

## 2019 Energy Code – Nonresidential Sign Lighting

California Energy Commission

# The 2019 Energy Code

- Effective January 1, 2020
  - $\circ\,$  Based on date of application for building permit
- **30% more efficient** than 2016 Code (nonresidential)
- Applies to occupancy groups:
  - $\circ\,$  A, B, E, F, H, I, M, R, S, and U
  - I-1 and I-2 (healthcare facilities)
  - Does not apply to I-3, I-4, L (Institution and Labs)
- Sections applicable to nonresidential lighting
  - $\circ~$  110.9, 110.12, 130.0-130.4, 140.6-140.8, 141.0(b)2I-L
- Sections applicable to residential lighting
  - 110.9, 130.0, 150.0(k)





## **Nonresidential Sign Lighting Mandatory Measures**





- Sign lighting controls apply to nonresidential, high-rise residential, and hotel or motel buildings
  - Exception: healthcare facilities
- Indoor signs must be controlled by an automatic time-switch or Astronomical time-switch
  - $\odot$  Exception: exit signs
- Outdoor signs must be controlled by:
  - Dimmer that automatically reduces power by at least 65% during nighttime hours (only if ON for more than 1 hour during the day); and
  - Automatic time-switch and photosensor, or astronomical timeswitch control

## **130.3(a)3, 110.12 Demand Responsive Electronic Message Center Control**

- Electronic Message Center (EMC) with load > 15 kW must:
  - Be capable of automatically reducing lighting power by a minimum of 30% in response to a demand response signal; and
  - Control must be a certified OpenADR2.0a or 2.0b Virtual End Node (VEN) or certified as being capable of responding to OpenADR 2.0b VEN.
    - More information is available at the CEC's <u>Demand Responsive</u> <u>Lighting Control</u> webpage
  - Exception: EMCs not permitted by health or life safety statute, ordinance, or regulation to be reduced.



## **Nonresidential Sign Lighting Prescriptive Measures**



# 140.8 Sign Lighting Power

- Compliance with sign lighting power will be based on wattage allowance or usage of specific light source types:
  - Maximum Allowed Lighting Power (wattage allowance)
    - Internally illuminated signs
    - Externally illuminated signs
  - **o Alternate Lighting Sources** 
    - Automatically complies if specific light sources are used
    - Unfiltered LEDs and neon must comply with alternate lighting sources method
  - Exceptions
    - Unfiltered incandescent lamps that are not part of an electronic message center (EMC), an internally illuminated sign, or an externally illuminated sign.
    - Exit signs shall meet the requirements of the Appliance Efficiency Regulations.
    - **Traffic signs** shall meet the requirements of the Appliance Efficiency Regulations.



### Internally illuminated signs

 $\odot$  Allowed lighting power is the product of the illuminated face area and 12 watts/ft^2

○ Double-faced signs use only the area of a single face





### Externally illuminated signs

 $_{\odot}$  Allowed lighting power is the product of the illuminated face area and 2.3 watts/ft^{2}





- Light sources will comply if meeting specific efficiency requirements:
  - **O High pressure sodium**
  - o Metal halide (MH)
    - Pulse start or ceramic MH with ballast efficiency ≥ 88%; or
    - Pulse start MH ≤ 320 watt with ballast efficiency ≥ 80% (Not including 175 watt or 250 watt MH lamps)
  - $\odot$  Neon or cold cathode
    - Rated output current < 50 mA: power supply/transformer efficiency ≥ 75%; or</li>
    - Rated output current ≥ 50 mA: power supply/transformer efficiency ≥ 68%
    - Unfiltered neon must meet 140.8(b)



- Light sources will comply if meeting specific efficiency requirements:
  - **o Fluorescent lighting** 
    - Use only lamps with  $CRI \ge 80$ ; or
    - Use electronic ballasts with output frequency ≥ 20 kHz
  - $\circ$  LED
    - Power supply efficiency  $\ge 80\%$
    - Unfiltered LED signs must meet 140.8(b)
  - O Compact Fluorescent

Cannot contain medium screw base socket (E24/E26)



- Using an ENERGY VERIFIED label is an optional method to validate compliance
- The sign must have a permanent, pre-printed, factory-installed, ENERGY VERIFIED label, confirming that the sign complies with 140.8
- ENERGY VERIFIED certification marks must be authorized by Underwriters Laboratories (UL) or other Product Certification Body accredited to ISO/IEC Guide 65 by the American National Standards Institute in accordance with ISO/IEC 17011

# **Energy Verified Label Examples**





Section Sign Listing Mark / Energy Mark (Holographic)

California Energy Commissio	on – Title 24 C	ompliance Record						
Compliance Method: [ ] Max	kimum Allow	ed Power [] Specific	: Lighting Source					
Maximum Allowed Power In	formation	Specific Lighting Source Information						
Sign Area (sq ft)		The sign uses only	[]1 []2 []3					
Sign Illumination Type	[]	these specific	[]4 []5 []6					
Internal (I) or External (E)	[]E	(Refer to NOTE A	[]7 []8 []9					
Watts/sq ft Allowed	[]Int=12	BELOW)	[]10					
	[]Ext=2.3							
Total Installed Watts			CHECK ALL					
			THAT APPLY					
Complies	[]Y[]N	Complies	[]Y[]N					



# **141.0(b)2M Alterations to Existing Signs**

- **Sign lighting alterations** must meet power requirements of 140.8 when:
  - ${\rm \circ}$  Increasing connected lighting load; or
  - $\circ$  Replace and rewire > 50% of ballasts; or
  - Relocate sign to a different location on the same site or on a different site
- Note

Replacing ballasts or lamps alone does not trigger requirements
 There are no control requirements for sign lighting alterations
 New signs must meet power and control requirements







# **Certification of Compliance**

- Certificate of Compliance (NRCC-XXX)
  - Submitted with permit application, included with plans
  - $_{\odot}$  Used by plans examiner to verify compliance
  - $_{\odot}$  LPA calculations, schedules, lighting controls, PAF, voltage drop, etc.
- Indoor
  - NRCC-LTI-E
- Outdoor
  - NRCC-LTO-E
- EPDS, Sign
  - NRCC-ELC-E, NRCC-LTS-E





- Certificate of Installation (NRCI-XXX)
  - $\circ$  Completed by installing contractor
  - Left on-site for building inspector
  - $\circ$  Identifies construction documents that show lighting and controls were installed as proposed in the certificate of compliance
- Indoor
  - NRCI-LTI-01 NRCI-LTI-06
- Outdoor
  - $\circ$  NRCI-LTO-01 NRCI-LTO-02
- EPDS, Sign
  - NRCI-ELC-01, NRCI-LTS-01

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- Lighting Certificate of Compliance forms
   combined into one interactive PDF
- Auto populate information from user inputs and conduct simple math
- Form expands and collapses based on selections
- Drop down selections
- Interactive instructions
- Add and delete table rows
- One single signature page

This document is u	used to demonstrate complianc	e with requiremen	ts in	<u>§110.9, §110.12</u>	2, §1	<u>30.0, §130.3, §140.8</u>	3, an	d <u>§141.0(b)2M</u> for	sign ligh	ting scopes using the p	presc
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01 Project Loca	tion (city)										
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CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards



CERTIFICATE OF	COMPLIANCE						NRCC-	LTS-E
his document is oath. Exit sians	s used to demonstrate compli and traffic sians are not reau	ance with requ ired to complv	irements in <u>§110.9</u> , <u>§1</u> with prescriptive reau	<u>10.12, §130</u> irements per	<u>.0, §130.3, §140.8</u> , and <u>§141.0(</u> exceptions to §140.8 and do no	<u>b]2M</u> for s ot need to	sign lighting scopes using the prescrip complete this compliance document.	tive
Project Name:	California Energy Commissio	on			Report Page:		Page	1 of 4
roject Address:	1516 9th St.				Date Prepared:		4/9	/2020
A. GENERAL IN	IFORMATION							
01 Project Loc	cation (city)				Sacramento			
02 Climate Zo	ne				12			-
03 Building	g is a healthcare facility							
								-
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140.8 or \$141.6 complete this co compliance meta 01 Name or Item Tag Sign1 Sign2	2(b)2M for alterations. Exit is mpliance document. WARNI hod, please open a new form 02 Complete Sign Descript Single face internally illum LED Externally illuminated L	ins that ure win igns and traffic NG: Changing or use "Save A ion inated .ED	signs are not required the Compliance Methors s". 03 Sign Status <sup>1</sup> New New	ermit applica I to comply v od in this tab	ttion and are demonstrating co vith prescriptive requirements p le will result in the deletion of a 04 Sign Type Outdoor Indoor	mpliance er excepti lata previe	using the prescriptive path outlined in ions to <u>\$140.8</u> and do not need to ously input. If you need to change the 05 Compliance Method <sup>2</sup> ENERGY VERIFIED Label Max Allowed Lighting Power	
6140.8 or §141.0 complete this co- compliance meta 01 Name or Item Tag Sign1 Sign2	D(b)2M for alterations. Exit is impliance document. WARNII hod, please open a new form 02 Complete Sign Descript Single face internally illum LED Externally illuminated I	ins rind the Wings and traffic NG: Changing or use "Save A ion inated .ED	New	ermit applicu t to comply v od in this tab	ttion and are demonstrating co. vith prescriptive requirements p le will result in the deletion of a 04 Sign Type Outdoor Indoor Add Sign Lighting System	mpliance er excepti lata previe tata previe	using the prescriptive path outlined in ions to <u>\$140.8</u> and do not need to ously input. If you need to change the 05 Compliance Method <sup>2</sup> ENERGY VERIFIED Label Max Allowed Lighting Power Remove Last Sign Lighting System	

Table Instructions	s: If any cell on this table says "DOES	NOT COMPLY	" oi	r "COMPLIES wit	h Ex	ceptional Conditions	" rej	er to Table D. for guid	lance.
01	02	03		04		05		06	07
Name or Item Tag	Complete Sign Description	Total Allowed (Watts)	≥	Total Designed (Watts)	OR	Compliant Light Sources	OR	ENERGY VERIFIED Label	Compliance Results
(See Table B)	(See Table B)	(See Table F)		(See Table F)		(See Table G)		(See Table H)	
Sign1	Single face internally illuminated LE		$\geq$		OR		OR	YES	COMPLIES
					Co	ntrols Compliance (Se	e Ta	ble F/G/H for Details)	COMPLIES with Exceptional Conditions
Sign2	Externally illuminated LED	23	≥	20	OR		OR		COMPLIES
					Co	ntrols Compliance (Se	e Ta	ble F/G/H for Details)	COMPLIES

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

November 2019



state of california Sign Lighting	
NRCC-LTS-E (Created 11/19)	CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE	NRCC-LTS-E
Project Name: California Energy Commission	Report Page: Page 2 of 4
Project Address: 1516 9th St.	Date Prepared: 4/9/2020

#### D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Table H. Energy Verified Labeled Signs and Controls Permit Applicant Notes: Sign1: The sign is not on during the day

#### E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

#### F. MAXIMUM ALLOWED LIGHTING POWER AND CONTROLS

Table Instructions: Complete this table for illuminated signs using the Maximum Allowed Lighting Power compliance method per <u>§140.8(a)</u> as indicated on Table B of this compliance document. Also demonstrate compliance with mandatory controls requirements from <u>§130.3</u> by indicating control types for each sign.

01	02	03	04	05	06	07		08		0	09
Name	r Complete Sign	lete Sign Illumination		Allowed	Allowance	Design	Ma	indatory Controls		Fi	ield
Item Ta	g Description	Method	(ft²)	(W/ft <sup>2</sup> )	(Watts)	Watts	Shut-Off	Dimming	Demand Response <sup>1</sup>	Pass	Fail
Sign2	Externally illuminated LED	Externally	10	2.3	23	20	Auto Timer 💽	NA 💽	NA		
				11		12	13	14			
		Luminaire Name or Item Tag	Com	plete Lumi Descriptior	naire n	Watts per Luminaire	How Wattage is Determined	Total number luminaires			
		Sign2	Externa	lly illumina	ated LED	20	Mfr.Spec 🔽	1			
						Add Luminaire	Remove Last				

\*NOTE: Controls with a \* require a note in the space below explaining how compliance is achieved. EX: Sign within tunnel illuminated day & night; EXCEPTION to <u>§130.3(a)2A</u>.

<sup>1</sup> FOOTNOTES: Demand response controls are only required for an Electronic Message Center having a new connected lighting power load greater than 15 kW per §110.12(d).

#### G. LIGHT SOURCES AND CONTROLS

This Section Does Not Apply

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards



oject Nar									:-LTS-E
	ne: Califo	rnia Energy Commission	Report Page	:				Page	: 3 of 4
oject Add	iress: 1516	9th St.	Date Prepar	ed:				4/9	3/2020
. ENERG	Y VERIFIED	LABELED SIGNS AND CONTROLS							?
able Instru ompliance ERIFIED la	uctions: Con e method pe abel confirm	nplete this table to demonstrate compliance with mar r <u>\$140.8(b)</u> as indicated on Table B of this compliance ing that the sign complies with the Section <u>140.8</u> of th	ndatory controls requirements from e document. Complete this table on he California 2019 Title 24, Part 6 St	<u>§130.3</u> for illun ly if sign has a p andards.	inated : ermane	signs using the ENE nt, pre-printed, fac	RGY VERIF tory instal	IED lab ed, ENE	el ERGY
	01	02		03				04	
Na	me or		Ma	andatory Contro	ls		Fie	ld Insp	ector
Iter	m Tag	Complete Sign Description	Shut-Off	Dimming		Demand Respor	nse <sup>1</sup> Pa	iss	Fail
Si	ign1	Single face internally illuminated LED	Astrn. Timer + Photocontrol	Exempt*	•	NA	-		
Sign Wi	ithin tunnel i ign1 E: Domand r	Illuminated day & night; EXCEPTION to <u>\$130.3(a)2A</u> . The sign is not on during the day	Aerogge Capter baying a pay coppe	stad lighting po	warlog	d graater than 15 k	14/	Recet	H
K: Sign Wi Si OOTNOTI er <u>§110.1</u>	ithin tunnel i ign1 E: Demand r <u>2(d)</u> .	lluminated day & night; EXCEPTION to <u>\$130.3(a)2A</u> . The sign is not on during the day esponse controls are only required for an Electronic N	Aessage Center having a new conne	cted lighting po	wer loa	d greater than 15 k	W	Reset	t
Sign wi Si COOTNOT er <u>§110.1</u>	ithin tunnel i ign1 E: Demand r 2 <u>(d)</u> . ATION OF I	Iluminated day & night; EXCEPTION to <u>\$130.3(a)2A</u> . The sign is not on during the day esponse controls are only required for an Electronic N REQUIRED CERTIFICATES OF INSTALLATION	Aessage Center having a new conne	cted lighting po	wer loa	d greater than 15 k	W	Reset	t
COOTNOT COOTNOT or <u>§110.1</u> DECLAR able Instru able E. Ad tle24/201	thin tunnel i ign1 E: Demand r 2(d). ATION OF I uctions: Sele Iditional Ren 9standards;	Iluminated day & night; EXCEPTION to <u>§130.3(a)2A</u> . The sign is not on during the day esponse controls are only required for an Electronic N REQUIRED CERTIFICATES OF INSTALLATION ections have been made based on information provide marks. These documents must be provided to the buill (2019 compliance documents/Nonresidential Docur	Aessage Center having a new conne ed in previous tables of this docume ding inspector during construction a <u>ments/NRCI/</u>	cted lighting po nt. If any select nd can be found	wer load ion need i online	d greater than 15 k Is to be changed, p at <u>https://www.en</u>	W lease explo	Reset	t (2) v in
Sign wi Sign wi COOTNOTI er §110.1 DECLAR able Instru- able E. Ad tle24/201 YES	thin tunnel i ign1 E: Demand r 2(d). ATION OF I uctions: Sele Iditional Ren 9standards; NO	Iluminated day & night; EXCEPTION to <u>§130.3(a)24</u> . The sign is not on during the day esponse controls are only required for an Electronic M REQUIRED CERTIFICATES OF INSTALLATION for the set of	Aessage Center having a new conne ed in previous tables of this docume ding inspector during construction a <u>ments/NRCI/</u> Form/Title	cted lighting po nt. If any select nd can be found	wer load ion need 1 online	d greater than 15 k ds to be changed, p at <u>https://www.en</u>	W lease explored leas	Reset	t (in )r
Sign wi Si COOTNOT er §110.1 DECLAR able Instru- able E. Ad tle24/201 YES	thin tunnel i ign1 E: Demand r 2(d). ATION OF I uctions: Sele Iditional Ren 9standards; NO	Iluminated day & night; EXCEPTION to <u>§130.3(a)24</u> . The sign is not on during the day esponse controls are only required for an Electronic N REQUIRED CERTIFICATES OF INSTALLATION ections have been made based on information provide arks. These documents must be provided to the buill (2019 compliance documents/Nonresidential Documents/	Aessage Center having a new conne ed in previous tables of this docume ding inspector during construction a <u>nents/NRCI/</u> Form/Title	cted lighting po nt. If any select nd can be found	wer load ion need I online	d greater than 15 k ds to be changed, p at <u>https://www.en</u>	W lease explo ergy.ca.go Field I Pass	Reset	t v in or ail
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Sign Wi Si COOTNOT. C	thin tunnel i ign1 E: Demand r 2(d). ATION OF 1 ductions: Sele lditional Rem 9standards; NO	Iluminated day & night; EXCEPTION to <u>§130.3(a)24</u> . The sign is not on during the day esponse controls are only required for an Electronic N REQUIRED CERTIFICATES OF INSTALLATION ections have been made based on information provide marks. These documents must be provided to the buill (2019 compliance documents/Nonresidential Docur NRCI-LTS-01-E - Must be submitted for all buildings	Aessage Center having a new conne ed in previous tables of this docume ding inspector during construction a <u>ments/NRCI/</u> Form/Title	cted lighting po nt. If any select nd can be found	wer load	d greater than 15 k ds to be changed, p at <u>https://www.en</u>	W lease explo ergy.ca.go Field I Pass	Reset	t / in Dr ail
COOTNOT COOTNO	thin tunnel i ign1 E: Demand r 2(d). ATION OF Iditional Ren 9standards; NO NO ATION OF	Iluminated day & night; EXCEPTION to <u>§130.3(a)24</u> . The sign is not on during the day esponse controls are only required for an Electronic M REQUIRED CERTIFICATES OF INSTALLATION ections have been made based on information provide marks. These documents must be provided to the buill (2019 compliance documents/Nonresidential Docur NRCI-LTS-01-E - Must be submitted for all buildings REQUIRED CERTIFICATES OF ACCEPTANCE	Aessage Center having a new conne ed in previous tables of this docume ding inspector during construction a <u>ments/NRCI/</u> Form/Title	cted lighting po nt. If any select nd can be found	wer load	d greater than 15 k ds to be changed, p at <u>https://www.en</u>	W lease explo ergy.ca.go Field I Pass	Reset	t / in or ail

# Sign Lighting for the Plans Examiner

- Verify Plans with NRCC-LTS-E form
  - $_{\odot}$  Verify mandatory controls specified
    - Indoor sign: time-switch or astronomical time-switch
    - Outdoor sign: time-switch and photosensor, or astronomical timeswitch; dimmer (if on more than 1 hour during the day)
  - $_{\odot}$  Verify power
    - Installed lighting power less than allowed; or
    - Alternate light source per 140.8(b); or
    - Energy Verified Label





- Verify installation matches plans and NRCC-LTS-E
- Verify the installed controls and operation
  - $\circ\,$  Indoor sign: time-switch or astronomical time-switch
  - Outdoor sign: time-switch and photosensor, or astronomical time-switch; dimmer (if on more than 1 hour during the day)
  - $\circ$  Acceptance testing is not required for signs
- Verify sign lighting power
  - $\ensuremath{\circ}$  Allowed lighting power; or
  - $\circ$  Specific lighting source; or
  - Energy Verified label
- Use NRCC-LTS-E as inspection checklist











### Residential

- CBECC-Res
- EnergyPro
- Right-Energy Title 24

## Nonresidential

- CBECC-Com
- EnergyPro

More information and up to date list of approved software



- Published quarterly
- Clarifies frequently asked questions on all topics related to the Energy Code
- Highlights new resources, clarifications, and more on the Energy Code
- Sign up for our list server and receive Blueprint Newsletter email quarterly
- More information about the <u>Blueprint</u> <u>Newsletter</u>



### THIS ISSUE

 2019 Energy Code: Low-rise Residential Summary of Major Changes

 2019 Energy Code: Nonresidential, Hotel and Motel, High-rise Residential Summary of Major Changes

- 2019 Energy Code: CBECC Software and ACM Manuals Approved
- 2016 Energy Code: New Fact Sheets and Videos for Covered Processes
- Q&A
   Outdoor Electric Heating

Flag Pole Lighting
 Continuous Insulation and

Z-Clips • Energy Code Ace

Class Schedule
 Energy Code Ace

2019 Reference Ace

#### 2019 ENERGY CODE: LOW-RISE RESIDENTIAL SUMMARY OF MAJOR CHANGES

The most significant change in the 2019 Building Energy Efficiency Standards (Energy Code) for low-rise residential buildings is the introduction of photovoltaic (PV) requirements in the prescriptive standards. There are also significant changes related to the indoor air quality requirements. This is a summary of these and other major changes:

these and other major changes: Mandatory Measures

 Walls with 2x6 framing require R-20 minimum insulation for wood-framed, or 0.071 maximum U-factor. § 150.0(c)2
 O.Modifications to the indoor air quality requirements of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 62.2 are included for various building and dwelling unit configurations such as horizontally attached buildings, or central ventilation systems. Balanced or continuously operating supply or exhaust ventilation system required. Home Energy Rating System (HERS) verification required when kitchen range hoods are installed. § 150.0(o)

3. Minimum efficiency reporting value (MERV) 13 air filters (or equivalent) are required for heating, cooling, and on the supply side of ventilation systems. § 150.0(m)12 4. Fan efficacy requirements are 0.45 watts/cubic feet per minute (CFM) or less for gas furnace air-handling units; or 0.58 watts/CFM or less for air-handling units that are not gas furnaces. New fan efficacy requirement for small-duct high-velocity forced-air systems. § 150.0(m)13B, C, D

Prescriptive Compliance

1. New PV solar electric generation requirement. § 150.1(c)14

4. New exterior door U-factor 0.20

2. New prescriptive Table 150.1-B for multifamily buildings. § 150.1(c) 3. Wall U-factors in climate zones 1-5 and 8-16 reduced to 0.048 maximum in 6single-family buildings; climate zones 6-7 remain at 0.065 maximum. § 150.1(c)1B

maximum and National Fenestration Rating Council (NFRC) labeling requirements. § 150.1(c)5, § 110.6(a)5 5. Quality insulation installation (QII) for all single-family buildings in all climate zones, and multifamily buildings in all climate zones except climate zone 7. HERS verification required. § 150.1(c)1E 6. New prescriptive options for beat pum

6. New prescriptive options for heat pump water heaters for newly constructed buildings, additions, and alterations. § 150.1(c)8, § 150.2(a)1D, § 150.2(b)1H

1

## Online Resource Center

**BUILDING ENERGY EFFICIENCY** 

2022 Building Energy Efficiency Standards

2019 Building Energy Efficiency Standards

2016 Building Energy Efficiency Standards

e Center

nergy Efficiency Standards

<u>e Efficiency Standards - Title 24</u> fornia: 800-772-3300 nia: 916-654-5106

Efficiency Standards

**STANDARDS - TITLE 24** 

### **Online Resource Center**

The Online Resource Center provides educational assistance about the Building Energy Efficiency Standards to building and enforcement communities. The California Energy Commission and utilities developed the resources, which include fact sheets, energy videos, and presentations.

	Online Resource
Expand All	Past Building E
Compliance Forms +	CONTACT
Energy Videos +	Building Energy
Trainings and Upcoming Events +	Outside Californ
Exhibitor Booth Handouts +	SUBSCRIBE
	Building Energy
ENERGY STANDARDS AND FORMS	First Name *

#### RESOURCES AND TRAINING MATERIALS





#### Overview

Look for informational resources that cover multiple building components in a single document for residential and nonresidential buildings. Commissioning Mandatory commissioning requirements for

nonresidential buildings.



Covered Processes Mandatory and prescriptive covered processes requirements for nonresidential buildings. Electrical Power Distribution Mandatory electrical power distribution requirements for nonresidential buildings.





### **Online Resource Center** webpage





- Forms & Resource tools
- Free training (in person and online)
- Checklists, Trigger Sheets for building departments
- Energy Code Ace webpage



- Open Monday through Friday
  - $\circ$  8:00 a.m. to noon
  - 1:00 p.m. to 4:30 p.m.
- Call at:
  - 1-800-772-3300 (In CA, toll free)
     1-916-654-5106 (Outside CA)
- Email at: Title24@energy.ca.gov



- Main conduit for communicating with stakeholders
- Sign up on <u>CEC listserver</u> webpage
- Subscribe to the following Efficiency Lists:
  - **o Building Standards**
  - $\circ$  Blueprint







## **Thank You!**

