF will conduct 4% random field audits and 4% random paper audits.
- After 5 years, ICF will be conducting 2% random field audits and 2% random paper audits.

CALCTP's application provides a list of "Potential Failed Items" for field audits and paper audits. The list contains items that are evaluated during an audit. If an Acceptance Test Technician or Employer fails an audit, CALCTP requires additional paper or field audits. Repeat failures can lead to certification revocation.

²⁵ CALCTP Application, Attachment E

4. ATTCP Qualifications: experience, qualifications, and reputation

Summary of Comment

The Labor Management Cooperation Committee's comments assert that:

- NLCAA does not have the reputation, knowledge, experience and ability to run a quality and reliable ATTCP program
- NLCAA lacks experience in operating certification programs

Regulatory Requirement

The Standards require ATTCP applicants to demonstrate it has the ability to provide a competent program by submitting an application which describes procedures for quality assurance, classroom and hands on training, prequalification, testing, and among other requirements listed in Section 10-103-A(c).

Per Section 10-103-A(f) of the Standards, Energy Commission staff is required to review and validate all information received to determine if the application is complete and contains sufficient information to be approved.

Energy Commission Staff Evaluation Criteria

This comment was asserted in a previous comments letter²⁶ and Energy Commission staff has already responded to the comment.²⁷ The comment does not change Energy Commission staff's conclusion that both applications meet the regulatory requirements of the Standards.

Energy Commission staff has reviewed the ATTCP applications as explained in each applications respective Staff Evaluation Report and determined that both applicants have met the requirements of Section 10-103-A.

By meeting the requirements of Section 10-103-A, Energy Commission staff believes both applicants have demonstrated its ability to provide a capable program which will benefit Technicians, Employers, and California building owners to support California's efforts to increase building energy efficiency.

²⁶ IBEW and NECA Comments on NLCAA Application Approval, 7/31/2014, TN# 73523, http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/NECA_IBEW-Willson_Buckhorn_2014-07-31.pdf

²⁷ Response to Comments for NLCAA Application to Become a Lighting Controls ATTCP, 10/1/2014, http://www.energy.ca.gov/business_meetings/2014_packets/2014-10-07/Item_07_NLCAA/2014-10-07_Item_7_Response_to_Comments.pdf

Applicable Material contained in ATTCP Applications

NLCAA

NLCAA's directors and associates include engineers, contractors, business owners and independent consultants with years of experience in implementing lighting controls and providing training on lighting controls. These individuals have developed and provided expert review of NLCAA's training materials and curricula.²⁸

Independent oversight of NLCAA's Acceptance Test training and certification process is provided by California Electrical Training.²⁹

CALCTP

CALCTP is overseen by a Board of Directors which includes representatives from utilities, California Lighting Technology Center, and other industry organizations.³⁰

The CALCTP-AT General Applicant Course was developed by the California Lighting Technology Center at UC Davis. The course content and examinations is based on a Job Task Analysis and Body of Knowledge developed by a panel of field experts.³¹

Independent oversight of CALCTP's quality assurance program is provided by ICF International.³²

²⁸ NLCAA Application, page 26; NLCAA Response to IBEW/NECA LMCC, 8/13/2014, TN# 73958, http://www.energy.ca.gov/title24/attcp/documents/NLCAA_comments/NLCAA-Yapp_2014-08-13.pdf

²⁹ NLCAA Application, page 25

³⁰ CALCTP Application, page 33

³¹ CALCTP Application, Attachment B

³² CALCTP Application, Revised CALCTP Organizational Structure

5. Interim Approval of CALCTP: interim approved providers

Summary of Comment

NLCAA's comments assert that:

- The Staff Evaluation Report for CALCTP's application indicated that Energy Commission staff requested additional information regarding the application from CALCTP on August 1, 2014. This clearly indicates that these sections of the application were not complete until August 1, 2014 and that granting interim approval on June 18, 2014 is not appropriate.

Regulatory Requirement

Section 10-103-A(e) Interim Approval of Lighting Controls Acceptance Test Technician Certification Provider

The California Advanced Lighting Controls Training Program (CALCTP) shall be approved as an authorized Lighting Controls Acceptance Test Technician Certification Provider subject to the following conditions:

Energy Commission Staff Evaluation Criteria

The Staff Evaluation Report documents the review and validation of the ATTCP application for full approval; not the application for interim approval. Therefore, references made in the Staff Evaluation Report are applicable only to CALCTP's application for full approval.

6. Interim Approval of Lighting Controls ATTCP: interim approved providers

Summary of Comment

Serrano Electric Inc.'s comments assert that:

- NLCAA should be granted interim approval as an authorized Lighting Controls Acceptance Test Technician

Regulatory Requirement

Section 10-103-A(e) Interim Approval of Lighting Controls Acceptance Test Technician Certification Provider

The California Advanced Lighting Controls Training Program (CALCTP) shall be approved as an authorized Lighting Controls Acceptance Test Technician Certification Provider subject to the following conditions:

Energy Commission Staff Evaluation Criteria

Per Section 10-103-A(e) of the Standards, CALCTP is the only organization identified for interim approval as a Lighting Controls Acceptance Test Technician Certification Provider. Only those organizations listed in the Standards may be considered for interim approval.

Exhibit A

Cover Letter

Date: November 10, 2014

Subject: Lighting Controls ATTCP Program, Response to Comments as posted in the October 7, 2014 Energy Commission Business Meeting Backup Materials

The attached document is Energy Commission staff's response to comments received regarding applications to be approved as an Acceptance Test Technician Certification Provider (ATTCP) pursuant to section 10-103-A(f) of the 2013 Building Energy Efficiency Standards.³³ This document was posted in the October 7, 2014 Energy Commission Business Meeting Backup Materials for agenda item number seven.³⁴ This document is Energy Commission staff's response to written comments made prior to October 1, 2014 regarding applications submitted to be approved as an ATTCP for lighting controls.³⁵ This document is included as posted on October 1, 2014³⁶ and is included here only as a reference document to support the preceding supplemental Energy Commission staff response to comments made between October 1, 2014 and November 10, 2014.

³³ Cal. Code Regs., tit. 24, pt. 6, and associated administrative regulations in pt. 1, ch. 10; section 10-103-A(f).

³⁴ Energy Commission Business Meeting Agenda, 10/7/2014,
http://www.energy.ca.gov/business_meetings/2014_agendas/2014-10-07_agenda.pdf.

³⁵ Response to Comments for NLCAA Application to Become a Lighting Controls ATTCP, 10/1/2014,
http://www.energy.ca.gov/business_meetings/2014_packets/2014-10-07/Item_07_NLCAA/2014-10-07_Item_7_Response_to_Comments.pdf.

³⁶ http://www.energy.ca.gov/business_meetings/2014_packets/2014-10-07/Item_07_NLCAA/.

Response to Comments for NLCAA Application to Become a Lighting Controls ATTCP

Energy Commission staff has completed a review and validation of the National Lighting Contractors Association of America's (NLCAA) application to determine whether the application meets the requirements of Section 10-103-A(c) of the 2013 Building Energy Efficiency Standards. (Cal. Code Regs., tit. 24, pt. 6, and associated administrative regulations in pt. 1, ch. 10.) On July 2, 2014, Energy Commission staff determined that NLCAA's application meets the requirements of the 2013 Standards Section 10-103-A(c). Pursuant to Section 10-103-A(f) of the 2013 Standards, staff explained these findings in the Staff Evaluation Report. A notice of availability was transmitted on July 18, 2014, over the Energy Commissions Listserv informing interested parties that the Staff Evaluation Report along with NLCAA's application was available on the Commission's website. All interested persons have had a reasonable time, since July 18, 2014, to review the posted information.

Pursuant to Section 10-103-A(f), staff reviewed public comments that were received in response to the July 18, 2014, Staff Evaluation Report and NLCAA's application. Energy Commission staff has grouped similar comments and is providing a response to each comment raised.

1. NLCAA demonstrates that it has the experience, qualifications, and reputation to ensure success.

Short Response

Pursuant to Section 10-103-A(f), Energy Commission staff must validate and review NLCAA's application to determine whether it meets the regulatory requirements in Section 10-103-A(c). There are no regulatory requirements that pertain to an applicant's experience, qualifications, and reputation. These are non-regulatory requirements that are not a part of Energy Commission staff's determination that NLCAA's application meets the requirements of Section 10-103-A(c).

Detailed Response and Analysis:

While there are no regulatory requirements that pertain to an applicant's experience, qualifications, and reputation, the Energy Commission understands the importance of the ATTCP program. The Energy Commission wants to ensure that all approved ATTCP's are capable of providing a program that will benefit Technicians, Employers, and California building owners to support California's efforts to increase building energy efficiency. Staff has validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). With this determination, Energy Commission staff is confident that NLCAA is qualified to implement a successful program.

NLCAA addressed concerns about its experience and qualifications in its response letter dated August 13, 2014. NLCAA's response letter provides a list of team members and summarizes each member's experience and qualifications. Many of the team members are business owners and electrical contractors with decades of experience in implementing

lighting and lighting controls. Some of the team members are certified Acceptance Test Technicians and certified Employers. Its team members have many years of experience teaching courses on lighting systems and controls and developing technical lectures and hands-on labs for lighting controls.

Based on Energy Commission staff's evaluation of NLCAA's application, as explained in the Staff Evaluation Report, and after consideration of comments received, staff continues to conclude that NLCAA's application meets the regulatory requirements. The Energy Commission will consider the concerns raised and monitor implementation of the ATTCP program to determine if any changes to the regulations should be considered through the rulemaking process for updating the 2016 Standards.

2. NLCAA properly validates prequalification requirements of those who become certified.

Short Response

The 2013 Standards limit participation in the Technician certification program to those persons who have 3 years of verifiable experience in lighting controls and electrical systems as determined by the ATTCP. Staff has validated and reviewed NLCAA's application and has determined that the application sufficiently demonstrates the criteria and reviewing processes used to determine whether a Technician applicant meets the prequalification criteria and the relevance of the Technician applicant's professional experience.

Detailed Response and Analysis

NLCAA requires all applicants to demonstrate that they have three years of experience by filling out an application where the applicant must provide employment information. Applicants must also provide a summary of relevant experience in lighting controls by listing the number of years of experience and provide a description of their experience in occupancy and photosensors, low and line voltage dimming systems, demand response control systems, time-based scheduling systems, interior lighting controls, and outdoor lighting controls. They must then sign and date their application. There is also a section in the application where the applicant must upload credentials such as copies of certificates, certification numbers, and licenses. All candidate applications are reviewed by NLCAA to ensure the applicant is qualified to take the training course.

Based on staff's evaluation of NLCAA's application, as explained in the Staff Evaluation Report, and after consideration of comments received, staff has not changed its conclusion that NLCAA's application meets the regulatory requirements.

Specific Questions on Prequalification

- a. Q - NLCAA does not adequately verify three years of verifiable professional experience and expertise in lighting controls and electrical system. They provide no procedures for verifying work experience.

A - NLCAA's application includes the criteria and processes it will use to ensure that all Technicians meet the prequalification requirements. Specifically, the application states that NLCAA will require Technicians to fill out an online form and provide: Employer information, years of experience in occupancy and photosensors, low and line voltage dimming systems, demand response control systems, time-based scheduling systems, interior lighting controls, and outdoor lighting controls. They must then sign the document. NLCAA will review all candidate applications to ensure the applicant is qualified to take the training course.

- b. Q - NLCAA expands the list of qualified professionals. NLCAA must use those individuals listed in Section 10-103-A(b)2. Expanding the list puts CALCTP at a competitive disadvantage. NLCAA allows those with a MS or BS in philosophy and geology. It also expands applications to military veterans with ratings in radio, aircraft communication, radar systems, and other non-lighting controls related systems.

A - Staff has validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). There are no requirements in Section 10-103-A(c) that specify a list of qualified professionals. Section 10-103-A(b)2 pertains only to the industry certification threshold. Therefore, those industry groups listed in Section 10-103-A(b)2 for certification apply only to meeting the threshold requirements. The only prequalification requirement for participation in the Technician certification program is that persons have 3 years of verifiable experience in lighting controls and electrical systems.

- c. Q - How will NLCAA determine who is considered a qualified commissioning professional, or a controls installation and startup contractor.

A - Staff has validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). There are no requirements in Section 10-103-A(c) that specify a list of qualified professionals. The only prequalification requirement for participation in the Technician certification program is that persons have 3 years of verifiable experience in lighting controls and electrical systems per Section 10-103-A(c)B(iii). As long as this minimum requirement is met, the applicant may take the training course regardless of designation, job title, or degree.

- d. Q - NLCAA accepts generalized experience in installing and maintaining indoor lighting and outdoor lighting.

A - NLCAA does not accept generalized experience in installing and maintaining indoor lighting and outdoor lighting. NLCAA requires experience in controls for indoor lighting and outdoor lighting systems.

3. NLCAA's test development and test curriculum are sufficiently rigorous and meet the requirements of Section 10-103-A.

Short Response

The 2013 Standards require an ATTCP applicant to demonstrate through its application that it has a written and practical test that demonstrates each Technician applicant's competence in all subject areas. Staff has validated and reviewed NLCAA's application and has determined that the application sufficiently demonstrates this requirement.

Detailed Response and Analysis

The 2013 Standards require that the ATTCP submit the necessary training material including written and practical tests that demonstrate each certification applicant's competence in all "specified subjects," which include occupancy and photosensors, low and line voltage dimming systems, demand response control systems, time-based scheduling systems, interior lighting controls, and outdoor lighting controls. Staff has reviewed NLCAA's application and reviewed the written and practical tests. Staff has validated and ensured that NLCAA's test development and test criteria are sufficiently rigorous, will ensure reliable results, and do not indicate bias exists.

Specific Question on Test Development

- a. Q - It is standard industry practice to require professional certification tests to be evaluated by a test validation professional to ensure sufficient rigor, reliability and lack of bias.

A – Energy Commission staff has validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). Energy Commission staff has validated and ensured that NLCAA's test development and test criteria are sufficiently rigorous, will ensure reliable results, and do not indicate bias exists.

There are no requirements in Section 10-103-A(c) that requires training material to be reviewed or approved by a test validation professional.

- b. Q - Are there multiple versions of the exams, do they use the same test questions?

A - Energy Commission staff validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). Energy Commission staff has reviewed NLCAA's exams and believes they are sufficiently rigorous, and will ensure reliable results.

There are no requirements in Section 10-103-A(c) that require multiple versions of the exams. Although, NLCAA will continually review exam questions and responses to ensure students understanding of the subject matter.

- c. Q - Are new test questions developed on a regular basis to prevent exam answers from being shared with other students?

A - Energy Commission staff validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). There are no requirements in Section 10-103-A(c) that require the applicant to continually develop new questions. Energy Commission staff will monitor program implementation to determine if this should be required in future revisions of the Standards.

- d. Q - Are exams proctored? If so, how, and by whom?

A - Pursuant to NLCAA's application, all exams are proctored by the instructor.

- e. Q - What is NLCAA's protocol for maintaining exam result records?

A - Section 10-103-A(c)(3)(B)(v) requires that the ATTCP maintain the results of the written and practical tests for five years after the date of the test. NLCAA retains the final examination in its server database for a minimum five years.

- f. Q - How does NLCAA maintain exam security?

A - Pursuant to NLCAA's application, all exams are proctored.

4. NLCAA's application includes sufficient quality assurance.

Short Response

The 2013 Standards require an ATTCP applicant to demonstrate through its application how its certification business practices include quality assurance. Staff has validated and reviewed NLCAA's application and has determined that the application sufficiently demonstrates this requirement.

Detailed Response and Analysis: The 2013 Standards Section 10-103-A(c)3F requires the ATTCP to describe in its application to the Energy Commission how its certification business practices include quality assurance.

NLCAA includes random audits as part of the Quality Assurance procedure. Random audits consist of random form review and random field inspections. The rate of random form reviews is two percent. The rate of random field inspections is one percent.

Scheduled field inspections will occur after a Technician has completed 11 Acceptance Test jobs. Upon satisfactory field inspection, a scheduled field inspection will occur every 25 jobs, every 50 jobs, and every 100 jobs. If the scheduled field inspection is unsatisfactory, a complaint will be generated by NLCAA.

A disciplinary field inspection occurs as the result of a complaint either by an outside entity or by NLCAA. During the disciplinary field inspection, retesting of lighting controls will be performed by NLCAA to verify Acceptance Testing results.

NLCAA requires Technicians to use NLCAA's proprietary Acceptance Test software when performing an Acceptance Test. The NLCAA software is designed so that the Acceptance Test Technician enters all required Acceptance data directly into the application's database. The software will generate all Acceptance Test forms, perform the required calculations which help eliminate mathematical errors, and ensure entered values are within a range that is reasonable. Technicians will be required to take pictures throughout the testing process of all controls. These pictures will be GPS-encoded to verify the Technician was on-site and that the proper controls are being tested. Once the Acceptance Tests are completed and signed, the Technician will no longer be allowed to make changes or modifications to the completed forms.

Staff believes use of this software will assist in the quality assurance process to ensure correct values are entered in the field and that the tests were completed properly.

Specific Questions on Quality Assurance

- a. Q - NLCAA does not have a description of what is considered an error or failed audit and what triggers further action. This information should be provided for public review and comment prior to approval of the application.

A - Energy Commission staff validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). There is no specific requirement that an applicant must define an error or failed audit and what triggers further action. However, NLCAA's application does list what is considered an error or failed audit and what triggers further action. A failed paper audit will trigger an NLCAA field inspection. Upon failure of a field inspection, NLCAA will submit to itself a complaint form and a formal complaint process will be initiated. The application also describes further action for failed audits (disciplinary actions).

- b. Q - NLCAA does not discuss what further action is taken for failed audits. This information should be provided for public review and comment prior to approval of the application.

A - Energy Commission staff validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). There is no specific requirement that an applicant "discuss what further action is taken for failed audits." However, NLCAA's application lists the action that will occur for failed audits. A failed paper audit will trigger an NLCAA field inspection. Upon failure of a field inspection, NLCAA will submit to itself a complaint form and a formal complaint process will be initiated. The application also describes further action for failed audits (disciplinary actions).

- c. Q - A higher rate of QA should be required.

A - Energy Commission staff, pursuant to Section 10-103-A (f)(1), must review and validate all information received in ATTCP applications to ensure that all requirements in Section 10-103-A(c) are met. Section 10-103-A(c)(3)(F), does not require an applicant to demonstrate a specific QA rate. Instead, an applicant must describe in its application to the Energy Commission how its certification business practices include quality assurance, independent oversight and accountability measures. As stated in the detailed response and analysis to comment three above, NLCAA has met this requirement.

Energy Commission staff has reviewed and validated NLCAA's application and has determined that NLCAA's application describes a QA system that meets the requirements.

- d. Q - NLCAA should be required to provide reports on all failed audits to the Energy Commission.

A - Energy Commission staff validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). The 2013 Standards do not require a provider to report failed audits to the Energy Commission. Energy Commission Staff will have access to NLCAA's QA tracking software and can review failed audits.

- e. Q - It is not clear from NLCAA's application if there is any consequence to certified Acceptance Test Technician Employers if their employee fails an audit.

A - Energy Commission staff validated and reviewed NLCAA's application and determined that it meets the regulatory requirements in Section 10-103-A(c). NLCAA's application explains that the Technician and Employer are required to fill out the audit form together. If there are any discrepancies then the Technician and Employer will start the disciplinary action. The application also describes further action for failed audits (disciplinary actions) for both Employers and Technicians.

- f. Q - Commission staff should be directed to set the minimum required number of random quality assurance audits before approving any applicants.

A - Section 10-103-A(c)3F requires an ATTCP to describe in its application how its certification business practices include quality assurance, independent oversight and accountability measures. Section 10-103-A(c)3F does not require a minimum number of audits. Any changes or code modifications to Section 10-103-A would require rulemaking. Staff invites stakeholders to participate in the Energy Commission's upcoming 2016 Building Energy Efficiency Standards rulemaking proceeding to reiterate these comments to amend the program's regulatory requirements. For more information, see the Energy Commission's webpage for Public Participation in the Energy Efficiency Standards Update, at <http://www.energy.ca.gov/title24/participation.html>.

5. CALCTP's application should be processed first.

Detailed Response and Analysis: Section 10-103-A does not specify the order in which applicants shall be approved.