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California Energy Commission
STAFF REPORT

Lighting Controls Acceptance Test Technician Certification Provider 2016 Updates Review: National Lighting Contractors Association of America

*Compliance Review to the 2016 California Building
Energy Efficiency Standards*

California Energy Commission

Edmund G. Brown Jr., Governor



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ABSTRACT

Per the requirements in Section 10-103-A(d) of the *2013 Building Energy Efficiency Standards* (codified in Title 24, Part 6, of the California Code of Regulations), acceptance test technician certification providers shall submit an update report to the California Energy Commission reporting what adjustments have been made to the training curricula, if any, to address adopted updates to the standards. The *2016 Building Energy Efficiency Standards* (2016 Standards) (codified in Title 24, Part 6, of the California Code of Regulations) were adopted by the Energy Commission on November 12, 2015, and all acceptance test technician certification providers were notified to begin development of their 2016 update reports.

Staff has evaluated the training curricula adjustments and other application amendments that the National Lighting Contractors Association of America submitted in its 2016 update report, which staff received in its entirety on July 6, 2016. Staff has determined that the proposed training curricula adjustments and other application amendments submitted satisfy the requirements for acceptance test technician certification providers in Section 10-103.1(c)3 of the 2016 Standards, which will go into effect January 1, 2017. Staff recommends approval of the National Lighting Contractors Association of America's 2016 training curricula adjustments and other application amendments.

Keywords: Nonresidential lighting controls acceptance test technician certification provider, National Lighting Contractors Association of America, lighting controls, acceptance testing, Building Energy Efficiency Standards

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EXECUTIVE SUMMARY

The Acceptance Test Technician Certification Provider Program provides training, certification, and oversight of acceptance test technicians who perform the acceptance tests required by California's *Building Energy Efficiency Standards*, as well as the acceptance test employers that employ technicians. Providers are professional organizations that are approved to provide training curricula for technicians and their employers, certification procedures, complaint resolution (including disciplinary procedures), quality assurance, and accountability measures. Acceptance testing ensures that installed equipment, controls, and systems in nonresidential buildings operate as required by the standards.

Per Section 10-103-A(d) of the *2013 Building Energy Efficiency Standards* (2013 Standards) (codified in Title 24, Part 6, of the California Code of Regulations), providers are required to report to the California Energy Commission what adjustments have been made to training curricula. Providers need to address changes to acceptance testing requirements or adopted updates to the standards no less than six months before the effective date of any newly adopted standards.

All reports shall contain a signed certification that all requirements have been met. Providers must also demonstrate to the Energy Commission that their acceptance testing certification services will comply with any applicable updates to the standards if their approved 2013 application does not comply with the 2016 requirements. The 2016 training curricula adjustments and any other 2016 application amendments shall be reviewed by the Energy Commission according to the criteria in Section 10-103.1(c)3 of the *2016 Building Energy Efficiency Standards* (2016 Standards) (codified in Title 24, Part 6, of the California Code of Regulations) to determine if the providers approved under the 2013 Standards satisfy requirements for providers in the 2016 Standards.

The National Lighting Contractors Association of America was approved by the Energy Commission as a nonresidential lighting controls provider on November 17, 2014, and submitted a complete 2016 update report on July 6, 2016. Energy Commission staff reviewed the report and determined it to comply with the requirements of Section 10-103.1(c)3 of the 2016 Standards.

CHAPTER 1: Background

The Acceptance Test Technician Certification Provider Program

The Acceptance Test Technician Certification Provider (ATTCP) Program provides training, certification, and oversight of acceptance test technicians (ATTs) who perform the acceptance tests required by California's *Building Energy Efficiency Standards*, as well as the acceptance test employers (ATEs) that employ ATTs. ATTCPs are professional organizations that are approved by the California Energy Commission to provide training curricula for ATTs and ATEs, certification procedures, complaint resolution (including disciplinary procedures), quality assurance, and accountability measures.

Acceptance testing ensures that installed equipment, controls, and systems in nonresidential buildings operate as required by the standards. The ATTCP Program was developed to improve compliance with lighting controls and mechanical acceptance test requirements.

Requirements for the 2016 Update Report

In accordance with Section 10-103-A(d) of the *2013 Building Energy Efficiency Standards* (2013 Standards) (codified in Title 24, Part 6, of the California Code of Regulations), lighting controls ATTCPs must report to the Energy Commission any adjustments made to the training curricula to address changes to lighting controls acceptance testing requirements or adopted updates to the standards. The reports must be submitted no less than six months prior to the effective date of any newly adopted standards and shall contain a signed certification that the ATTCP has met all requirements for this program. ATTCPs must also demonstrate to the Energy Commission that their acceptance testing certification services will comply with any applicable updates to the standards if their approved 2013 application does not comply with the requirements for ATTCPs in the *2016 Building Energy Efficiency Standards* (2016 Standards) (codified in Title 24, Part 6, of the California Code of Regulations).

Update reports submitted by lighting controls ATTCPs shall be reviewed according to the review and determination process in Section 10-103-A(f)1 of the 2013 Standards. Although staff's overall review of the 2016 update reports will follow the procedures for the review of an ATTCP application under the 2013 Standards, the contents of each 2016 update report will be reviewed for compliance with the 2016 Standards. Staff will evaluate the training curricula adjustments and other application amendments contained within an ATTCP's 2016 update report to determine if the ATTCP's training

and certification services, including quality assurance measures, comply with the criteria and procedures in Section 10-103.1(c)3 of the 2016 Standards.

Updates to the *Building Energy Efficiency Standards* for the 2016 Code Cycle

The 2016 Standards include various updates that affect the Lighting Controls ATTCP Program on different levels. Staff considers most of these updates to be minor, as these changes do not require the lighting controls ATTCPs to alter their approved applications substantively. However, there are updates to the standards that require a substantive alteration of the ATTCP application. These substantive and nonsubstantive updates to the standards will be discussed as part of the staff evaluation in Chapter 2 of this report.

National Lighting Contractors Association of America

The National Lighting Contractors Association of America (NLCAA), a nonprofit corporation, is one of two organizations approved by the Energy Commission as a nonresidential lighting controls ATTCP on November 17, 2014. NLCAA began submitting components of its 2016 update report for review beginning April 18, 2016, with the final component submitted on July 6, 2016 in response to feedback from Energy Commission staff.

NLCAA's 2016 update report was submitted under the 2013 Standards. The report was evaluated in accordance with the application review and determination requirements in Section 10-103-A(f)1 of the 2013 Standards. Staff has summarized the relevant sections from NLCAA's 2016 training curricula adjustments and other application amendments as they pertain to the requirements in Section 10-103.1(c)3 of the 2016 Standards. Furthermore, staff has assessed whether NLCAA's training curricula adjustments and other application amendments satisfy the ATTCP requirements in Section 10-103.1(c)3 of the 2016 Standards.

CHAPTER 2:

ATTCP 2016 Update Report Evaluation

To ease the transition to the new code cycle, the most significant changes for lighting controls acceptance testing were identified by staff and communicated to the ATTCPs. The three sections that follow present these changes. The first two sections discuss the regulatory changes deemed to have the most effect on ATTCPs at the organizational level: modified quality assurance requirements in Section 10-103.1(c)3F and a new lighting controls acceptance test as required in Section 130.4(a)7. The third section discusses minor updates that ATTCPs should address in the training curricula when certifying and recertifying ATTs and ATEs.

While the only requirements directly applicable to lighting controls ATTCPs are in Section 10-103.1 of the 2016 Standards, the new lighting controls acceptance test requirement in Section 130.4(a)7 of the 2016 Standards and in the 2016 Reference Nonresidential Appendix NA7.7.6.2 affect the services that ATTCPs must provide. Training adjustments are necessary to address the new acceptance test and the minor updates to the standards.

Modified Requirements for Quality Assurance

Regulatory Changes

According to Section 10-103.1(c)3F of the 2016 Standards, the ATTCP shall review a random sample of no less than 1 percent of each technician's completed compliance forms and shall perform randomly selected on-site audits of no less than 1 percent of each technician's completed acceptance tests.

ATTCP Requirements

This update to the standards adds a quality assurance requirement for ATTCPs that calls for ATTCPs to review a minimum sample size of completed acceptance forms and tests to ensure consistent compliance. Although a larger sample size and frequent auditing are encouraged, ATTCPs must submit a description of, and findings from, a quality assurance program implementing the minimum standard.

Summary of Compliance Method for ATTCP

According to NLCAA's approved application, at least 2 percent of all completed compliance forms are reviewed randomly to ensure proper completion, and at least 1 percent of completed jobs are inspected and verified in the field. Since these approved quality assurance measures already satisfy the new requirements in Section 10-103.1(c)3F of the 2016 Standards, NLCAA has elected not to amend its existing quality assurance program audits.

Staff Assessment

NLCAA’s existing quality assurance paper and on-site random audit rates have been reviewed, and staff has concluded that NLCAA satisfies the requirements in Section 10-103.1(c)3F of the 2016 Standards and that no further action is required to demonstrate compliance. A summary of NLCAA’s compliance is found in **Table 1**.

Table 1: Summary of ATTCP Compliance With §10-103.1(c)3F

REQUIREMENT	AMENDMENT LOCATION(S)	ADEQUATE
1% random sampling of each ATT’s completed compliance forms	Not Applicable – Amendment Not Necessary	☒
1% randomly selected on-site audits of each ATT’s completed acceptance tests	Not Applicable – Amendment Not Necessary	☒

Source: California Energy Commission

Requirements for the New Acceptance Test

Regulatory Changes

In accordance with Section 103.4(a)7 of the 2016 Standards, a certificate of acceptance shall be submitted to the enforcement agency under Section 10-103(a) of the 2016 Standards that certifies that lighting systems receiving the institutional tuning power adjustment factor (PAF) comply with Section 140.6(a)2J of the 2016 Standards and Reference Nonresidential Appendix NA7.7.6.2.

ATTCP Requirements

This update to the standards adds an acceptance test for a lighting system being used to claim the institutional tuning PAF and introduces the new acceptance form, NRCA-LTI-05-A. The ATTCP must certify that ATTs perform the institutional tuning PAF acceptance test and submit a certificate of acceptance as required in Section 130.4(a)7. The ATTCP must demonstrate that the institutional tuning training its ATTs will undergo satisfies the applicable requirements in Section 10-103.1(c)3 of the 2016 Standards.

The ATTCP must:

- Provide both hands-on experience and theoretical training to technicians such that they may demonstrate their abilities to apply the 2016 Standards acceptance testing and documentation requirements to lighting systems for which the institutional tuning PAF is being claimed to comply with Section 140.6(a)2J and Reference Nonresidential Appendix NA7.7.6.2.
- Issue a written and practical test to demonstrate each certification applicant’s competence in the institutional tuning PAF acceptance test.

- Demonstrate its 2016 recertification training on the institutional tuning PAF acceptance test is equivalent to the 2016 training new certification applicants will receive and satisfies the training scope and test requirements in Section 10-103.1(c)3 of the 2016 Standards.
- Update its employer training to cover the scope and process of the institutional tuning PAF acceptance test.

Summary of Compliance Method for ATTCP

To satisfy the applicable requirements in Section 10-103.1(c)3 of the 2016 Standards for institutional tuning training, NLCAA has made additions to its existing certification training curricula and created training curricula for 2016 recertification. For its ATT certification course, NLCAA has added an institutional tuning lecture section, laboratory component, and quiz, as well as institutional tuning questions on the final exam. The institutional tuning PAF acceptance test training (lecture and laboratory components) includes:

- Instruction on institutional tuning.
- Guidance on how institutional tuning may be accomplished to claim a PAF.
- Guidance on how to determine if the institutional tuning PAF acceptance test is required.
- Instruction and practice with performing the acceptance test and completing the NRCA-LTI-05-A documentation.
- Information on some of the issues that ATTs may encounter related to the acceptance test for institutional tuning.

To satisfy the requirement for ATEs to receive instruction on the scope and process of the new acceptance test, NLCAA has added the institutional tuning lecture section used in the ATT certification course to the ATE certification course.

NLCAA has also created a training curriculum for 2016 recertification of ATTs and ATEs, that is the same for ATTs and ATEs and that will be conducted online. The portions of the training that cover the institutional tuning PAF acceptance test include:

- The same institutional tuning lecture section used in the ATT and ATE certification courses.
- The same institutional tuning laboratory component used in the ATT certification course.
- The same institutional tuning quiz questions provided in the ATT course.
- A graded practical exam section on completing the NRCA-LTI-05-A documentation.

Staff Assessment

Staff has evaluated NLCAA’s modified 2016 training materials for certification of technicians and employers, as well as NLCAA’s 2016 recertification training, and has determined that it satisfies the requirements of Section 10-103.1(c)3. **Table 2** summarizes NLCAA’s compliance with the applicable requirements in Sections 10-103.1(c)3A, 10-103.1(c)3B, and 10-103.1(c)3C of the 2016 Standards for training on the new institutional tuning PAF acceptance test.

Table 2: Summary of ATTCP Compliance With §10-103.1(c)3A, §10-103.1(c)3B, and §10-103.1(c)3C

REQUIREMENT	AMENDMENT LOCATION(S)	ADEQUATE
Training Scope	Technician Handbook – REV02 (Confidential)	☒
Curricula	Technician Handbook – REV02 (Confidential) Summary of Changes to 2016 Acceptance Test Technician Course Material	☒
Hands-On Training	Technician Handbook – REV02 (Confidential)	☒
Tests	Acceptance Testing Documents 2016 (Confidential) Technician Handbook – REV02 (Confidential)	☒
Recertification	Summary of Inclusions in 2016 Acceptance Code Update Course Material (Confidential) Online Acceptance Code Update Presentation Slides (Confidential)	☒
Employer Training	Employer Handbook – REV02 (Confidential)	☒

Source: California Energy Commission

Minor Changes to the Lighting Controls and Acceptance Test Requirements

Regulatory Changes

Minor updates were made to the lighting controls and acceptance testing requirements in the standards and reference appendices; these updates are summarized in **Table 3**.

Table 3: Summary of Minor Lighting Controls and Acceptance Testing Updates to the *Building Energy Efficiency Standards*

Updated Regulation	Description of Change
§130.1(b)3	This update provides clarification that dimmable luminaires shall be controlled with a manual dimmer capable of ON and OFF functionality.
§130.1(c)1, Exception 3	This update increases allowable continuous lighting for emergency exits from 0.05 watts/ft ² to 0.1 watts/ft ² .
§130.1(c)1, Exception 5	This update adds a new exception to shutoff controls to allow illumination when provided by lighting equipment that is designated for emergency lighting, connected to an emergency power source or

Updated Regulation	Description of Change
	battery supply, and is intended to function in emergency mode only when normal power is absent.
§130.1(c)5	This update adds a requirement for specific areas to have vacancy/partial ON controls rather than normal occupancy sensors.
§130.1(e)	This update excludes areas with less than 0.5 watts/ft ² from 10,000ft ² threshold to reduce lighting power in response to a demand response signal.
§130.2(c)3B	This update increases the maximum dimming permitted as part of an active motion controlled lighting system from 80% to 90%.
§130.2(c)4	This update removes outdoor sales lots and sales canopies from this section. These spaces must now comply with Section 130.2(c)3.
§140.6(a)2J	This update provides the requirements for a tuned lighting system to qualify for the institutional tuning PAF in Table 140.6-A.
§140.6(a)3C	This update provides clarification that lighting wattage used for make-up and hair lighting is excluded from the prescriptive calculations when controlled with a vacancy sensor.
Table 140.6-A (§140.6)	This update removes PAFs and adds a PAF for institutional tuning.
Tables 140.6-B, 140.6-C, 140.6-D, 140.6-E, 140.6-F, 140.6-G (§140.6)	These updates modify lighting power densities to reflect the industry shift to light-emitting diode (LED) lighting as the design baseline.
§140.7(a)6	This update removes ATMs from excluded wattages. Calculations now need to include ATM lighting for outdoor lighting power adjustments.
§141.0(b)2I	This update changes the requirement to allow scenarios where alterations to multilevel controls, if triggered, can be more cost-effective. If the lighting power is 85% or less of the allowance, then it is permissible to have one control step between 30-70%. If lighting power is greater than 85% of the allowance, then the requirement of 130.1(b) is applicable. There is an alternative option that allows the reduction of lighting power by 35-50% from existing, thereby allowing an exemption to the multilevel control requirement of 130.1(b).
§141.0(b)2J	This update provides relief to the trigger for acceptance testing of smaller projects if controls added were for 20 or fewer luminaires.
§141.0(b)2L	This update provides clarification for general requirements, adds specifics to certain areas, and provides relief to the trigger for acceptance testing for smaller projects if controls added were for 20 or fewer luminaires.
NA7.6.1.2, NA7.6.2.3, NA7.6.3.2, NA7.8.2	These updates add descriptions for minimum sampling to test functionality of photocontrols.

Source: California Energy Commission

ATTCP Requirements

The updates to the standards listed in **Table 3** are considered “minor” because they do not require an ATTCP’s application to be substantively altered. While any changes to the lighting controls acceptance testing requirements, substantive or not, will require an ATTCP to adjust its training curricula, the updates in **Table 3** do not require substantive training adjustments—such as entirely new laboratory components or lecture sections. Instead, the 2016 updates build upon the requirements of the 2013 Standards; therefore, the ATTCP must simply demonstrate that its training includes these updates to comply with the technician curricula requirements in Section 10-103.1(c)3B(i) and the employer training requirements in Section 10-103.1(c)3C.

Whereas the 2016 certification training must meet the requirements of the 2016 Standards, recertification for 2016 is intended to take place before the standards go into effect. As such, 2016 recertification training is subject to the requirements in Section 10-103-A(c)3B(vi) of the 2013 Standards, which require the ATTCP to recertify its existing ATTs on all new or modified lighting controls acceptance test requirements in the 2016 Standards. In preparation for the 2016 code cycle, the ATTCP must demonstrate that its recertification training includes the minor updates in **Table 3**. The requirements do not include tests or hands-on training; however, ATTCPs are encouraged to incorporate these elements.

Summary of Compliance Method for ATTCP

As part of the 2016 update report, NLCAA has listed the changes to its 2016 ATT and ATE certification curricula that include the updates in **Table 3**. NLCAA has also submitted the presentation slides that will be used in the 2016 recertification training course and has indicated where the **Table 3** updates are addressed. These training materials are confidential; therefore, evaluation of compliance is available only in this public document.

Staff Assessment

Staff evaluated NLCAA’s confidential certification and recertification materials for the 2016 code cycle, comparing the listed curricula adjustments to the minor updates in **Table 3**. Staff has determined that NLCAA’s 2016 certification training satisfies the requirements in Section 10-103.1(c)3B(i) of the 2016 Standards for ATTs and in Section 10-103.1(c)3C of the 2016 Standards for ATEs. NLCAA’s 2016 recertification training also satisfies the requirements of Section 10-103-A(c)3B(vi) of the 2013 Standards for recertification. A summary of NLCAA’s compliance is found in **Table 4**.

Table 4: Summary of ATTCP Compliance With §10-103.1(c)3B(i), §10-103.1(c)3C, and §10-103-A(c)3B(vi)

REQUIREMENT	AMENDMENT LOCATION(S)	ADEQUATE
(Lighting Controls ATT Training) Curricula	Summary of Changes to 2016 Acceptance Test Technician Course Material Technician Handbook – REV02 (Confidential)	☒
Lighting Controls ATE Training	Employer Handbook – REV02 (Confidential)	☒
(Lighting Controls ATT Training) Recertification	Summary of Inclusions in 2016 Acceptance Code Update Course Material (Confidential) Online Acceptance Code Update Presentation Slides (Confidential)	☒

Source: California Energy Commission

CHAPTER 3:

Other ATTCP Application Amendments

In addition to the application amendments necessary to demonstrate compliance with the 2016 Standards requirements for lighting controls ATTCPs, all ATTCPs had the option to propose additional application amendments for the 2016 code cycle in their update reports for approval with the 2016 training curricula.

Online 2016 Recertification Training

Chapter 2 of this report contains information on how NLCAA's 2016 recertification training content satisfies the requirements in Section 10-103-A(c)3B(vi) of the 2013 Standards for ATT recertification training. This section specifically examines whether the recertification content can be implemented in an online format, per NLCAA's request. The intent of the standards, NLCAA's method to remain consistent with the intent of the standards, and staff's assessment of whether NLCAA satisfied the intent of the standards are discussed below.

Requirements

Recertification for the 2016 code cycle is intended to take place before the effective date of the 2016 Standards and is subject to the requirements as specified by the 2013 Standards. According to Section 10-103-A(c)3B(vi) of the 2013 Standards, lighting controls ATTCPs are required to recertify their ATTs each time the standards are updated with new or modified lighting controls acceptance test requirements.

The regulations do not specify what form the training should take, as long as the regulatory changes are communicated to the ATTs. While the possibility of online training is not excluded by the standards, staff has requested that ATTCPs limit online recertification training to nonsubstantive content to remain consistent with the intent of the standards. Staff reasons that the 2013 certification training combined with the 2016 recertification training that existing ATTs receive, should be equivalent to the 2016 certification training that new ATT applicants will receive.

In the case of the new institutional tuning PAF acceptance test, staff informed the ATTCPs that the 2016 recertification training should be held to the same standards as the 2016 certification training. The ATTs will need to be trained on the procedures and documentation for a new acceptance test that was not required under the 2013 Standards. While equivalency is also not explicitly required in the standards, all ATTCP recertification proposals will be reviewed by staff, and a recommendation will be made to the Energy Commission whether the training satisfies the regulatory requirements while remaining consistent with the intent of the regulations.

Proposed Application Amendment

NLCAA has proposed to conduct 2016 recertification training for its existing ATTs and ATEs online. This training—which is the same for both ATTs and ATEs—consists of 12 training modules and includes recorded lectures, video demonstrations, interactive quizzes, and a final exam.

NLCAA contends that the training for institutional tuning is not new material and only needs review, with the exception of how to complete the new NRCA-LTI-05-A documentation for lighting systems claiming an institutional tuning PAF. NLCAA proposes that there is an overlap between the skills and knowledge required to perform the institutional tuning PAF acceptance test and those necessary to perform acceptance tests the ATTs were certified for under the 2013 Standards. Furthermore, NLCAA claims that although the definition of institutional tuning is new in the 2016 Standards, the ATTs have already received training on institutional tuning. Therefore, NLCAA asserts that the institutional tuning PAF acceptance test requirement is a nonsubstantive change and the training on it may be provided online.

Following the assumption that the new institutional tuning PAF acceptance test is a nonsubstantive update to the standards and that all other updates that should be included in the recertification training are minor, NLCAA has concluded that requiring its ATTs to attend 2016 recertification training in person would contradict its commitment to provide reasonable access to training.

Summary of Compliance Method for ATTCP

NLCAA will require all ATTs and ATEs to take the same 2016 recertification training; however, this discussion will only refer to ATTs since staff is ensuring ATTs are adequately trained to perform the institutional tuning PAF acceptance test. To address concerns that the training current ATTs receive for the acceptance test as part of recertification be equivalent to the training that new ATT applicants will receive for the 2016 code cycle, NLCAA's online recertification training will include:

- A narrated presentation of the same institutional tuning lecture from the ATT course to satisfy the requirement in Section 10-103.1(c)3B(i) of the 2016 Standards for ATT training curricula.
- A video demonstration, which the ATTs have already performed during their 2013 certification course, to satisfy the requirement in Section 10-103.1(c)3B(ii) of the 2016 Standards for ATT hands-on training.
- A quiz section based on the lecture and video demonstration, a quiz section based on an additional video demonstration, and a final exam section to satisfy the requirement in Section 10-103.1(c)3B(v) of the 2016 Standards for ATT training tests, with questions from the ATT 2016 certification course.

NLCAA will also require the ATTs to download the 2016 certification training materials, as the recertification training refers to those materials. The only components of the

institutional tuning content in the 2016 online recertification training that are not identical to the 2016 ATT certification training are an additional video demonstration and a quiz based on the video. NLCAA added these components in response to feedback from Energy Commission staff to address the ATT training requirement for a practical exam.

As stated, NLCAA has asserted that the requirement for hands-on training is satisfied by a combination of previous hands-on institutional tuning training and review provided by the video demonstration of a laboratory exercise that the ATTs have already completed.

Staff Assessment

Staff has reviewed NLCAA’s proposal and online recertification training modules and has determined that the institutional tuning module assembles the training that ATTs already received in previous training modules to provide instruction on the institutional tuning PAF acceptance test. Staff has determined that NLCAA’s 2016 recertification training for ATTs certified under the 2013 Standards may be considered equivalent to the 2016 ATT certification training. Therefore, the 2016 recertification training may be conducted online and still be consistent with the intent of the requirements in the 2016 Standards to include hands-on and theoretical training to certify ATT competency to perform the acceptance tests. **Table 5** summarizes NLCAA’s compliance with the ATT training requirements in Section 10-103.1(c)3 of the 2016 Standards for its proposal to conduct recertification training online.

Staff’s determination regarding online recertification training is specific to the 2016 code cycle, and does not extend to the consideration of future recertification. In the future when it becomes necessary for ATTCPs to conduct recertification training, staff will work with ATTCPs to determine if an online format is appropriate in those particular cases.

**Table 5: Summary of ATTCP Compliance With §10-103.1(c)3
(Online Recertification Training)**

REQUIREMENT	AMENDMENT LOCATION(S)	ADEQUATE
Training Scope	Online Acceptance Code Update Presentation Slides (Confidential) Technician Handbook – REV02 (Confidential)	☒
Curricula	Online Acceptance Code Update Presentation Slides (Confidential) Technician Handbook – REV02 (Confidential)	☒
Hands-on training	Technician Handbook – REV02 (Confidential)	☒
Tests	Acceptance Testing Documents 2016 (Confidential) Technician Handbook – REV02 (Confidential)	☒

Source: California Energy Commission

CHAPTER 4: Staff Recommendations

Under Section 10-103-A(f)1 of the 2013 Standards, staff has completed its evaluation of the application amendments submitted by NLCAA in its 2016 update report, which was received in its entirety on July 6, 2016. Staff has determined that NLCAA's proposed 2016 training curricula adjustments and other application amendments comply with the requirements in Section 10-103.1(c)3 of the 2016 Standards. Staff recommends that the Energy Commission approve NLCAA's proposed 2016 ATT and ATE training curricula adjustments and 2016 recertification training curriculum, as well as NLCAA's request to conduct 2016 recertification training online.

APPENDIX A: GLOSSARY

ATTCP

Acceptance test technician certification provider

An agency, organization, or entity approved by the Energy Commission to train and certify acceptance test technicians and acceptance test employers.

ATT

Acceptance test technician

A field technician who is certified by an authorized acceptance test technician certification provider.

ATE

Acceptance test employer

A person or entity who employs an acceptance test technician and is certified by an authorized acceptance test technician certification provider.

NLCAA

National Lighting Contractors Association of America

A California nonprofit corporation that provides service, support, training, and certification to acceptance test technicians, and acceptance test contractors.

Institutional tuning

The process of adjusting the maximum light output of lighting systems to support visual needs or save energy. The control strategy is implemented at the institutional level and maximum light level adjustments are available only to authorized personnel.