State of California **California Natural Resources Agency**

M e m o r a n d u m

To: DREW BOHAN
Executive Director

Date: April 24, 2018

Telephone: (916) 654-5013

From: **Dave Ashuckian, Deputy Director**
California Energy Commission
Efficiency Division
1516 Ninth Street
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Subject: POSSIBLE APPROVAL OF THE CALIFORNIA STATE PIPE TRADES COUNCIL MECHANICAL SYSTEMS ACCEPTANCE TEST TECHNICIAN CERTIFICATION PROVIDER UPDATES FOR THE 2016 BUILDING ENERGY EFFICIENCY STANDARDS

Business Meeting: May 9, 2018
Project Manager: Joe Loyer, Existing Buildings and Compliance Office

Summary
Staff evaluated the California State Pipe Trades Council's (CSPTC) 2016 Update Report pursuant to Section 10-103.2(e) of the *2016 Building Energy Efficiency Standards* (Energy Standards) to add the 2016 Energy Standards to its existing Acceptance Test Technician Certification Provider (ATTCP) certification services. The CSPTC Update Report was submitted on January 10, 2017, and amended on March 7, 2018. Staff reviewed CSPTC's Update Report and determined that it meets the requirements of Section 10-103.2(c) of the 2016 Energy Standards and the quality assurance requirements of Section 10-103.2(c)3F of the proposed 2019 Energy Standards.

Commission Action Requested
Staff recommends that the California Energy Commission consider for approval the CSPTC quality assurance program as meeting the requirements of Section 10-103.2(c)3F of the proposed 2019 Energy Standards to be used in place of the requirements of Section 10-103.2(c)3F of the 2016 Energy Standards. Staff further recommends that the CSPTC Update Report be considered for approval to add the 2016 Energy Standards to its existing ATTCP certification services.

Executive Office Action Requested
Section 10-103.2(e) of the 2016 Energy Standards requires the Executive Director to issue a written recommendation that the Energy Commission designate the Update Report as approved or deny the Update Report.

Background

In accordance with Section 10-103.2(d)2 of the 2016 Energy Standards,[1] an ATTCP is required to report to the Energy Commission what adjustments have been made to the training curricula to address changes reflective of the variety of mechanical systems that are currently encountered in the field, changes to mechanical acceptance testing requirements, or adopted updates to the Energy Standards no less than six months prior to the effective date of any newly adopted Energy Standards.

The 2016 Energy Standards

Following the adoption of the 2016 Energy Standards, the mechanical ATTCPs raised several logistical problems to the quality assurance requirements in Section 10-103.2(c)3F, including on-site access and cost, that were not raised during the 2016 Energy Standards rulemaking. As a result, staff determined that the ATTCPs proposals did not comply with the requirements in Section 10-103.2(c)3F of the 2016 Energy Standards.

The proposed 2019 Energy Standards addressed the issues raised by the mechanical ATTCPs and allows for an on-site inspection rate equal to that required by the 2016 Energy Standards. CSPTC has also agreed that the proposed quality assurance requirements in Section 10-103.2(c)3F of the proposed 2019 Energy Standards are implementable. Therefore, staff recommends that the Energy Commission approve the ATTCP quality assurance programs that meet the requirements in Section 10-103.2(c)3F of the proposed 2019 Energy Standards as equivalent to complying with the Section 10-103.2(c)3F of the 2016 Energy Standards.

CSPTC Update Report

Staff evaluated the CSPTC Update Report which describes the proposed substantive adjustments to the quality assurance program and the nonsubstantive adjustments to the training curricula. Pursuant to Section 10-103.2(e), staff determined that the Update Report is complete and requires no additional information.

Staff determined that the substantive adjustment to CSPTC's quality assurance program complies with the requirements in Section 10-103.2(c)3F of the proposed 2019 Energy Standards. Staff further determined that the nonsubstantive adjustments to CSPTC’s training requirements comply with the requirements in Section 10-103.2(c) of the 2016 Energy Standards.

Pursuant to Section 10-103-B(f)2 of the 2013 Energy Standards, staff has published a report of the review and evaluation of CSPTC’s Update Report and posted it to the Energy Commission website with a notice of availability (sent via the Energy Commission’s listserv) on April 17, 2018, to give interested parties a reasonable amount of time to review and provide comments.

[1] *Building Energy Efficiency Standards*, California Code of Regulations, Title 24, Part 6, and associated administrative regulations in Part 1, Chapter 10.

STATE OF CALIFORNIA

Energy Resources Conservation And Development Commission

In the matter of,	)	
	)	EXECUTIVE DIRECTOR
California Energy Commission Decision on the	)	RECOMMENDATION TO
Application of the California State Pipe Trades	)	APPROVE THE CALIFORNIA
Council (CSPTC) to Certify	)	STATE PIPE TRADES COUNCIL
Nonresidential Mechanical Acceptance Test	)	AS A NONRESIDENTIAL
Technicians and Employers Pursuant to Section	)	MECHANICAL ACCEPTANCE
10-103.2 of the *2016 Building Energy Efficiency*	)	TEST TECHNICIAN
Standards	)	CERTIFICATION PROVIDER
	)	
	)	April 24, 2018

I. Executive Summary

California Energy Commission staff has reviewed the California State Pipe Trades Council's (CSPTC) 2016 Update Report pursuant to Section 10-103.2(e) of the *2016 Building Energy Efficiency Standards* (Energy Standards) to add the 2016 Energy Standards to its existing Acceptance Test Technician Certification Provider (ATTCP) certification services. The CSPTC Update Report was submitted on January 10, 2017, and amended on March 7, 2018.

Staff determined that CSPTC's Update Report meets the requirements of Section 10-103.2(c) of the 2016 Energy Standards and the quality assurance requirements of Section 10-103.2(c)3F of the proposed 2019 Energy Standards.

Staff recommends that the Energy Commission approve the CSPTC quality assurance program as meeting the proposed 2019 Energy Standards requirements in place of the 2016 Energy Standards requirements. Staff further recommends that the CSPTC Update Report be considered for approval to add the 2016 Energy Standards to its existing ATTCP certification services.

II. Background

Acceptance testing ensures that installed equipment, controls, and systems in nonresidential buildings operate as required by the Energy Standards. The ATTCP program was adopted under the 2013 Energy Standards and allows the Energy Commission to approve ATTCPs to provide training, certification, and oversight of acceptance test technicians (ATTs) who perform the required acceptance tests and the acceptance test employers (ATEs) that employ ATTs.

2016 Energy Standards

Following the adoption of the 2016 Energy Standards, the mechanical ATTCPs raised several logistical problems regarding the quality assurance requirements in Section 10-103.2(c)3F, including on-site access and costs, that were not raised during the 2016 Energy Standards

rulemaking. As a result, staff determined that the ATTCPs proposals did not comply with the requirements in Section 10-103.2(c)3F of the 2016 Energy Standards.

The proposed 2019 Energy Standards addressed the issues raised by the ATTCPs and allows for an on-site inspection rate equal to that required by the 2016 Energy Standards. CSPTC has also agreed that the proposed quality assurance requirements in Section 10-103.2(c)3F of the proposed 2019 Energy Standards are implementable. Therefore, staff recommends that the Energy Commission approve the ATTCP quality assurance programs that meet the requirements in Section 10-103.2(c)3F of the proposed 2019 Energy Standards as equivalent to complying with the Section 10-103.2(c)3F of the 2016 Energy Standards.

III. Summary of the Staff Report

Energy Commission staff reviewed the CSPTC 2016 Update Report as amended pursuant to Section 10-103.2(f)1 of the 2016 Energy Standards. Staff evaluated the proposed substantive adjustment to the quality assurance program and the nonsubstantive adjustments to the training curricula. Pursuant to Section 10-103.2(e), staff determined that the Update Report is complete and requires no additional information.

Staff determined that the substantive adjustment to CSPTC's quality assurance program meets the requirements in Section 10-103.2(c)3F of the proposed 2019 Energy Standards. Staff further determined that the nonsubstantive adjustments to CSPTC's training requirements meet the requirements in Section 10-103.2(c) of the 2016 Energy Standards.

Pursuant to Section 10-103-B(f)2 of the 2013 Energy Standards, staff has published a staff report of the review and evaluation of CSPTC's Update Report and posted it to the Energy Commission website with a notice of availability (sent via the Energy Commission's listserv) on April 17, 2018, to give interested parties a reasonable amount of time to review and provide comments.

III. Recommendation of the Executive Officer

Based upon staff's review and verification of the CSPTC Update Report, I recommend that the Energy Commission approve the CSPTC quality assurance program as compliant with the proposed 2019 Energy Standards requirements in place of the 2016 Energy Standards requirements. I further recommend that the Energy Commission confirm these findings and approve CSPTC's Update Report.

This approval authorizes CSPTC to administer the program described in its application as amended by the Update Report, to train, certify, and provide necessary oversight for ATTs and ATEs to perform the Nonresidential Mechanical Acceptance Tests, as required under the 2016 Energy Standards.

Signature on file _____ _____

DREW BOHAN Date
Executive Director
California Energy Commission

California Energy Commission

STAFF REPORT

Mechanical Acceptance Test Technician Certification Provider 2016 Updates Review: California State Pipe Trades Council

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

California Energy Commission

Edmund G. Brown Jr., Governor

April 2018 | CEC-400-2018-XXX

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ABSTRACT

Per the requirements in Section 10-103.2(d) of the *2016 Building Energy Efficiency Standards*, acceptance test technician certification providers must report to the California Energy Commission what adjustments have been made to the training curricula, if any, to address adopted updates to the Energy Standards. The Energy Commission adopted the *2016 Building Energy Efficiency Standards* on November 12, 2015, which went into effect on January 1, 2017. Energy Commission staff notified the California State Pipe Trades Council on February 12, 2016, that it must develop a report of the adjustments that it will make to its training curricula and application to address the new and modified requirements in the *2016 Building Energy Efficiency Standards.* The California State Pipe Trades Council submitted its update report on January 10, 2017, and an amendment to the update report on March 7, 2018. Staff determined that California State Pipe Trades Council's amended 2016 update report was complete on March 12, 2018.

Staff evaluated the training curricula adjustments and other application amendments that the California State Pipe Trades Council submitted in its amended 2016 update report. Staff determined the proposed training updates and other application amendments the California State Pipe Trades Council submitted meet the requirements of Section 10-103.2(c) of the 2016 Energy Standards. Staff recommends approval of the California State Pipe Trades Council's 2016 training curricula adjustments and other application amendments.

Keywords: Nonresidential Mechanical Acceptance Test Technician Certification Provider, California State Pipe Trades Council, Mechanical Systems, Acceptance Testing, Building Energy Efficiency Standards.

Please use the following citation for this report:

Loyer, Joe. April 2018. *Mechanical Acceptance Test Technician Certification Provider 2016 Updates Review: California State Pipe Trades Council.* California Energy Commission. Publication Number: CEC-400-2018-XXX.

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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 the 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 the 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 *Building Energy Efficiency Standards*.

Per Section 10-103.2(d) of the *2016 Building Energy Efficiency Standards*, providers are required to report to the California Energy Commission what adjustments have been made to training curricula to address changes to acceptance testing requirements or adopted updates to the *Building Energy Efficiency Standards*. This update report should be submitted no less than six months before the effective date of any newly adopted *Building Energy Efficiency 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 if their previously approved application does not comply with the new or modified requirements. The training curricula adjustments and any other application amendments shall be reviewed by the Energy Commission according to the criteria in Section 10-103.2(f), to determine if providers satisfy the requirements under the *Building Energy Efficiency Standards*. The Energy Commission adopted the *2016 Building Energy Efficiency Standards* on November 12, 2015, which went into effect on January 1, 2017.

The Energy Commission approved the California State Pipe Trades Council as a nonresidential mechanical acceptance test technician certification provider on August 10, 2016. Energy Commission staff notified the California State Pipe Trades Council on February 12, 2016, that it must develop a 2016 update report with the adjustments that it will make to its training curricula and application to address the new and modified requirements in the *2016 Building Energy Efficiency Standards*. The California State Pipe Trades Council submitted its 2016 update report to the Energy Commission for review on January 10, 2017, and submitted an amended version on March 7, 2018. The Energy Commission agreed that for the 2016 Energy Standards code cycle, approved mechanical acceptance test technician certification providers could meet the proposed 2019 quality assurance requirements instead of the 2016 requirements. Energy Commission staff reviewed the amended 2016 update report and found that the 2016 training curriculum adjustments and other application amendments submitted meet the requirements of Section 10-103.2(c)3 of the *2016 Building Energy Efficiency 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* (Energy 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 Energy Standards. The ATTCP Program was developed to improve compliance with lighting controls and mechanical acceptance test requirements.

Requirements for 2016 Update Report

In accordance with Section 10-103.2(d) of the 2016 Energy Standards (codified in Title 24, Part 6, of the California Code of Regulations), mechanical ATTCPs are required to report to the Energy Commission what adjustments have been made to the training curricula to address changes to mechanical system acceptance testing requirements or adopted updates to the Energy Standards. The reports must be submitted no less than six months prior to the effective date of any newly adopted Energy Standards and shall contain a signed certification that the ATTCP 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 Energy Standards, if their approved 2013 application does not comply with the requirements for ATTCPs in the 2016 Energy Standards.

Update reports submitted by mechanical ATTCPs are considered application amendments. According to Section 10-103.2(f)2 of the 2016 Energy Standards, amendments that contain any substantive changes shall be subject to the application review and determination process specified in Section 10-103.2(e). As such, staff will evaluate the training curricula adjustments and other application amendments contained within 2016 update reports to determine if an ATTCP's training, certification, and oversight services comply with the criteria and procedures set forth in Section 10-103.2(c)3 of the 2016 Energy Standards.

Quality Assurance Requirements for the 2016 Code Cycle

The 2016 Energy Standards added a quality assurance requirement for ATTCPs to review a minimum sample size of completed acceptance forms and tests to ensure consistent compliance.

While this minimum level of quality assurance was already being met (if not exceeded) for sampling of acceptance forms, the mechanical ATTCPs indicated they would be unable to meet the minimum sampling level of acceptance tests. As a result, Energy Commission staff entered into discussions with the ATTCPs regarding a revision to the quality assurance regulations in Section 10-103.2(c)3F for mechanical ATTCPs and proposed changes for the 2019 Energy Standards.[1] The Energy Commission agreed that for the 2016 Energy Standards code cycle, approved mechanical ATTCPs could meet the proposed 2019 quality assurance requirements instead of the 2016 requirements.

California State Pipe Trades Council

The Energy Commission adopted the 2016 Energy Standards on November 12, 2015, which went into effect on January 1, 2017. Energy Commission staff notified California State Pipe Trades Council (CSPTC) on February 12, 2016 that it must develop a 2016 update report with the adjustments that it would make to its training curricula and application to address the new and modified requirements in the 2016 Energy Standards. CSPTC submitted its 2016 update report to the Energy Commission for review on January 10, 2017. However, concerns regarding the quality assurance program initially proposed by CSPTC were raised and the program was found to be noncompliant. Following quality assurance discussions for the 2019 Energy Standards and the decision that mechanical ATTCPs would be permitted to comply with the 2019 quality assurance requirements for the 2016 code cycle, CSPTC submitted an amended 2016 update report on March 7, 2018.

Energy Commission staff determined that CSPTC's 2016 update report was complete on March 12, 2018. Staff reviewed CSPTC's 2016 update report according to the review and determination process specified in Section 10-103.2(e) of the 2016 Energy Standards. Staff found that CSPTC's proposed quality assurance measures comply with Section 10-103.2(c)3F of the 2019 Energy Standards and the rest of CSPTC's application amendments proposed in its 2016 update report comply with the requirements in Section 10-103.2(c) of the 2016 Energy Standards.

1 See Appendix B: Excerpt of the Quality Assurance Requirements for the 2019 Energy Standards.

CHAPTER 2:
ATTCP 2016 Update Report Evaluation

Staff identified the changes from 2013 to 2016 for mechanical systems acceptance testing to help ease the mechanical ATTCPs' transition to the 2016 Energy Standards. Staff identified two main categories of regulatory changes as defined by Section 10-103.2(f)1: substantive and nonsubstantive changes.

The first section of this chapter discusses the regulatory changes that staff deemed to be substantive based on the associated effect on ATTCPs at the organizational level: the modified quality assurance requirements in Section 10-103.2(c)3F of the 2016 Energy Standards. The second section of this chapter discusses changes that staff deemed to be nonsubstantive because they do not significantly alter the requirements of the application materials for the ATTCPs, ATTs or ATEs.

Substantive Regulatory Changes

Quality Assurance - Title 24, Part 1, Section 10-103.2(c)3F

The ATTCP shall describe in their application to the Energy Commission how their certification business practices include quality assurance and accountability measures, including, but not limited to, 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 the Energy Standards.

The ATTCP shall review a random sample of no less than 1 percent of each technician's completed compliance forms (desk audit) and shall perform randomly selected on-site shadow audits of no less than 1 percent of each employer's overseen projects, following the assigned technician observing the performance on the job site (on-site audit).

Independent oversight may be demonstrated by accreditation under the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC) 17024 standard.

Summary of Compliance Method for ATTCP

Compliance With the Desk Audit Requirement

In an agreement with ESCO Group, CSPTC will implement quality assurance measures for the percentage of on-site audits to satisfy the requirement for random sampling of each technician's completed acceptance tests: no less than 1 percent of each ATT's completed compliance documents and no less than 1 percent of each ATT's completed acceptance tests. Each ATT will also be subject to a random audit rate of 5 percent of its completed mechanical acceptance tests or

five compliance documents, whichever is greater. CSPTC requires all of its certified ATEs to enter and submit all completed acceptance compliance documents into the ESCO Group nonresidential mechanical data registry. The registry uses algorithms within each compliance document to check 100 percent of submitted compliance documents for inaccuracies and anomalies. Any anomalous findings or exact replication of results will be examined and, in most cases, initiate field verification and more frequent audits of the involved personnel. Notifications will be sent to CSPTC if any compliance documents are identified as atypical.

If an audit reveals suspicious activity that requires more than a desk audit, auditors reserve the right to follow up with a site visit to investigate the deficiencies. Auditors employed by ESCO Group will have a minimum of five years of field experience working on the specific compliance documents that they are assigned to audit.

Compliance With the On-Site Audit Requirement

CSPTC has contracted with ESCO Group to provide independent, third-party onsite audit services. ESCO Group will perform onsite audits of no less than 1 percent of each ATE's calendar year projects. Whenever feasible, onsite audits will be performed across multiple projects at various building-sites and include ATTs employed by the ATE. Onsite audits will be performed on or before each ATE's fiftieth project within a calendar year.

The independent quality assurance provider (IQAP) will submit a report to the Energy Commission no later than January 31 of each year. The report shall contain a list of ATEs that did not receive an onsite audit during the previous calendar year. The IQAP will make a good faith effort to audit all ATEs listed in the annual unaudited ATE report on a priority basis (as early in the calendar year as possible).

The IQAP will perform onsite audits using the "job shadow" method conducted by trained and credentialed quality assurance inspectors (QAI).

The ATTCP will record and make available to the Energy Commission all remedial actions resulting from an audit. This record will include, but shall not be limited to, remediation and/or discipline actions such as retraining, suspension, or revocation of an ATE's or ATT's certification.

Notification of Audit Results

Based on the audit results, the ATTCP shall notify the ATE, and the ATT by email of what, if any, remedial actions are required.

The ATTCP will take the following actions upon receipt of a quality assurance report from the IQAP.

- Minor infraction: warning issued (ATE and ATT)
- First failure: targeted retraining and retesting (ATE or ATT)
- Second failure: decertification (ATE or ATT) with the option to restore certification with the successful completion of the full training and testing requirements.

The ATTCP will maintain a record of all remedial actions for any ATE or ATT for no less than five years and will submit a descriptive report annually (and periodically by request) to the Energy Commission of all quality assurance activities with the assistance of ESCO Group.

Staff Assessment

Staff reviewed CSPTC's amended application regarding the proposed quality assurance program.[2] The proposed program includes 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 the Energy Standards. CSPTC will review 100 percent of each ATT's completed compliance forms electronically and will perform randomly selected on-site audits of no less than 1 percent of each ATE's overseen projects. Staff determined that CSPTC's proposed quality assurance program complies with the requirements in Section 10-103.2(c)3F of the proposed 2019 Energy Standards.[3] A summary of compliance to Section 10-103.2(c)3F is provided in Table 13.

Nonsubstantive Regulatory Changes

Minor Changes to Title 24, Part 6

The updates to the 2016 Energy Standards in Part 6 are considered "minor" because they do not require an ATTCP to substantively alter its approved application. While any changes to the mechanical systems acceptance testing requirements, substantive or not, will require an ATTCP to adjust its training curricula, the minor updates do not require substantive training adjustments—-such as entirely new laboratory components or lectures. Instead, the minor 2016 updates build upon the requirements in the 2013 Energy Standards. Therefore, the ATTCP must simply demonstrate its training includes the minor updates to comply with the ATT curricula requirements in Section 10-103.2(c)3B(i) and the ATE training requirements in Section 10-103.2(c)3C.

In compliance with the 2016 Energy Standards, the ATTCP must demonstrate that its recertification training includes the minor updates. The recertification requirements for minor updates do not include tests or hands-on training, though staff encourages ATTCPs to incorporate those elements where appropriate and possible.

Summary of Compliance Method for ATTCP

CSPTC developed a webinar that each certified ATT and ATE must attend to recertify. The training for ATTs and ATEs is relatively unchanged from the 2013 Energy Standards. The webinar would familiarize ATTs and ATEs with the changes to the 2016 Energy Standards and, in particular, any changes to the *Nonresidential Compliance Manual* and the mandated mechanical acceptance tests. All ATTs and ATEs will have to complete their respective 2016 recertification

2 CSPTC Application Amendment. Amendment to the CSPTC ATTCP Application, March 6, 2018, KAM Associates. Docket 13-ATTCP-01 TN#: 222901.
3 See Attachment B: Excerpt of the Quality Assurance Requirements for the 2019 Energy Standards.

statements, which serves as a signed affidavit, stating that they have attended the webinar and that their respective qualifications have not changed. If the ATTs and ATEs fail to do so, it will result in decertification. All the test materials for this training are confidential; therefore, staff's evaluation of its compliance is available only in this public document.

Staff Assessment

Staff evaluated CSPTC's submitted recertification materials for the 2016 Energy Standards. Staff has determined that CSPTC's 2016 recertification training satisfies the requirements in Section 10-103.2(c)3B(i) of the 2016 Energy Standards for ATTs and in Section 10-103.2(c)3C of the 2016 Energy Standards for ATEs. Staff has also determined that CSPTC's 2016 recertification training satisfies the requirements in Section 10-103.2(c)3B(vi) of the 2016 Energy Standards for recertification. A summary of CSPTC's compliance with Sections 10-103.2(c)3B(i), 10-103.2(c)3B(ii), and 10-103.2(c)3C of the 2016 Energy Standards are provided in Table 1.

Table 1: Summary of ATTCP Compliance With Minor Title 24, Part 6 2016 Updates

SECTION	UPDATE	ATTCP APPLICATION AMENDMENT LOCATION(S)	ADEQUATE
110.2	Updates to Tables 110.2-A through 110.2-K to align them with minimum efficiency requirements in ASHRAE 90.1	TN213523-2 California 2016 Building Energy Efficiency Standards for Nonresidential Buildings – Slides 9-12	☒
120.2(i)	Corrects "greater than or equal to" to "greater than" for consistency with ASHRAE 90.1	TN213523-2 California 2016 Building Energy Efficiency Standards for Nonresidential Buildings – Slide 14	☒
120.2(j)	Adds section specifying digital direct controls (DDC) applications and qualifications	TN213523-2 California 2016 Building Energy Efficiency Standards for Nonresidential Buildings – Slide 15	☒
120.2(k)	Revises the requirements for space conditioning systems with DDC to the zone level	TN213523-2 California 2016 Building Energy Efficiency Standards for Nonresidential Buildings – Slide 15	☒
140.4(n)	Adds control requirements when interlocks for doors and windows are present	TN213523-2 California 2016 Building Energy Efficiency Standards for Nonresidential Buildings – Slide 16	☒

SECTION	UPDATE	ATTCP APPLICATION AMENDMENT LOCATION(S)	ADEQUATE
NA7.5.11.2.4	Removes functional testing for refrigerant diagnostic sensors	TN213523-2 California 2016 Building Energy Efficiency Standards for Nonresidential Buildings – Slides 34-37	☒

Source: California Energy Commission

CHAPTER 3:
Staff Recommendations

Under Section 10-103.2(f)2 of the 2016 Energy Standards, staff completed its evaluation of the application amendments CSPTC reported in its amended 2016 update report on March 12, 2018. Staff has found that CSPTC's proposed 2016 training curricula adjustments and other application amendments comply with the ATTCP requirements in Section 10-103.2(c)3 of the 2016 Energy Standards. Staff advises that CSPTC incorporate these updates into the existing training curricula to complete the 2016 certification training for technicians applying for the first time. Staff recommends that the Energy Commission approve CSPTC's proposed 2016 ATT and ATE training curricula adjustments, 2016 recertification training curriculum, and proposed quality assurance program modifications.

APPENDIX A: Glossary

ASHRAE American Society of Heating, Refrigeration, and Air Conditioning Engineers	Founded in 1894, ASHRAE is a global society focused on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. It serves as a source of technical standards and guidelines.
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 certified by an authorized acceptance test technician certification provider.
ATE Acceptance test employer	A person, or entity, that employs an acceptance test technician and is certified by an authorized acceptance test technician certification provider.
DDC Digital direct controls	Automated controls of a condition or process by a digital device (computer). DDC is often used to control the HVAC devices such as valves via microprocessors using software to perform the control logic.
CSPTC California State Pipe Trades Council	A labor union representing plumbers, pipefitters, and heating, ventilation, air conditioning, and refrigeration service technicians.
Energy Standards Building Energy Efficiency Standards	State regulations contained in Title 24, Parts 1 and 6 of the California Code of Regulations.

APPENDIX B:
Excerpt of the Quality Assurance Requirements for the 2019 Energy Standards

EXCERPT FROM PROPOSED 2019 BUILDING ENERGY EFFICIENCY STANDARDS

Title 24, Part 1, Section 10-103.2(c)3F

F. Quality Assurance and Accountability. The ATTCP shall describe in its applications to the Energy Commission procedures for conducting quality assurance and accountability activities, including but not limited to the following:

(i) The ATTCPs shall ~~describe in their applications to the Energy Commission how their certification business practices~~ include quality assurance and accountability measures, including but not limited to independent oversight of the certification materials, processes and procedures, visits to building sites where certified technicians are completing acceptance tests, certification process evaluations, building department surveys to determine acceptance testing effectiveness, and expert review of the training curricula developed for Building Energy Efficiency Standards, Section 120.5.

(ii) The ATTCP shall review a random sample of no less than 1 percent of each ~~Technician's~~ ATT'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~~. The ATTCP shall also randomly select and shadow audit no less than 1 percent of each ATE's overseen projects, following the assigned ATT and observing their performance on the job site. Independent oversight may be demonstrated by accreditation under the ISO/IEC 17024 standard.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

2016 Building Energy Efficiency Standards, California Code of Regulations, Title 24, Parts 1 and 6	**Docket No. 13-ATTCP-01** **Resolution No. 18-0509-03**

[PROPOSED] RESOLUTION OF THE ENERGY COMMISSION APPROVING THE CALIFORNIA STATE PIPE TRADES COUNCIL'S PROPOSED MECHANICAL ACCEPTANCE TEST TECHNICIAN CERTIFICATION PROVIDER UPDATES FOR THE 2016 BUILDING ENERGY EFFICIENCY STANDARDS CODE CYCLE

WHEREAS, section 10-103.2(d) of the *2016 Building Energy Efficiency Standards* (Energy Standards) requires Mechanical Acceptance Test Technician Certification Providers (ATTCPs) to report to the Energy Commission what adjustments have been made to the training curricula to address changes reflective of the variety of mechanical systems that are currently encountered in the field, changes to mechanical acceptance testing requirements, or adopted updates to the Energy Standards no less than six months prior to the effective date of any newly adopted Energy Standards; and

WHEREAS, the *2016 Building Energy Efficiency Standards*, California Code of Regulations, Title 24, Part 6, and associated administrative regulations in Part 1, Chapter 10, went into effect on January 1, 2017; and

WHEREAS, the California State Pipe Trades Council (CSPTC) submitted the update report required by section 10-103.2(d) of the *2016 Building Energy Efficiency Standards* ("Update Report") to the Energy Commission; and

WHEREAS, CSPTC proposes to meet the quality assurance requirements of Section 10-103.2(c)3F of the proposed 2019 Energy Standards, that these requirements are equally as stringent as the requirements of the 2016 Energy Standards, and that these requirements resolve logistical issues raised by the 2016 Energy Standards; and

WHEREAS, Energy Commission staff reviewed CSPTC's Update Report and determined that CSPTC's training curricula adjustments met the requirements in section 10-103.2(c) of the *2016 Building Energy Efficiency Standards*; and

WHEREAS, the Executive Director of the Energy Commission provided a written recommendation, attached hereto as "Exhibit A," describing the review and validation of

CSPTC's Update Report by Energy Commission staff and recommending approval of CSPTC's training curricula adjustments and application amendments; and

WHEREAS, the Energy Commission has considered the Executive Director's recommendation, all written comments submitted, oral comments made at today's Business Meeting, and Energy Commission staff's responses to all comments on this matter.

THEREFORE BE IT RESOLVED, that the Energy Commission finds that the CSPTC's proposed training curricula adjustments and application amendments meet the requirements in section 10-103.2(c) of the *2016 Building Energy Efficiency Standards*; and

THEREFORE BE IT FURTHER RESOLVED, that demonstrating compliance with the quality assurance requirements of Section 10-103.2(c)3F of the proposed 2019 Energy Standards is sufficient to demonstrate compliance with Section 10-103.2(c)3F of the 2016 Energy Standards; and

BE IT FURTHER RESOLVED, that the Energy Commission confirms the Executive Director's findings, adopts his recommendation, and approves CSPTC's proposed training curricula adjustments and application amendments as described in CSPTC's Update Report.

Date: May 9, 2018

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on May 9, 2018.

AYE:
NAY:
ABSENT:
ABSTAIN:

_____

Cody Goldthrite
Secretariat
California Energy Commission

Exhibit A