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Acceptance Testing Enforcement

Lighting Controls and Mechanical Systems in Nonresidential Buildings

Presenter: Joe Loyer, Senior Mechanical Engineer
Date: TBD

Agenda

- Introduction
- Acceptance Testing and the ATTCP
- Builders and Contractors
- Authorities Having Jurisdiction
- Questions and Answers

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In this presentation we will go over the introduction to help get everyone on the same page.
We will then discuss some background regarding acceptance testing in general and the ATTCP.
We will discuss the tools the builders and contractors to demonstrate compliance with the Energy Code.
Finally, we will discuss the tools for the AHJ to enforce the Energy Code using the ATTCP program.

Acronyms Used

ATTCP	Acceptance Test Technician Certification Provider
ATT	Acceptance Test Technician
ATE	Acceptance Test Employer
AHJ	Authority Having Jurisdiction
CEC	California Energy Commission
NRCC	Nonresidential Certificate of Compliance
NRCI	Nonresidential Certificate of Installation
NRCA	Nonresidential Certificate of Acceptance

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These are eight (8) of the main acronyms that are used in this presentation. While we are introducing these acronyms here, we will be discussing them in more detail later in the presentation.

ATTCP stands for Acceptance Test Technician Certification Provider
There are six (6) ATTCPs
They are approved by the CEC
They provide training, certification, and oversight for the ATTs and ATEs.

ATT stands for Acceptance Test Technician
This is the person that performs the acceptance test required in the Energy Code (Sections 130.4 and 120.5).
They can also be the installing technician. They are not required to be an independent 3rd party.

ATE stands for Acceptance Test Employer
This is the person that is responsible to ensure that the ATT performs the acceptance test and completes the required compliance documentation (Section 10-103).

The ATT and the ATE can be the same person.

AHJ stands for Authority Having Jurisdiction
Generally, this refers to the local building department, but may also refer to other state or federal agencies.
For example, the Division of the State Architect is the AHJ for California Schools.

CEC stands for the California Energy Commission

NRCC, NRCI, and NRCA are the compliance documentation required by the Energy Code throughout the various stages of construction.

NRCC stands for Nonresidential Certificate of Compliance and is the documentation that must accompany the application for a construction permit to an AHJ. It is approved (or denied) the AHJ with all the other application documentation.

NRCI stands for Nonresidential Certificate of Installation. The NRCIs are completed by the installing technician and are meant to be a convenient means for the AHJ Inspector to verify that the installed equipment is consistent with the NRCC documentation or that the NRCC has been updated. It should be noted that the NRCIs are undergoing a significant revision at this time.

NRCA stand for the Nonresidential Certificate of Acceptance. This is the test of the installed equipment (or feature in some cases). There are four main trades in acceptance testing, Envelope, Mechanical, Lighting, and Covered Processes.

This presentation will be concerned with the Mechanical and Lighting Controls acceptance testing.

Be prepared to answer questions comparing the HERS program to the ATTCP program.

Introduction

Learning Goals

Understand the ATTCP Program

Builders and contractors

- ATTCP program to demonstrate code compliance
- Secure an ATT certification
- Engineer or architect can rely on program

Authorities Having Jurisdiction

- ATTCP program to enforce Energy Code
- Inspectors can rely on efficacy of program
- Other checks for inspectors to use

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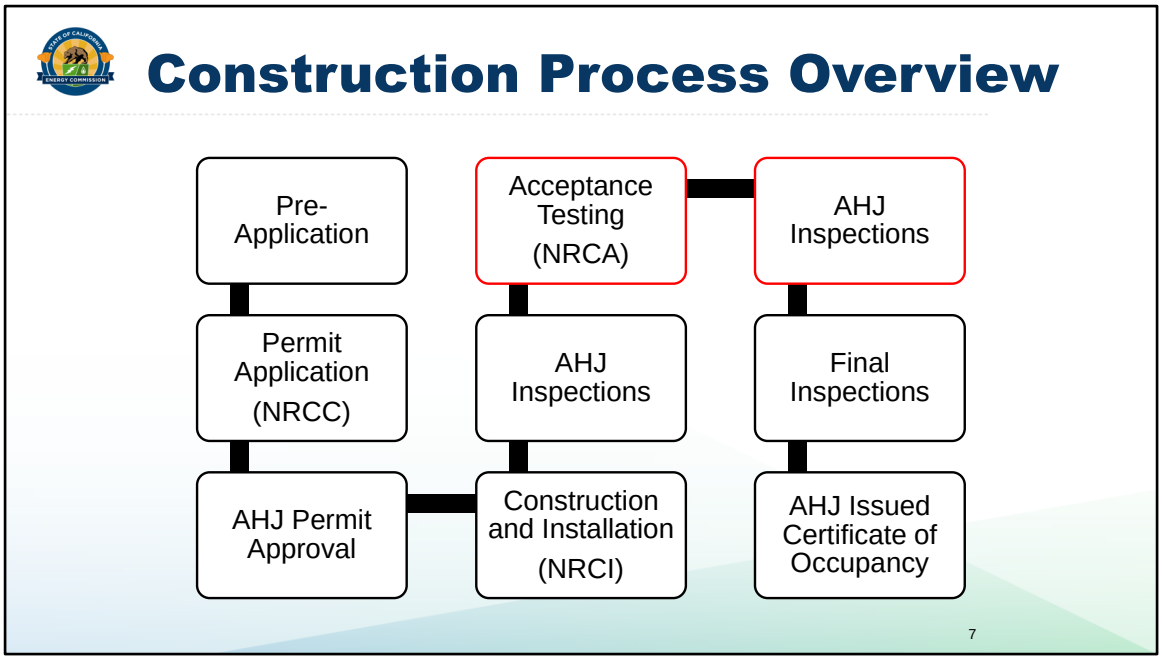
Builders and Contractors and AHJs have always had a difficult relationship. There are many complaints on both sides.

The ATTCP program was originally developed to create a means for the AHJ to enforce the Energy Code requirements.
It does this by admitting that the contractor and builder do not know how to demonstrate compliance.
So, the first responsibility is to training and certify the builder and contractor on how to comply with the Energy Code.
The second responsibility is to train the AHJ on how to enforce the ATTCP program without additional undue burden.

Acceptance Test Technicians perform required tests for lighting controls and mechanical systems in nonresidential buildings. The California Energy Commission's approved Acceptance Test Technician Certification Providers (ATTCP) train, certify, and oversee the technicians and their employers.



This is a representation of the Construction Process – I don't need to say that this is idealized.

The pre-application process is a long process.
This include securing the project site, providing initial designs, checking with zoning, producing detailed designs, and compliance documentation.
Many project end in the pre-application phase for a variety or reasons.

The Permit Application is required to include the NRCCs.
There are 10 NRCCs possible, which are generally broken down by trades.
The Energy Commission now provide Dynamic forms for all 10 NRCCs that generally guide the builder or contractor that are required to complete the forms.
The NRCCs are submitted to the AHJ for approval. Our advice to the AHJs is to review these NRCCs to make sure that they are consistent with the other permit application documents.
The NRCC for mechanical (NRCC-MCH-E) and lighting controls (NRCC-LTI-E, NRCC-LTO-E) include a table at the end of the form indicating what acceptance tests are required for the construction project.

Once the AHJ approves the application, they are also approving the NRCC. The AHJ approved NRCC is important for the inspector and the ATT at acceptance testing, because it includes the acceptance tests that are required for the project.

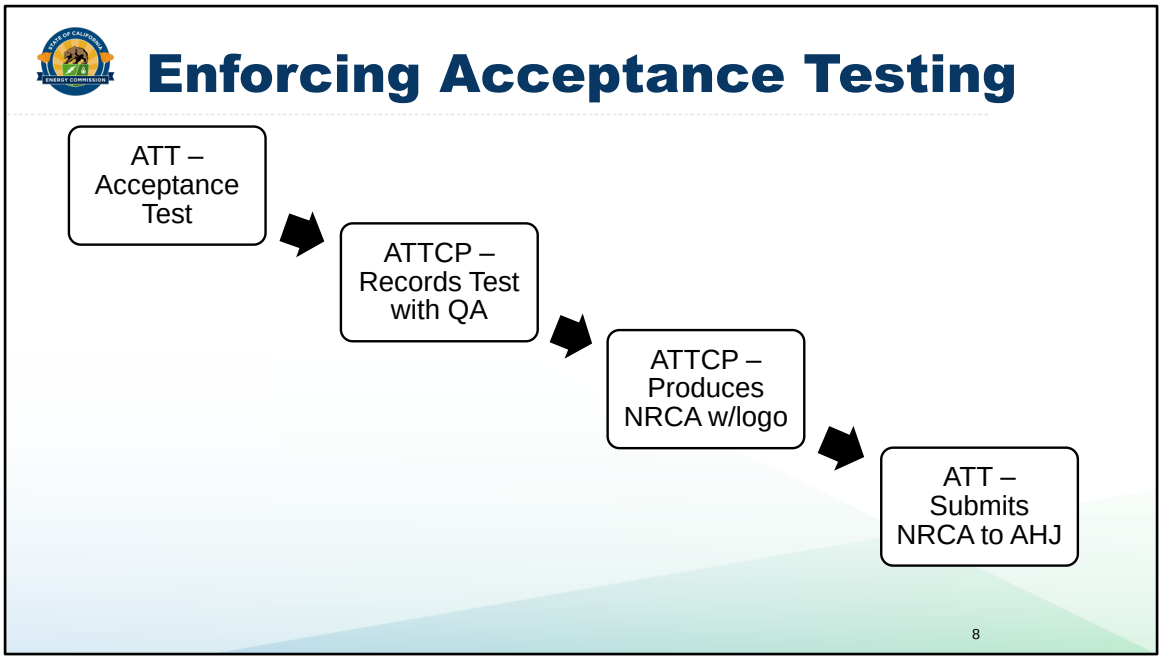
Construction may begin once the builder or contractor has the Permit to Construct.
The normal inspection from the AHJ will occur as required, but the building or contractor is required to ensure that the installing technician completes the NRCI and that it is consistent with the NRCC. While there are often change orders, in many cases these do not affect the NRCC, but is the cases where they do, the builder or contractor is responsible for updating the NRCC and getting it approved by the AHJ.

Acceptance testing may be required for envelope, lighting, mechanical, and covered processes.
For lighting controls and mechanical (the most typical tenant improvements), the acceptance test must be performed by an ATT.
All acceptance tests have an NRCA form that is completed by the installing technician and submitted to the AHJ.

The AHJ can require that the acceptance test be performed in front of them.

Final inspection and the issuance of the Certificate of Occupancy proceed as they normally do for any jurisdiction.

For the most part, the construction process is not changed from what is required and is typical practice now.
The changes will be during the acceptance testing and AHJ inspection for lighting controls and mechanical systems.



ATT perform and document the acceptance test for the AHJ approval.
The ATT will perform the required acceptance test as indicated on the NRCC and as specified in the Energy Code.

- So, the ATT must have access to an AHJ approved NRCC and the NRCI.

The ATT will submit the complete acceptance test results to the ATTCP.
The ATTCP performs up to three levels of quality assurance checks on the ATT acceptance tests:

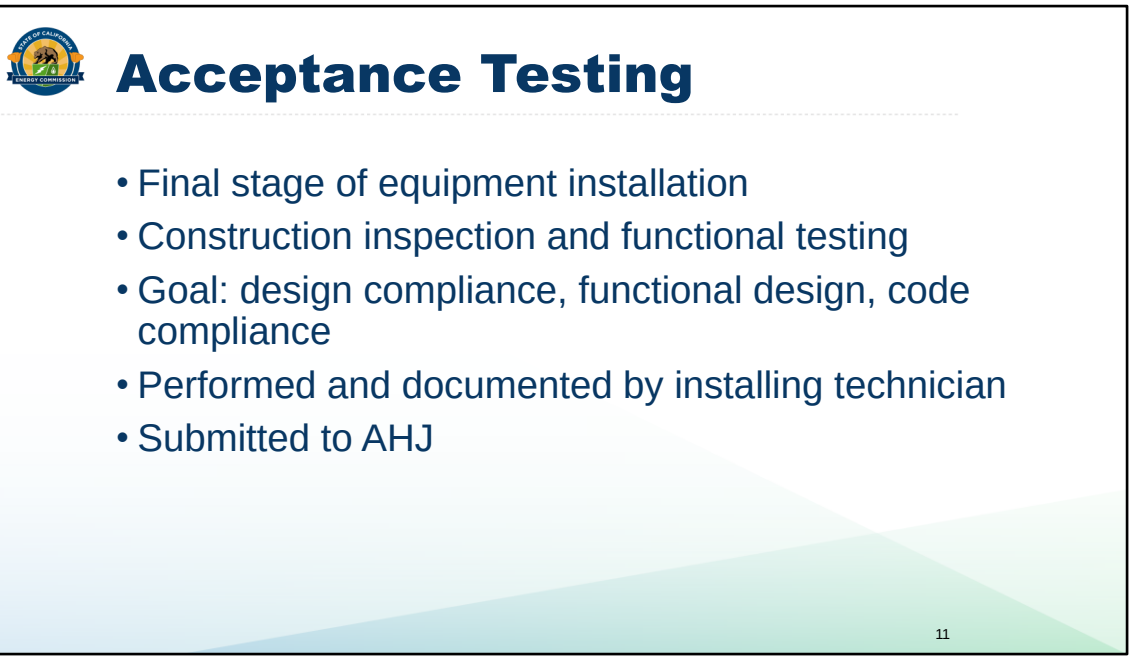
- First level: the data entered in the system
- Second level: paper/desk audit
- Third level: on-site audit

Most AHJ are not familiar with QA – be prepared to provide more details if asked

The ATTCP will issue a PDF of the completed acceptance test to the ATT, who will submit it to the AHJ for approval.
The PDF will carry the ATTCP logo and other markings to indicate authenticity.
The AHJ Inspector is only required to receive a valid NRCA.
- The Inspector can verify that the NRCA is valid or go even further, all the way to requiring that the ATT perform the acceptance test in front of them.

Installing technicians are required to be certified acceptance test technicians to perform the Energy Code required acceptance tests for lighting controls as of July 2014.
However, technicians were only recently required to be certified ATTs to perform the acceptance tests for mechanical system by the Energy Commission (April 14, 2021).
In that decision, the Energy Commission recommends that the AHJ not enforce the mechanical ATT certification requirement until October 1, 2021.
The Energy Commission recommends that the ATT certification requirement apply to project permitted on or after October 1, 2021.

Acceptance Testing and the ATTCP



Required since the 2005 Energy Code cycle
Acceptance testing is required now, but compliance and enforcement have not been consistent.

Final stage of equipment installation
At this stage, the equipment has been installed and is sometimes inspected by the AHJ.
The technician then performs the acceptance test as prescribed by the Energy Code.

Construction inspection and functional testing
Each acceptance test includes a construction inspection prior to the functional test.
The construction inspection includes verification that the design documents are available to the technician and that the device or construction element is in place and ready to be tested.

Functional testing is a step-by-step instruction for actively testing the installation and is prescribed in Code.

Typically, testing control systems is a simple mater of verifying that the controls respond appropriately.

Goal: design compliance, functional, and code compliance
The goal of acceptance testing is three-fold:
First, verify that the installation is compliant with the approved design.
This is where the ATT must review the nonresidential certificate of compliance (NRCC) that the project applicant submitted to the AHJ for approval.
When the AHJ approved the permit application, the NRCCs are approved as well and represent compliance with the Energy Code.
So, the ATT must first verify that the installation was installed to design requirements.

Secondly, the installation must be functional.
The goal is that the installation must function appropriately and meet the requirements of the design.
For mechanical installations this means passing the inspection and functional testing typically delivering the minimum air required in the NRCC.

Thirdly, the installation must be tested in accordance with the functional testing requires in the Energy Code.
The installation can be additionally tested to manufacturer requirements but must be test in accordance with the code.

Performed and documented by the installing technician
Acceptance testing has always been the responsibility of the installing technician.
However, it is permissible to use a third-party.

The acceptance is signed by the technician and the responsible person.
The responsible person is typically an engineer, architect, general contractor, or project owner.

Submitted to the authority having jurisdiction (or AHJ)
The "responsible person" is responsible for making the acceptance test compliance document (NRCA) available to the AHJ.
However, this can be delegated to the technician as well.

Acceptance Test Technician Certification Provider (ATTCP) Program
Established in the 2013 Energy Code

The purpose of the program is to improve acceptance testing compliance
Limited to lighting controls and mechanical systems
Does not include Envelope or Covered Processes (See Energy Code Sections 120.5 and 130.4)

Private organizations approved by the CEC
There are 6 total ATTCPs, 2-lighting controls and 4-mechanical

Train, certify, and provide oversight for Acceptance Test Technicians and Employers (ATTs/ATEs)
The oversight includes a significant quality assurance program that each ATTCP is responsible for performing.
It includes 3-levels of QA:
First level: the data entered in the system
Second level: paper/desk audit

Third level: on-site audit

Internal database forms tracking system
This is tied to the QA and allows the ATTCP to enforce the requirements
Only ATTs are allowed access to the database to complete the NRCA documents
Once completed, these NRCAs are issued from the ATTCP with its watermark and logo to aid in enforcement by the AHJs

ATTCP Responsibilities

- Train and certify ATTs and ATEs
- Quality Assurance Program
- Complaints Process
- Generate NRCA Compliance Documents

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Compliance training for Technicians & Employers

Employer Training

4-hour classroom training

Overview of what the technician is required to do

Technicians Training

Minimum 3-years of experience

Both classroom and laboratory trained

Written and Laboratory Certification Exams

ATTCP Quality Assurance Program

Acceptance test results are screened as they are entered

1% - 3% of completed acceptance tests are reviewed

ATTCP performs an on-site inspection on 1% of acceptance tests for each ATT

Complaints Process

The ATTCP takes all complaints through a review and authentication process approved by the California Energy Commission.

At the end of the year, all complaints are reviewed by the Energy Commission and posted on our website.

Lighting Controls ATTCPs

Approved by CEC

- National Lighting Contractors Association of America (NLCAA)
- California Advanced Lighting Controls Training Program (CALCTP)

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Read the slide

Mechanical Systems ATTCPs

Approved by CEC

- California State Pipe Trades Council (CSPTC)
- National Energy Management Institute Committee (NEMIC)
- National Environmental Balancing Bureau (NEBB)
- Refrigeration Service Engineers Society (RSES)

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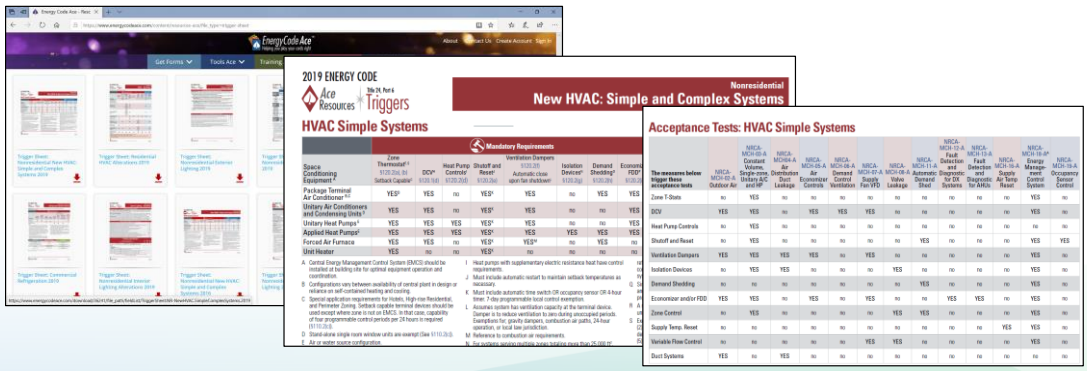
Builders and Contractors

Triggers for Acceptance Testing

New installation, addition, alteration

Newly constructed building or tenant improvement



Any new installation of lighting or mechanical system will typically trigger the requirement for an acceptance test.
This includes newly constructed buildings or tenant improvements.

Energy Code Ace offers a full set of what they call trigger sheets.
They include new HVAC systems – both Simple and Complex (as defined by the Energy Code) and requirements for newly installed lighting controls.

They are generally geared toward designers, contractors, and engineers, but are available for anyone to review.
The trigger sheets suggest the applicable code relevant to the action being taken.
As shown here for Simple HVAC System, including the required acceptance testing.

Unfortunately, not every situation is covered by these trigger sheets.
And these trigger sheets are not The Energy Code – they are an opinion and not regulation.
If there is any question as to the triggered requirements, the Energy Code

itself is the absolute reference.

And, just as a reminder, the builder or contractor is responsible for code compliance, not Energy Code Ace.

General Acceptance Testing Triggers

- Newly installed lighting controls
  - Indoor
  - Outdoor
- Mechanical systems
  - Newly installed
  - Replacement

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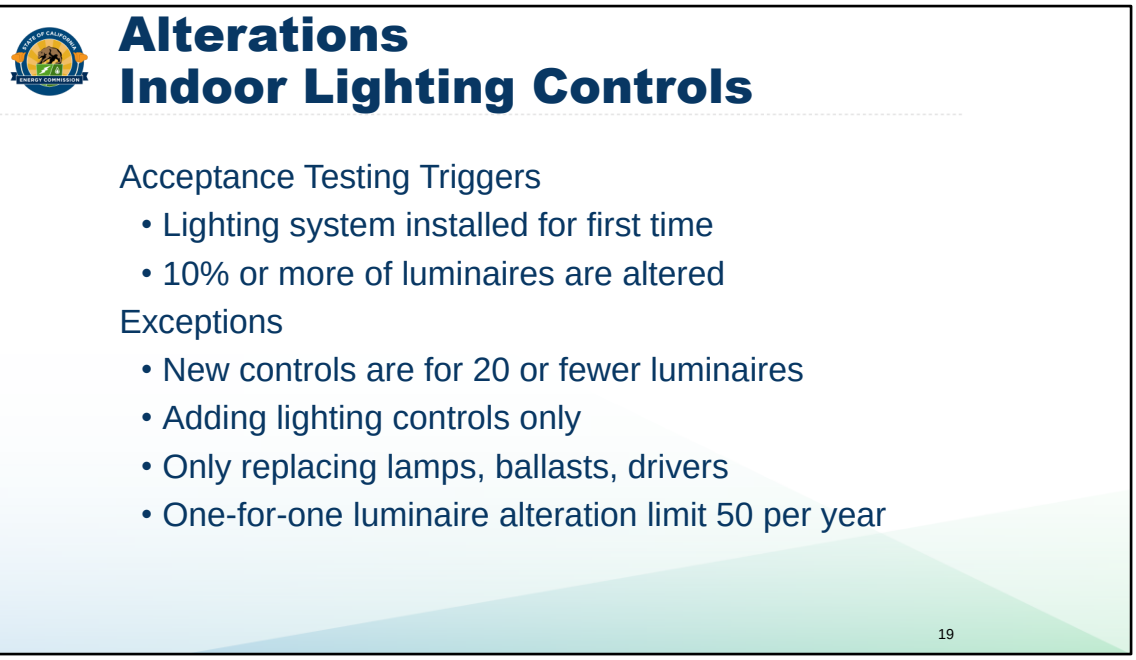
All newly constructed nonresidential, high-rise residential, and hotel/motel buildings or additions
with newly installed indoor and/or outdoor lighting and controls will require acceptance testing.

All newly constructed nonresidential, high-rise residential, and hotel/motel buildings or additions
served by at least one HVAC system (newly installed or replacement of an existing system or controls) will require at least one of the mechanical acceptance tests (normally about 5 -7 acceptance tests).

Exception: Any existing and unaltered HVAC or water heating system serving a new addition.



Alterations (or tenant improvements) are the majority of construction activities for nonresidential projects
Most TIs are for indoor lighting controls.

Alterations: **Indoor**
Lighting controls acceptance testing will be required for the following:

- Spaces where lighting systems are installed for the first time.
- When 10% or more of the luminaires serving a space are altered (per enclosed space).

Exception:

- New lighting controls added to control 20 or fewer luminaires for the entire project.
  - This exception is for the requirement to perform an acceptance test, while the next three are for applying the lighting controls requirements to a project at all.
- Any alteration limited to adding lighting controls, or
- replacing lamps, ballasts, or drivers.
- One for one luminaire alteration of up to 50 luminaires either per complete floor or tenant space per annum.

Alterations
Outdoor Lighting Controls

Acceptance Testing Triggers

- Systems listed in Table 140.7-A or 140.7-B.

Exception

- Controls for 20 or fewer luminaires

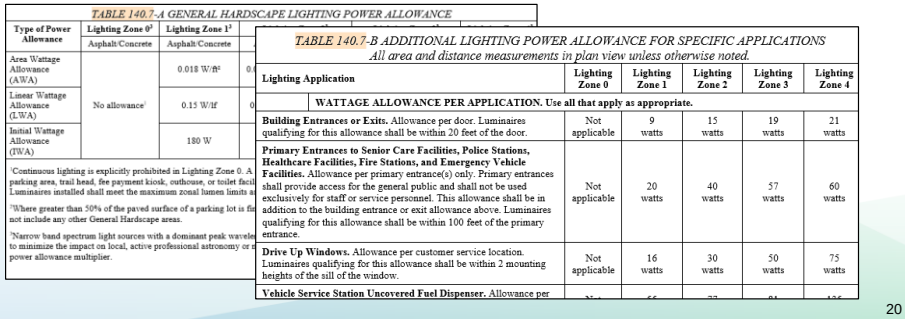


TABLE 140.7-A GENERAL HARDSCAPE LIGHTING POWER ALLOWANCE

Type of Power Allowance	Lighting Zone 0[2]	Lighting Zone 1[3]
	Asphalt/Concrete	Asphalt/Concrete
Area Wattage Allowance (AWA)	No allowance[1]	0.018 W/ft²
Linear Wattage Allowance (LWA)		0.15 W/lf
Initial Wattage Allowance (IWA)		180 W

[1]Continuous lighting is explicitly prohibited in Lighting Zone 0. A parking area, trail head, fee payment kiosk, outhouse, or toilet facil Luminaires installed shall meet the maximum zonal lumen limits a

[2]Where greater than 50% of the paved surface of a parking lot is fit not include any other General Hardscape areas.

[3]Narrow band spectrum light sources with a dominant peak wavele to minimize the impact on local, active professional astronomy or r power allowance multiplier.

TABLE 140.7-B ADDITIONAL LIGHTING POWER ALLOWANCE FOR SPECIFIC APPLICATIONS
All area and distance measurements in plan view unless otherwise noted.

Lighting Application	Lighting Zone 0	Lighting Zone 1	Lighting Zone 2	Lighting Zone 3	Lighting Zone 4
WATTAGE ALLOWANCE PER APPLICATION. Use all that apply as appropriate.					
Building Entrances or Exits. Allowance per door. Luminaires qualifying for this allowance shall be within 20 feet of the door.	Not applicable	9 watts	15 watts	19 watts	21 watts
Primary Entrances to Senior Care Facilities, Police Stations, Healthcare Facilities, Fire Stations, and Emergency Vehicle Facilities. Allowance per primary entrance(s) only. Primary entrances shall provide access for the general public and shall not be used exclusively for staff or service personnel. This allowance shall be in addition to the building entrance or exit allowance above. Luminaires qualifying for this allowance shall be within 100 feet of the primary entrance.	Not applicable	20 watts	40 watts	57 watts	60 watts
Drive Up Windows. Allowance per customer service location. Luminaires qualifying for this allowance shall be within 2 mounting heights of the sill of the window.	Not applicable	16 watts	30 watts	50 watts	75 watts
Vehicle Service Station Uncovered Fuel Dispenser. Allowance per					

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Alterations: Outdoor

Alterations or additions to existing outdoor lighting systems that are included in the lighting applications listed in Table 140.7-A and Table 140.7-B.

Table 140.7-A is primarily outdoor lighting zones.
Table 140.7-B lists (for two pages) the specific lighting applications that you will see most of the time.

For example:
Outdoor lighting for entrances
Drive-up windows
Service stations
Sales frontages
Hardscape ornamental lighting
And more

Exception:
New lighting controls added to control 20 or fewer luminaires (for the entire project).

Alterations
Mechanical Systems - HVAC

Acceptance Testing Triggers

- Any new or replacement systems or components

Exception

- Electric resistance space heaters for apartments

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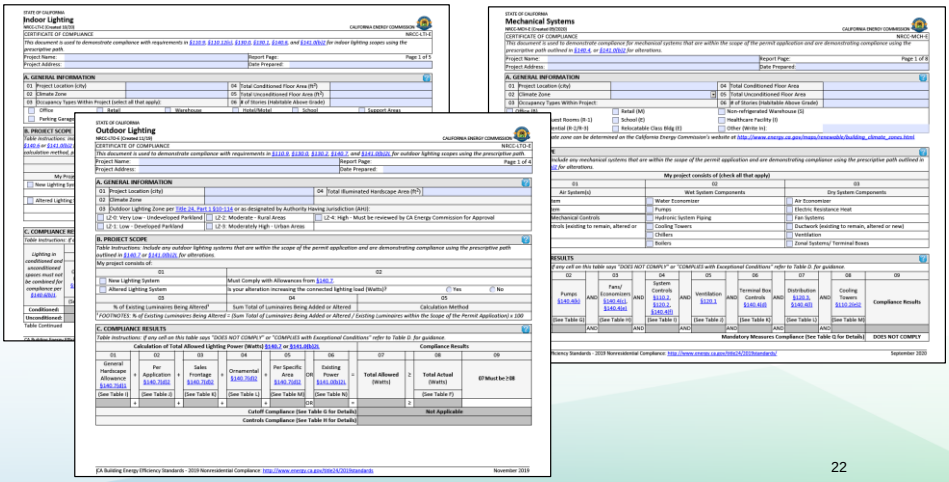
Alterations:

- Any new or replacement space conditioning components will require mechanical acceptance testing.

Exceptions:

- Does not apply to replacements of the following if they are equivalent or lower capacity:
- Electric resistance space heaters for high-rise residential apartment units.
- Electric resistance space heaters when natural gas is not available.

NRCCs for Lighting Controls and Mechanical Systems



The NRCCs are available from Energy Code Ace (not the Energy Commission website).
They are dynamic forms, meaning they will include only those tables that are relevant to the proposed construction.
For newly constructed buildings, all 10 NRCCs will likely be required.
For tenant improvements, the NRCCs are separated according to the trade involved or expected.

So, for Lighting Controls there are two NRCCs one for indoor lighting and one for outdoor lighting.
For mechanical systems, there is only one NRCC.

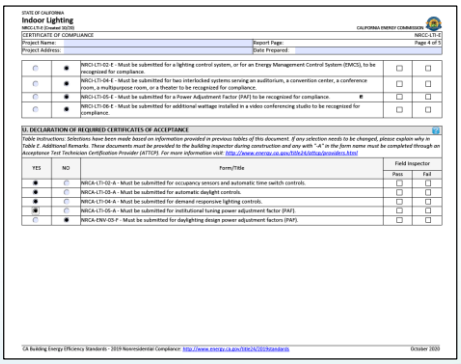
These NRCCs are completed by the designer, architect, or engineer (the "Responsible Person") and submitted with the complete application to the AHJ for a permit to construct.

When the AHJ approves the permit application, they are also approving the NRCCs.
For lighting controls and mechanical systems, the NRCCs are critical for the

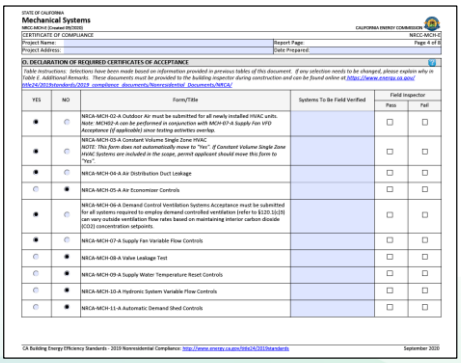
ATT to complete their acceptance test construction inspection.
The project will fail acceptance testing without an NRCC approved by the AHJ.

NRCC - Acceptance Tests Tables

Indoor Lighting - NRCC
Acceptance Test Requirement Table



Mechanical - NRCC
Acceptance Test Requirement Table



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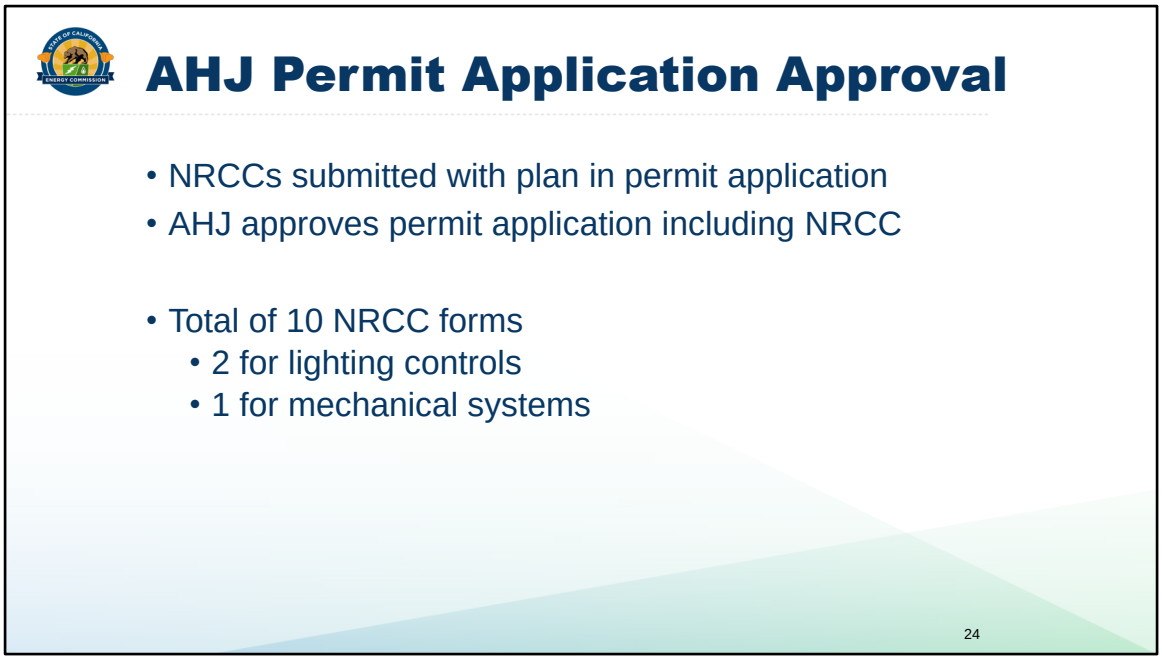
Each of the lighting controls and mechanical NRCCs include a section that lists the acceptance tests to be performed.
On these NRCC, there is a space for the AHJ field inspector to indicate if the acceptance test was competed to their satisfaction.
However, it is not required that the AHJ make use of these spaces – they are only included for convenience.

However, the person completing the NRCC can override the acceptance test recommended by the dynamic form.
The form provides a space for the author to explain why they are overriding, but there are no further requirements.
The CEC is considering requiring an ATT to sign-off on any such override, but there is no guarantee that this would address the issue.
Ultimately, the AHJ plans review would be the backstop to ensure that acceptance testing is required at the planning phase.
The Field inspector can also require acceptance testing even if the planner missed it, but this is always a difficult position to put the inspector in.



Each mechanical and lighting controls acceptance test requires the completed Nonresidential Certificate of Compliance (NRCC) **as approved by the AHJ**.
The building permit applicant must complete and submit the NRCC to the AHJ with the permit application.
The AHJ should confirm the required NRCAs specified on the NRCCs.
When the AHJ approves the permit application and issues the permit to construct, they also approve the NRCC.
There are 10 NRCC forms that cover a variety of trades.
They are dynamic forms designed to guide the applicant through the proper completion of the form (to a limited extent).
One of the NRCC forms is for mechanical installations.
Two of the NRCC forms are for lighting controls (indoor and outdoor).

Authorities Having Jurisdiction

The AHJ site inspector has full authority to question any part of the acceptance test or reject the acceptance test.
The CEC is not taking away from the AHJ's authority at all.
NRCA forms can be used as a tool by inspector to spot check installed systems and controls.

The only requirement is for the Inspector to verify that they should get an NRCA by referring to the NRCC approved by the AHJ (typically the planning office) and to then verify that the NRCA they receive from the ATT has the ATTCP Logo.

In a more detailed training provided by the ATTCPs, the inspector will be made aware of simple questions or inspections for each acceptance test that can ensure the acceptance test is legitimate.
The CEC encourages the inspector to question the acceptance test, ask to see the ATT's equipment, or demonstrate the acceptance test (in whole or in part).

However, enforcement of acceptance testing is as simple as ensuring the PDF

is unaltered and carries the ATTCP logo and markings.

Lighting Controls ATTCP Logos

National Lighting Contractors Association of America

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These are the logos that the inspector will see on NRCA for lighting controls

Mechanical Systems ATTCP Logos

a. NEMIC Logo (Background Watermark on NEMIC Acceptance Forms)

NEMIC
NATIONAL ENERGY MANAGEMENT INSTITUTE COMMITTEE

b. ICB/TABB Logo (Lower Right-Hand Corner on NEMIC Acceptance Forms)

ICB / TABB
INTERNATIONAL CERTIFICATION BOARD
TESTING, ADJUSTING AND BALANCING BUREAU
THE PROFESSIONAL'S CHOICE™

NEBB

RSES
The HVACR Training Authority

Title 24 Acceptance Test Technician Certification Provider (ATTCP) Program

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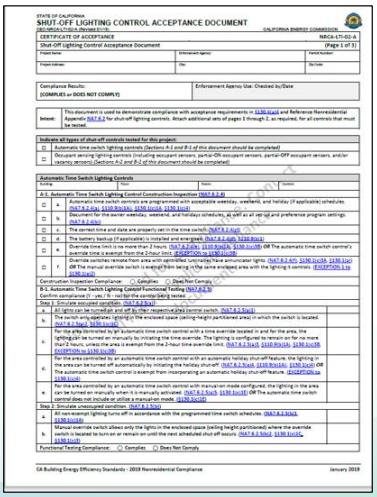
These are the logos that the inspector will see on NRCA for mechanical systems

Invalid NRCAs



STATE OF CALIFORNIA
SHUT-OFF LIGHTING CONTROL ACCEPTANCE DOCUMENT
(NONRESIDENTIAL COMPLIANCE)
CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF ACCEPTANCE
NRCA-LTI-02-A
Shut-Off Lighting Control Acceptance Document
(Page 1 of 3)

Project name | Enforcement Agency | Permit Number
Project Address | City | Zip Code

Compliance Results:
(COMPLIES or DOES NOT COMPLY)
Enforcement Agency Use: Checked by/Date

Intent: This document is used to demonstrate compliance with acceptance requirements in §130.4(a)4 and Reference Nonresidential Appendix NA7.4.2 for shut-off lighting controls. Attach additional sets of pages 1 through 2, as required, for all controls that must be tested.

Indicate all types of shut-off controls tested for this project:
☐ Automatic time switch lighting controls (Sections A-1 and B-1 of this document should be completed)
☐ Occupant sensing lighting controls (including occupant sensors, partial-ON occupant sensors, partial-OFF occupant sensors, and/or vacancy sensors) (Sections A-2 and B-2 of this document should be completed)

Automatic Time Switch Lighting Controls
Building | Floor | Space | Number

A-1. Automatic Time Switch Lighting Control Construction Inspection (NA7.4.2.A)
☐ a. Automatic time switch controls are programmed with acceptable weekday, weekend, and holiday (if applicable) schedules. (NA7.4.2.A1a, §110.9(b)1A, §130.1(c)1A, §130.1(c)2)
☐ b. Document for the owner weekday, weekend, and holidays schedules, as well as all set-up and preference program settings. (NA7.4.2.A1a)
☐ c. The correct time and date are properly set in the time switch. (NA7.4.2.A1a)
☐ d. The battery backup (if applicable) is installed and energized. (NA7.4.2.A1b, §130.8(a)1)
☐ e. Override time limit is no more than 2 hours. (NA7.4.2.A2a, §110.9(b)2A, §130.1(c)3B) OR The automatic time switch control's override time is exempt from the 2-hour limit. (EXCEPTION to §130.1(c)3B)
☐ f. Override switches remote from area with controlled luminaires have annunciator lights. (NA7.4.2.A3, §130.1(c)3A, §130.1(c)4) OR The manual override switch is exempt from being in the same enclosed area with the lighting it controls. (EXCEPTION 1 to §130.1(c)3)

Construction Inspection Compliance: ○ Complies ○ Does Not Comply

B-1. Automatic Time Switch Lighting Control Functional Testing (NA7.4.2.B)
Confirm compliance (Y = yes / N = no) for the control being tested:

Step 1: Simulate occupied condition. (NA7.4.2.B1a1)

a.	All lights can be turned on and off by the / respective wall control switch. (NA7.4.2.B1a1)	
b.	The switch only operates lighting in the enclosed space (ceiling-height partitioned area) in which the switch is located. (NA7.4.2.Exc2, §130.1(c)4C)	
c.	For the area controlled by an automatic time switch control with a time override located in and for the area, the lighting can be turned on manually by initiating the time override. The lighting is configured to remain on for no more than 2 hours, unless the area is exempt from the 2-hour time override limit. (NA7.4.2.3a1f, §110.9(b)1A, §130.1(c)3B EXCEPTION to §130.1(c)3B)	
d.	For the area controlled by an automatic time switch control with an automatic holiday shut-off feature, the lighting in the area can be turned off automatically by initiating the holiday shut-off. (NA7.4.2.3a1d, §110.9(b)1B) §130.1(c)4) OR The automatic time switch control is exempt from incorporating an automatic holiday shut-off feature. (EXCEPTION to §130.1(c)4)	
e.	For the area controlled by an automatic time switch control with manual-on mode configured, the lighting in the area can be turned on manually when it is manually activated. (NA7.4.2.3a1f, §130.1(c)3B) OR The automatic time switch control does not include or utilize a manual-on mode. (§130.1(c)3B)	

Step 2: Simulate unoccupied condition. (NA7.4.2.B1b)

a.	All non-exempt lighting turns off in accordance with the programmed time switch schedules. (NA7.4.2.B1b1, §130.1(c)3A)	
b.	Manual override switch allows only the lights in the enclosed space (ceiling height partitioned) where the override switch is located to turn on or remain on until the next scheduled shut-off occurs. (NA7.4.2.B1b2, §130.1(c)3C, §130.1(c)3)	

Functional Testing Compliance: ○ Complies ○ Does Not Comply

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
January 2019

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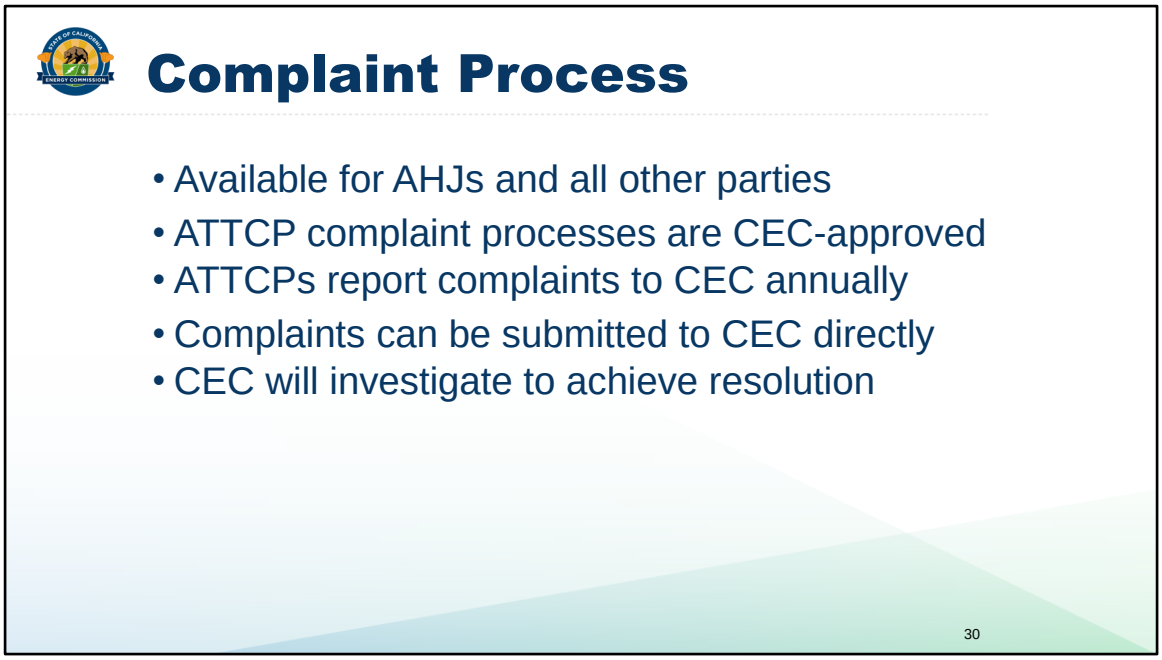
Be caution of accepting compliance documents that include only the CEC Logo or that appear to be altered.
This NRCA-LTI-02-A looks official but does not carry an ATTCP Logo and includes a watermark that states that it may not be used for compliance.
These compliance documents are available from the CEC for the ATT to use it for taking notes in the field.

The CEC is aware of other attempts to modify this compliance document to eliminate the watermark.
If it does not carry an ATTCP logo, it is not valid.



The ATTCP complaint process is in place for AHJs and all other parties.

Discuss the complaints process that they all have in common.

Each ATTCP uses their own complaint process, but they have all been approved by the CEC in the ATTCP application approval process.
The ATTCPs report the number and outcome of all complaints to the CEC on an annual basis.
The CEC encourages complaints to the CEC if the AHJ is dissatisfied with the ATTCP process.
For all complaint submitted to the CEC, staff will follow up with the ATTCP and ATT as well as the AHJ (or other parties) to investigate and to achieve a resolution for those submitting the compliant(s).

Resources

ATTCP Training:

- National Lighting Contractors Association of America (NLCAA)
- California Advanced Lighting Controls Training Program (CALCTP)
- California State Pipe Trades Council (CSPTC)
- National Energy Management Institute Committee (NEMIC)
- National Environmental Balancing Bureau (NEBB)
- Refrigeration Service Engineers Society (RSES)

California Energy Commission:

- Acceptance Test Technician Certification Provider Program
- Online Resources Center

Energy Code Ace: Web-Link

Staff Contact: Joe Loyer at Joe.Loyer@energy.ca.gov

Questions & Answers

Thank You!