



# July 7, 2020 Meeting Minutes

Redwood Empire Association of Code Officials

1007-B West College Avenue # 326 Santa Rosa, CA 95401

The July 7<sup>th</sup> meeting was held online through WebEx

## 1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

The meeting was called to order at 12:01 pm by Jay Bradford, which was followed by the pledge of allegiance.

## 2. SELF INTRODUCTIONS (Officers, Guests, Members) Skipped due to online format.

There were 21 members and guests in attendance.

## 3. APPROVAL OF MINUTES -

A motion by Charles Lucas and second by Wayne Wirick were made, all were in favor and the minutes of the August meeting were approved.

## 4. OFFICERS REPORTS

**President: Jay Bradford** – Gave a meeting overview

**Vice President: David Willoughby** – Had not verified the June bank statement but has since verified that the amounts reported by the Treasurer are correct.

**Treasurer: Steve Buffenbarger** - Checking account report for the month of June:

**Checking beginning balance - \$26,999.34**

**Deposits: \$.22 - interest**

**Withdrawals and checks: \$1,033.64 – Go Daddy (website), Franchise Tx Bd, Maureen Luis (tax return)**

**Checking ending balance: \$25,965.92**

**Secretary: Steve Neely** – Not present.

**Past President: Charles Lucas** – No report.

## 5. LIAISON REPORTS

**AIARE: No Report**

**CSI: No Report**

**SCFPO: Jay Bradford and Eric Seabrook:**

**ICC: Susan Dowty:** Susan mentioned some of the resources provided by ICC in this ongoing Pandemic including relevant Podcasts each month and the ICC Coronavirus Response Center page, <https://www.iccsafe.org/advocacy/coronavirus-response-center/>. Added 10-page survey about online plan review. Annual conference in St. Louis cancelled and now planning the 2021 conference. Lots of opportunities for free training. New discussion forum on the website. Learning Center is very busy, lots of classes. For free viewing of codes can go to <https://codes.iccsafe.org/> click on CA and will find the state codes and amendments incorporated.

**CBOAC: Glenn Schainblatt:** No report this month, Glenn's microphone was not working.

**CALBO: Brad Wungluck:** Not present. Ed Week classes have moved dates. San Ramon will be occurring in the beginning of January 2021.

**CEC: Amie Brousseau:** Amie mentioned that at the last business meeting they approved several more reach codes for the Cities of Richmond and Hayward. Added a new Solar Assessment Tool for determining shading conditions on PV systems. Also, on the website is a new Reach Code study for mid-rise residential construction addressing cost effectiveness. Amie is working with Christine Condon to bring the community a free online training on the new QII requirements which should be out sometime towards the middle of August. She also shared the CEC's Efficiency Division Updates for July and the new April-June Blueprint.

**IAEI: Mike Stone:** Mike mentioned the AIEI South Western Section meeting was cancelled and will have

the meeting virtually. and that there will be some free virtual training coming up. IAEI is offering some free trainings, Mike will be trying to put together a free training on generators thru Generac.

**BayREN: Christine Condon:** QII class moved to August.

**ICC Region 1: Charles Lucas:** The meeting was held on June 23<sup>rd</sup> and the discussion centered around how to have virtual meetings.

**SMART: Doug Williams:** The property acquisition around Healdsburg is still proceeding forward at this time.

**6. COMMITTEE REPORTS**

**Education Committee:** Kevin Scheumann reported that the committee is continuing to work on setting up some trainings once the SIP restrictions are lifted.

**Web-Site Committee:** Officers. All the officers are pitching in to add content, update, and maintain the website.

**Audit Committee:** no report.

**7. PROGRAM**

Discussion on jurisdictional responses to COVID-19

**8. CORRESPONDENCE AND ANNOUNCEMENTS**

No items brought forward.

**9. NEW BUSINESS**

Jesse with the City of Santa Rosa is having applicants submit plans for permits thru emails and using Adobe Acrobat DC to review the plans. Going forward with digital plan review the City of working on a contract with E Plan Hub and expects to be operational in 5 months. They are using the Camino Inspection platform. Offices were opened to the public on July 6<sup>th</sup> using 30-minute appointments with a 15-minute break between to enable sanitization.

**10. OLD BUSINESS**

No items brought forward.

**11. LEGISLATIVE NEWS**

No items brought forward.

**12. CODE ISSUES**

No items brought forward.

**13. ADJOURNMENT**

The meeting was adjourned at 1:15 by Jay Bradford.

**The next meeting will be held on August 4<sup>th</sup> online thru WebEx. The meeting starts at 12 noon. Invitations will be sent out.**

## ICC Government Relations Monthly Update – July 2020

Follow @ICC\_GR on [Twitter](#) for breaking news & announcements throughout the month  
Click [here](#) for the ICC Government Relations Staff Regional Map

### **CARES Act Funding for Building Departments: New document on coronavirus advocacy resources site for jurisdictions with population < 500,000**

The Code Council has added this [document](#) to the [Coronavirus Advocacy Resources Site](#) to explain how jurisdictions with populations less than 500,000 can seek CARES Act funding for virtual needs. The document includes links to the Coronavirus Relief Fund (CRF) pages for states that have either allocated CRF funds directly to local governments with populations under 500,000 or provided these governments with a cap against which they can be reimbursed for eligible CRF expenses. These states are Arkansas, Colorado, Connecticut, Florida, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Missouri, Nebraska, North Carolina, Nevada, New Hampshire, Oklahoma, South Dakota, Texas, Utah, Virginia, Washington, and West Virginia. Code department virtual needs can be funded through these allocations in each of these states because each of these states is following Treasury's guidance on eligible CRF expenditures. In other states, localities with populations under 500,000 need to work through their state to access CRF funding. Non-county localities with populations under 500,000 may also work through their county to access this funding if their county received CRF funds directly. For more information and help understanding the process, please reach out your ICC regional representative.

### **Annual conference cancellation update**

As previously announced, the International Code Council Board of Directors decided not to hold an Annual Conference, Expo, and Annual Business Meeting (ABM) in 2020 given the health concerns for large gatherings, a possible resurgence of the virus in the fall, and declining budgets for many building safety departments. [Additional information](#) was provided after the Board met on [June 8](#) as outlined below:

- There will be no officer or board elections this year. All current board member terms will be extended one year. Elections will resume at the 2021 ABM only for those seats that would have been up for election in 2020.
- No bylaw amendments or resolutions will be considered until the 2021 ABM.
- Honorary member nominations for 2020 will be evaluated and recommended by the Honorary Members Committee this year, but the member ratification process will occur at the 2021 ABM.
- The Major Jurisdiction Committee, Membership Council, and Past Presiding Officers Council fall in-person meetings will not take place. The officer terms for these councils and committees will be extended one year until the 2021 Annual Conference. These groups may continue to meet virtually.
- The Chapter Presidents and Regional Chapter fall in-person meetings will not take place. These groups may continue to meet virtually.
- Most of the 2020 awards will be issued this year and the awardees will be recognized virtually. The exceptions – the President's Award, William J. Tangye Staff Award, Global Award, and Innovation in Code Administration Award – are on hold until the 2021 Annual Conference.

### **Code development: a process of evolution and improvement**

As a part of the International Code Council's established process – the premier codes and standards development process – several appeals have been filed in response to the 2019 Group B cycle. These appeals are currently making their way through the system. While some of these issues will be dealt with through the appeals process, other elements have raised opportunities for improvement in the long-term code development process. Those issues will be referred to a committee that was created to

deal with long-term changes. To learn more about the 2019 Group B appeals and the next steps in the code development process, read article [here](#).

### **Applications open for communities to pilot new buildings and housing benchmarks**

The Alliance for National & Community Resilience (ANCR), a member of the International Code Council's family of solutions, has opened the application process for communities to join an in-depth piloting program for new buildings and housing benchmarks. As part of the program, communities will participate in ANCR's Community Resilience Benchmarks (CRB) system, which supports communities in evaluating their current resilience and identifying strategies for improvement. Deadline for submissions is **August 1, 2020**, at 5:00 pm EST. Successful communities will receive a \$5,000 grant, consultant services from an ANCR professional, recognition at a relevant conference and valuable insight into opportunities to advance their resilience. More information [here](#).

### **New online community offers change to discuss, share and learn with other professionals**

The Code Council's new online community forums site is an online discussion area where members can further develop their professional experience – by gathering with industry colleagues to interact and discuss relevant topics related to building safety, codes, design and education in a peer-to-peer environment. Digital training and assessment opportunities are also available to help members take their professional development to the next level. Members will be able to participate in direct discussion with ICC Government Relations and technical staff who will be leading several topic discussions. Check it out [here](#).

### **Code Council update on standards currently being revised and under development**

There is a long-standing relationship between construction codes and standards that address design, installation, testing and materials related to building construction. Building regulation cannot be effectively carried out without such standards. The International Code Council references almost 1,300 standards in its International Codes and has been re-accredited for its American National Standards Institute (ANSI) standard development activities under the ICC Consensus Procedures. The Code Council also develops a number of standards, including mechanical, plumbing, structural, resilience, accessibility and green standards, and is accredited by ANSI as a standards developer. Code Council Standards Development Director Karl Aittaniemi provides an update on these standards currently being revised or that are under development [here](#).

### **Inaccuracies in building codes that UpCodes has posted online**

The Code Council was alerted to inaccuracies in building codes that UpCodes has posted online, after research, has definitively determined that UpCodes made multiple mistakes in their online codes website for at least four states: New Jersey, Oregon, Virginia and Wyoming. In fact, the United States District Court for the Southern District of New York recently found that UpCodes made rather surprising oversights in the copies of the codes that it posts such as erroneously indicating that the landlocked state [of Wyoming] adopted an appendix focusing on tsunami-generated flood hazards. The Court also recognized that the UpCodes website is continually being updated with potentially erroneous codes. Such errors create potentially serious safety issues and open the door for possible misinterpretations and misapplications of the codes in these communities. The Code Council is suing UpCodes for the wholesale copying of the International Codes (I-Codes) without permission. With this latest information, we also know UpCodes errors could undermine the safety of our communities by presenting inaccurate and incomplete codes. Therefore, we have brought a second case against UpCodes for false advertising. More information [here](#).

### **Two new CodeNotes are here!**

Two new *CodeNotes* are now available, courtesy of the ICC PMG Membership Council:

1. [Nail Salon Exhaust Requirements in the I-Codes](#) *CodeNotes*, based on the 2021 International Mechanical Code (IMC), International Building Code (IBC), International Existing Building Code (IEBC) and International Property Maintenance Code (IPMC), provides an understanding of the requirements for an exhaust system for manicure tables and pedicure stations.
2. [Worker Safety on Roofs and Elevated Structures](#) *CodeNotes*, based on the 2015 International Mechanical Code (IMC), addresses the safety of occupants in buildings and provides for protection for service and inspection personnel as it relates to hazards when working on rooftops.

### **Code Council and RESNET water rating index standard approved by ANSI**

The American National Standards Institute (ANSI) has announced that it has approved the RESNET/ICC Standard 850-2020. This new ANSI standard sets the technical specifications for the inspection, testing and labeling of a home's water efficiency. The release of this standard comes at a time when water resources are becoming increasingly strained in many parts of the country with the cost of water prices increasing faster than that of energy prices. The potential for water cost savings through water efficiency measures is available in nearly all regions of the U.S. The ANSI/RESNET/ICC Standard 850-2020 will also serve as the technical requirements for RESNET's residential water efficiency rating system, known as HERS<sub>H2O</sub>. The national roll-out of HERS<sub>H2O</sub> will be announced soon with additional information available at [RESNET HERSH2O](#). More information is included [here](#).

### **Notice of non-ALSC stamped lumber**

Recently, the International Code Council learned of lumber located in a port in the State of New York with a stamp by an organization not accredited by the American Lumber Standard Committee (ALSC) agency. There are no corresponding ALSC system design values attributable to the stamp; therefore, it should not be represented as a structural lumber product under the ALSC system. For more information and an image of the non-ALSC stamp, go [here](#).

### **Ryan Colker, vice president of innovation, weighs in on net-positive buildings and the role of modern building codes**

The pressure for companies and cities to consider the climate crisis — and associated risks — in post-COVID 19 recovery strategies is increasing. How feasible are net-positive buildings, and how might our new economic landscape affect their development? Ryan Colker, vice president of innovation for the Code Council, and ICC member Andrew Klein, a professional engineer and code consultant for the Building Owners and Managers Association International, discuss the issue in a recent GreenBiz 350 podcast with host Heather Clancy. Click [here](#) to listen.

### **National forum launched for solar and solar-plus-storage code and permitting solutions**

A [newly launched, three-year project](#) — supported by a cooperative agreement with the U.S. Department of Energy [Solar Energy Technologies Office](#) — will bring together diverse stakeholders to identify and develop solutions to solar and solar-plus-storage code enforcement and permitting challenges. The project builds upon, and will significantly expand, the work of the Sustainable Energy Action Committee (SEAC), an organization founded in California in 2015 as a forum for collaboration on guidelines for implementation of codes and standards for permitting and inspection practices of renewable energy systems. Under the recent U.S. Energy Department award, the Interstate Renewable Energy Council (IREC) will lead the administration of SEAC and facilitate its expansion into a national forum. Other key partners in the project include the International Association of Electrical Inspectors (IAEI), the International Code Council, UL LLC, the International Association of Fire Fighters, the National Association of State Fire Marshals (NASFM), the Solar Energy Industries Association (SEIA), the U.S. Energy Storage Association, and the California Solar & Storage Association (CALSSA).

### **2018 IWUIC Code and Commentary is now available**

The 2018 International Wildland-Urban Interface Code (IWUIC) and Commentary is now [available](#). This comprehensive publication provides a convenient reference for regulations in the 2018 IWUIC, and the format includes the full text of each section, table and figure in the code, followed immediately by the commentary applicable to that text. Each section's narrative includes a statement of its objective and intent, and usually includes a discussion about why the requirement commands the conditions set forth. Code text and commentary text are easily distinguished from each other and helpful illustrations are included for understandability.

### **Take your professionalism to the next level**

The International Code Council's new online discussions platform is where building safety professionals can ask questions, gather with industry colleagues virtually, and discuss relevant topics related to building safety, codes, design and education, in a peer-to-peer environment.

[www.iccsafe.org/discussions](http://www.iccsafe.org/discussions) (You may need to sign out and log back in to myICC to access this new feature). Digital training and assessment opportunities are also available to help members take their professional development to the next level. Members will be able to participate in direct discussions with ICC Government Relations and technical staff who will be leading several topic discussions.

### ***GOT PULSE?* Episode 28: COVID-19 and safety practices for reopening buildings**

In this latest episode, the Code Council's Vice President of Innovation Ryan Colker leads a discussion on safety procedures for reopening business in the wake of COVID-19. Colker is joined by Chief Executive Officer of the Building Owners and Managers Association Henry Chamberlain and Assistant Director of the Clark County Department of Building & Fire Prevention Sam Palmer. Listen [here](#).

### **International protocol on building temporary healthcare facilities**

In examining the response by building regulators around the world to the urgent need for additional healthcare facilities during the early stages of the COVID-19 pandemic, several key lessons and best practices can be drawn. The International Protocol on Building Temporary Healthcare Facilities in Emergency Situations — developed based on input from members of the Inter-Jurisdictional Regulatory Collaboration Committee and compiled by representatives from the Australian Building Codes Board, the International Code Council and the Scottish Government — is a discussion draft document that will undergo a review and update every 21 days. The next version will be released on July 17, 2020. Comments are currently being sought and can be submitted to [Judy Zakreski](#), vice president of Global Services for the International Code Council. [Read more](#)

### **Upcoming from the [ICC Learning Center](#): Institutes, training, webinars, etc.**

Online learning is available from the ICC Learning Center. Find course listings you'd like to attend in the [Learning Center](#) using the Search function. Single-day training events are an opportunity to focus on topics to ensure your code knowledge stays up to date, with some seminars offering a Virtual Classroom option so you can participate in the event from any location with an internet connection:

- July 9 - [2018 IRC Essentials](#).
- July 21 - [Inspector Skills](#).
- July 22 - [Basic Code Enforcement](#).
- July 23 - [2018 IBC Means of Egress](#).
- August 13 - [Essential Skills for Rising Leaders](#).
- August 18 - [Effective Communication](#).
- August 25 - [Mass Timber Building and the IBC®](#).
- September 1-2 - [Permit Tech Institute](#).
- September 10 - [Formulating an Effective Code Enforcement Program](#).
- September 30 - [Millennials in Code Enforcement](#).

- November 18 - [Essential Skills for Rising Leaders](#).
- Available daily online, [2015 Permit Technician 14 Study Guide](#).
- Available daily online, [IRC® Online Study Guide for Residential Building Inspectors B1](#).

Plus check out more upcoming virtual learning and webinar offerings here:

- Virtual landing [page](#)    Webinar landing [page](#)





# Efficiency Division Updates

CALIFORNIA ENERGY COMMISSION

REACO ICC Monthly Meeting

July 2020

## Efficiency Division Updates

- Business Meeting on June 10. The following items were approved:
  - Approved the local jurisdictions of the city of Richmond and the city of Hayward for energy ordinances that exceed the energy efficiency requirements of the 2019 Energy Code (Title 24, Part 6).
  - Resolution approving the National Energy Management Institute Committee (NEMIC) nonresidential mechanical acceptance test technician certification provider update report for the 2019 Energy Code. This allows NEMIC to administer its proposed program changes and training curricula adjustments for the 2019 Energy Code.
- Next Business Meeting on July 8. **Business Meetings Agendas and Minutes:**  
<https://www.energy.ca.gov/proceedings/business-meetings>
- Several new **solar assessment tools** are approved. These tools can be used to verify and document the shading conditions of the installed PV system as specified in JA 11.4(a).
- The **Reach Codes Program** has released the 2019 Mid-Rise New Construction Cost-Effectiveness Study. This report documents cost-effective combinations of measures that exceed the minimum state requirements, the 2019 Energy Code, effective January 1, 2020, for new mid-rise (four- to seven-story) multifamily residential construction.

## Energy Standards Training and Events

- **Energy Commission training:** [www.energy.ca.gov/title24/orc/schedule\\_oe/index.php](http://www.energy.ca.gov/title24/orc/schedule_oe/index.php)
- **Energy Code Ace training:** [www.energycodeace.com/training](http://www.energycodeace.com/training)
- **PG&E training:** [www.pge.com/pec](http://www.pge.com/pec)
- **BayREN training:** [www.bayrencodes.org/services/trainings/](http://www.bayrencodes.org/services/trainings/)

## Energy Code Resources

- **Online Resource Center:** <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center>
- **Energy Standards Hotline email** [Title24@energy.ca.gov](mailto:Title24@energy.ca.gov) or call 800-772-3300

*To receive regular updates, sign up and respond to the confirmation email:*

- **Blueprint Newsletter email list:** <https://www.energy.ca.gov/newsroom/blueprint-newsletter>
- **Building Standards email list:** <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards>
- **Appliance Standards email list:** <https://www.energy.ca.gov/rules-and-regulations/appliance-efficiency-regulations-title-20>



## 2022 Energy Code Pre-Rulemaking

- Visit the [California Energy Codes & Standards \(CASE\) website](https://title24stakeholders.com/) to review 2022 initiatives and participate in the development process stakeholder meetings:  
<https://title24stakeholders.com/>
- Visit the [CEC 2022 Energy Code web page](https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency) to stay up to date:  
<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>

## California Energy Commission 2022 Code Development Schedule

Estimated Date	Activity or Milestone
July 2019 - April 2020	Utility-Sponsored Stakeholder Workshops
April, 2020	All Initial CASE/PUBLIC Reports Submitted to Commission
April - August 2020	Commission-Sponsored Workshops
July, 2020	All Final CASE/PUBLIC Reports Submitted to the Commission
July - September 2020	Express Terms Developed
January, 2021	45-Day Language posted and set to list serve, Start of 45-Day review/comment period
January, 2021	Lead Commissioner Hearing
April, 2021	Adoption of 2022 Standards at Business Meeting
May - November 2021	Staff work on Software, Compliance Manuals, Electronic Documents
May - November 2021	Final Statement of Reasons Drafted and Approved
October, 2021	Adoption CALGreen (energy provisions) - Business Meeting
December, 2021	CBSC Approval Hearing
January, 2022	Software, Compliance Manuals, Electronic Documents Available to Industry
January - December 2022	Standards Training (provided by 3rd parties)
June 1, 2022	6 Month Statutory Wait Period Deadline
January 1, 2023	Effective Date

# BLUEPRINT

CALIFORNIA ENERGY COMMISSION  
EFFICIENCY DIVISION

## IN THIS ISSUE

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  - Nonresidential Outdoor Lighting
  - Nonresidential Ventilation Controls and Filtration for Alterations
  - Residential Filtration for Alterations
  - Residential Future HPWH Dedicated Receptacle
  - Residential Single-Width Headers
  - Residential PV Exception
  - Residential ADUs
  - Residential Non-HERS Compliance Forms
  - Residential Duct Testing
  - Camp Dwelling Occupancy

## Nonresidential Indoor Lighting Alterations

Under the 2019 Building Energy Efficiency Standards (Energy Code) **Section 141.0(b)2I**, nonresidential indoor lighting alterations requirements are applicable when 10 percent or more of luminaires in an enclosed space are altered. Alterations to the lighting system can include (but are not limited to) replacing, removing, reinstalling, relocating, adding, and modifying luminaires. Alterations to wiring that serves luminaires are considered lighting alterations.

There are three compliance pathways for nonresidential indoor lighting alterations. For the first two compliance pathways, alteration requirements depend on the proposed lighting power:

- Section 141.0(b)2Ii – Lighting power that is greater than 80 percent, and up to 100 percent of the lighting power allowance. The project must meet all mandatory lighting control requirements as applicable (manual area, multilevel,

automatic shut-OFF, automatic daylighting, and demand responsive controls).

- Section 141.0(b)2Iii – Lighting power that is 80 percent or less of the lighting power allowance. The project must meet manual area control requirements and automatic shut-OFF control requirements as applicable.

In the third compliance pathway, buildings or tenant spaces that are 5,000 square feet or less may utilize a different method of compliance if meeting specific criteria.

- Section 141.0(b)2Iiii - The lighting alteration must be a one-for-one luminaire alteration and the altered luminaire power must be at least 40 percent lower compared to the pre-alteration wattage. Lighting power allowance calculations are not utilized for this compliance approach. Control requirements include manual area controls and automatic shut-OFF controls as applicable.

Table 141.0-F includes the specific control requirements for each

compliance approach (Figure 1).

Some enclosed spaces may be exempt from the lighting alteration requirements. Here are some examples of spaces or alterations that do not trigger lighting alteration requirements:

- Enclosed spaces where less than 10 percent of luminaires are included in the lighting alteration.
- Enclosed spaces with one luminaire.
- Alterations that are limited to the addition of lighting controls to an existing lighting system.
- Alterations that are limited to the replacement of lamps, ballasts, or drivers. (Replacing lamps and ballast, or lamps and driver is considered an alteration.)

Refer to Section 141.0(b)2I for the specific language related to the indoor lighting alteration requirements and exceptions.

Table 141.0-F – Control Requirements for Indoor Lighting System Alterations

Control Specifications		Projects complying with Section 141.0(b)2Ii	Projects complying with Sections 141.0(b)2Iii and 141.0(b)2Iiii
Manual Area Controls	130.1(a)1	Required	Required
	130.1(a)2	Required	Required
	130.1(a)3	Only required for new or completely replaced circuits	Only required for new or completely replaced circuits
Multi-Level Controls	130.1(b)	Required	Not Required
Automatic Shut Off Controls	130.1(c)1	Required; 130.1(c)1D only required for new or completely replaced circuits	Required; 130.1(c)1D only required for new or completely replaced circuits
	130.1(c)2	Required	Required
	130.1(c)3	Required	Required
	130.1(c)4	Required	Required
	130.1(c)5	Required	Required
	130.1(c)6	Required	Required
	130.1(c)7	Required	Required
	130.1(c)8	Required	Required
Daylighting Controls	130.1(d)	Required	Not Required
Demand Responsive Controls	130.1(e)	Required	Not Required

Figure 1: Table 141.0-F Control Requirements for Indoor Lighting Alterations

## Nonresidential Outdoor Lighting Cutoff Requirements

Under the 2019 Energy Code, **Section 130.2(b)** requires nonresidential outdoor luminaires with an initial lumen output of 6,200 lumens or greater to meet luminaire cutoff requirements. This is a change from the 2016 Energy Code cutoff requirements which

were triggered for luminaires rated for use with lamps greater than 150 lamp watts. The 2019 Energy Code also now defers to CALGreen Section 5.106.8 for backlight, uplight, and glare (BUG) rating requirements.

CALGreen Code Section 5.106.8 includes additional BUG rating limits for area lighting and for lighting located within a distance of two mounting heights from property lines. The 2019 nonresidential certificate of compliance for outdoor lighting (NRCC-LTO-E) now documents these BUG rating requirements in Table G of the form (Figure 2). The form will automatically populate the maximum allowed BUG

## COVID-19 Essential Workers

The CEC is available to support essential workers in the construction field. The CEC has clarified solar photovoltaic and energy storage installers as essential energy workers during COVID-19 response. For more information see the **CEC's clarification notice** and the message from Chair Hochschild on the **CEC's response to COVID-19**.

ratings from CALGreen Table 5.106.8 based on the user input lighting zone and mounting height distance of the luminaire from property lines. For more information on these requirements, refer to CALGreen Section 5.106.8 and Table 5.106.8.

## 2019 Energy Code Updated with Navigational Links

An **updated version of the 2019 Energy Code** is now available with embedded navigational links which include:

- Linked Table of Contents
- Linked section references in Table 100.0-A
- Links to sections and tables throughout the Energy Code
- Linked index to reference keywords in sections

## Solar Assessment Tools

The 2019 Energy Code includes prescriptive and performance requirements to install solar photovoltaic (PV) systems for newly constructed low-rise residential buildings. As part of the PV requirement, installers must verify and document the shading conditions of the installed PV system as specified in **Reference Joint Appendix JA11.4**. The verification must be done using a solar assessment tool that is approved by the executive director. For a listing of approved tools and more information visit the **solar assessment tools web page**.

G. CUTOFF REQUIREMENTS (BUG)											
Table Instructions: Complete this table for fixtures of ≥ 6,200 initial luminaire lumens indicated on Table F as needing to comply with Cutoff Requirements. Maximum lumens can be found in Title 24, Part 11, Section 5.106.8.											
01	02	03	04	05	06	07	08	09	10	11	12
Name or Item Tag	Complete Luminaire Description	Backlight Rating <sup>2</sup>			Uplight Rating <sup>2</sup>			Glare Rating <sup>2</sup>			Field Inspector
		Mounting Height from Property Line <sup>1</sup>	Max Allowable Backlight Rating <sup>2</sup>	Backlight Rating Per Design	Lighting Type	Max Allowable Backlight Rating <sup>2</sup>	Uplight Rating Per Design	Mounting Height from Property Line <sup>1</sup>	Max Allowable Glare Rating <sup>2</sup>	Glare Rating Per Design	
Ltg1	LED wall pack	> 2 MH from property line	No Limit	B3	Area Lighting	U0	U0	> 2 MH from property line	G3	G3	<input type="checkbox"/> <input type="checkbox"/>
Ltg2	LED cobra head	> 2 MH from property line	No Limit	B3	Area Lighting	U0	U0	> 2 MH from property line	G3	G3	<input type="checkbox"/> <input type="checkbox"/>
											Reset

Figure 2: NRCC-LTO-E Table G

## Q&A

### Nonresidential Indoor Lighting

**Do automatic daylighting control requirements apply to luminaires that fall partially within a daylight zone?**

Yes. Luminaires that are at least 50 percent in a daylight zone must be included in the zone and meet applicable control requirements for that zone. If the luminaire is less than 50 percent in a daylight zone, it does not need to be included in the zone.

**Are multi-segment linear lighting systems treated as a single luminaire?**

No. For linear lighting systems that utilize individual luminaires or segments that can be connected together into a single run, each segment of the run is considered an

individual luminaire. For example, a 24-foot linear lighting run composed of three 8-foot segments is classified as three 8-foot luminaires.

**Do automatic daylighting control requirements apply to linear lighting systems where there are multiple segments wired into a single run?**

Yes. In a multi-segment run the individual luminaires and segments that fall within a daylight zone must be controlled separately within the daylight zone in which they fall. For example, a 24-foot run consisting of three 8-foot luminaires are mounted perpendicular to a window, if one 8-foot segment falls in a primary sidelit zone, one segment falls in a secondary sidelit daylight zone, and one segment is not in a daylight zone, each segment must be controlled separately in each type of daylight zone and separate from luminaires not in a daylight zone (Figure 3).

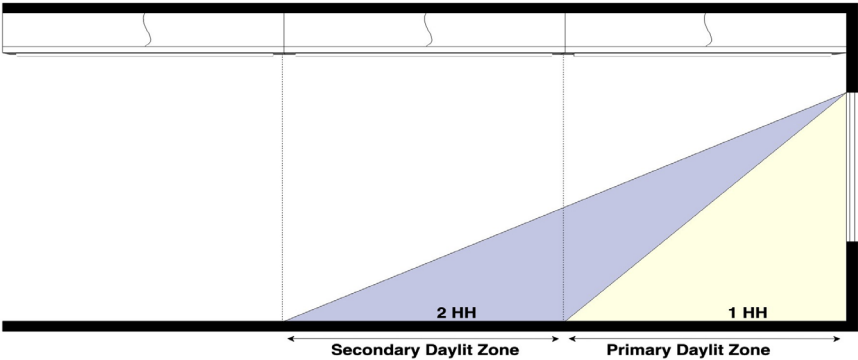


Figure 3: Linear Lighting Primary and Secondary Zones



Nonresidential Outdoor Lighting

For parking lot lighting projects with hardscape other than asphalt or concrete, does the project use the concrete general hardscape lighting power allowance from Table 140.7-A?

Yes. Parking lots where more than 50 percent of the paved surface is material other than asphalt or concrete may use the general hardscape lighting power allowance for concrete hardscape in Table 140.7-A of the 2019 Energy Code

Does exterior emergency lighting need to comply with the outdoor lighting control requirements?

No. Emergency lighting may also be exempt from the control requirements. Exception 1 to Section 130.2(c) provides an exemption to the control requirements for “outdoor lighting not permitted by a health or life safety statute, ordinance, or regulation to be turned OFF or reduced.” Confirm with the enforcement agency as to whether this exception applies to the project.

ventilation air handler replacement, and controls replacement. If any of these are not included in the alteration, DCV is not required. For an addition, if a completely new system is installed, including new ducts, new air handler, and new controls, DCV is applicable. If any of these are not included in the addition, DCV is not required.

Do the requirements for occupant sensing ventilation control (OSVC) per Section 120.1(d)5 and occupant sensing zone control (OSZC) per Section 120.2(e)3 apply to alterations and additions?

No. OSVC and OSZC requirements do not apply to alterations and additions.

Is MERV 13 filtration required for an altered space conditioning or ventilation system?

Yes. MERV 13 filtration is required when the entire space conditioning system or entire ventilation system is replaced. The alteration must include a complete duct system and air handler replacement. If either of these are not included in the alteration, MERV 13 filtration is not required. However, if filtration is added as a compliance option, a pressure drop adjustment credit can be taken for fan power allowance per Section 141.0(b)2C and Table 141.0-D (Figure 5).

TABLE 140.7-A GENERAL HARDSCAPE LIGHTING POWER ALLOWANCE

Type of Power Allowance	Lighting Zone 0 <sup>1</sup> Asphalt/Concrete	Lighting Zone 1 <sup>1</sup> Asphalt/Concrete	Lighting Zone 2 <sup>1</sup>		Lighting Zone 3 <sup>1</sup>		Lighting Zone 4 <sup>1</sup> Asphalt/Concrete
Area Wattage Allowance (AWA)	No allowance <sup>1</sup>	0.018 W/ft²	0.023 W/ft²	0.025 W/ft²	0.025 W/ft²	0.03 W/ft²	0.03 W/ft²
Linear Wattage Allowance (LWA)		0.15 W/lf	0.17 W/lf	0.4 W/lf	0.25 W/lf	0.4 W/lf	0.35 W/lf
Initial Wattage Allowance (IWA)		180 W	250 W	250 W	350 W	350 W	400 W

<sup>1</sup>Continuous lighting is explicitly prohibited in Lighting Zone 0. A single luminaire of 15 Watts or less may be installed at an entrance to a parking area, trail head, fee payment kiosk, outhouse, or toilet facility, as required to provide safe navigation of the site infrastructure. Luminaires installed shall meet the maximum zonal lumen limits as specified in Section 130.2(b).

<sup>2</sup>Where greater than 50% of the paved surface of a parking lot is finished with concrete. This does not extend beyond the parking lot, and does not include any other General Hardscape areas.

<sup>3</sup>Narrow band spectrum light sources with a dominant peak wavelength greater than 580 nm – as mandated by local, state, or federal agencies to minimize the impact on local, active professional astronomy or nocturnal habitat of specific local fauna – shall be allowed a 2.0 lighting power allowance multiplier.

Figure 4: Table 140.7-A (Figure 4). Per footnote 2 in the table, the concrete allowance can only be used for parking lot hardscape and cannot be used for other types of general hardscape.

Does exterior emergency lighting need to comply with the outdoor lighting power allowance requirements?

No. If the emergency lighting is connected to an emergency power source and is used solely for emergency egress, it does not need to meet the lighting power allowance requirements of Section 140.7.

Nonresidential Ventilation Controls and Filtration for Alterations

Do demand control ventilation (DCV) requirements per Sections 120.1(d)3 and 4 apply to alterations and additions?

Yes, if the ventilation system is completely new or completely replaced, then DCV requirements are applicable. For alterations, the alteration must include a complete duct system replacement,

Table 141.0-D Fan Power Limitation Pressure Drop Adjustment

Device	Adjustment Credits
Particulate Filtration Credit: MERV 9 through 12	0.5 in. of water
Particulate Filtration Credit: MERV 13 through 15	0.9 in. of water

Figure 5: Table 141.0-D

## Residential Filtration for Alterations

### Do the MERV 13 filtration requirements apply to low-rise residential HVAC alterations?

Yes, if the alteration to an existing system includes a new or complete replacement duct system, then MERV 13 filtration low-rise residential HVAC requirements will apply. A complete replacement of a duct system includes the replacement of at least 75 percent of the duct system.

## Residential Future HPWH Dedicated Receptacle

For future installation of a heat pump water heater (HPWH), **Section 150.0(n)1A** calls for a 125 volt, 20 amp receptacle, connected to the panel with 10-gauge wire. Could 12-gauge wire be used instead, since it would suffice for 20 amp?

No. The code requires the circuit to be installed in a way that will allow for easy conversion to 240 volt operation. A typical HPWH requires 240 volt at 30 amp, so all conductor wires must be 10-gauge.

### Does Section 150.0(n)1Ai specify an unterminated wire to be left in a junction box?

No. The branch circuit in Section 150.0(n)1A will have an unused conductor wire upon installation. Section 150.0(n)1Ai requires that unused conductor wire be labeled “spare,” and “electrically isolated,” or capped, on both sides (Figure 6).

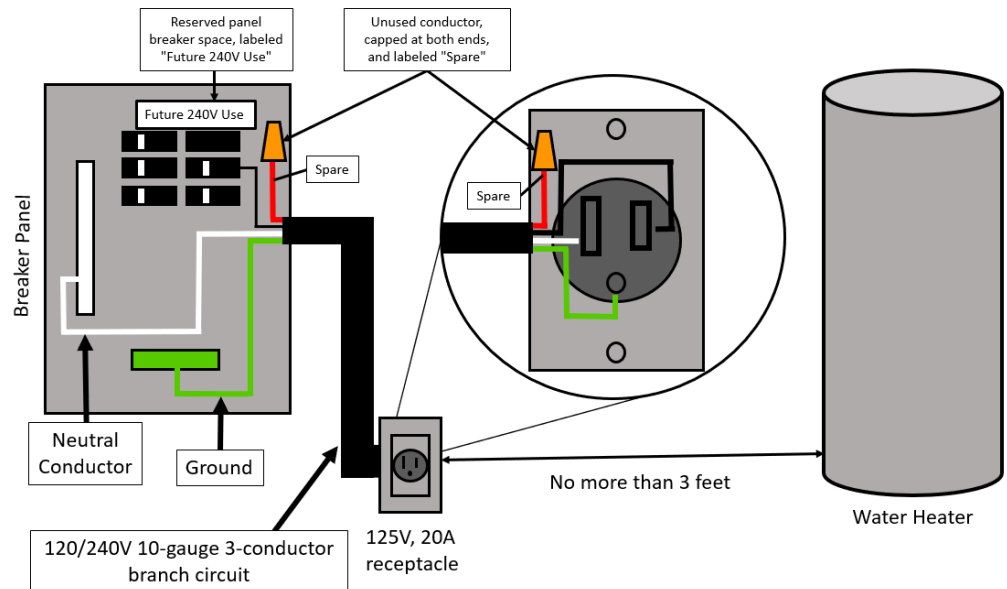


Figure 6: HPWH Ready Connections

### Does single-phase (residential) power with a 2-pole breaker to supply a 240 volt circuit meet the requirements per Section 150.0(n)1Aii, which specifies a single pole breaker space for the circuit, labeled for “Future 240V Use”?

Yes. Conversion to 240 volt operation requires a 2-pole breaker. The reserved single pole circuit breaker space adjacent to the circuit breaker for the branch circuit is to be labeled with the words “Future 240V Use.”

## Residential Single-Width Headers

### Does a single-width header require insulation?

Yes. All exterior window and door headers shall be insulated to a minimum of R-3 for 2x4 framing, or equivalent width, and a minimum of R-5 for all other assemblies. If continuous rigid insulation equal to or greater than R-2 is used across the entire wall, an insulated header is not required.

### Are uninsulated single-width headers allowed in a demising wall, such as the wall between the house and garage?

Yes. Walls between garages and conditioned spaces are only subject to mandatory requirements, which do not require continuous rigid insulation.

For 2019 Energy Code training online or on-demand see Energy Code Ace's **online offerings** for tools, training, and resources.

## Residential PV Exception

**Is there a PV exception for a home rebuilt after it was destroyed in a declared disaster area (such as a wildfire)?**

Yes, if the home was destroyed in a declared disaster before January 1, 2020. **Assembly Bill 178** (AB 178, Dahle, Chapter 259, Statutes of 2019) provides for a PV exception which is available in the latest update to CBECC-Res residential compliance software. Additional information about how to specify this exception can be found in the software and in the CBECC-Res user manual, Section 4.4.1.2. The user manual includes a summary of the income or insurance coverage requirements specified by AB 178. The user manual can be viewed within the CBECC-Res program (select Help, then User Manual) or you can download a copy on the **2019 Approved Computer Compliance web page**. This exception expires on January 1, 2023.

## Residential ADUs

**I would like to build an accessory dwelling unit (ADU) directly above an existing garage. Is this new ADU considered an addition?**

Yes. By adding a second story to the garage, the new ADU is still attached to the garage, and that building's conditioned floor area and conditioned volume are being increased. This is an addition.

**I am converting an existing garage under 1,000 square feet to an ADU. Does this new ADU have to meet the 2019 Energy Code indoor air quality whole building ventilation requirements of Section 150.0(o)?**

Yes. The 2019 Energy Code now requires whole building ventilation for any new dwelling unit, regardless of size. This requirement applies to both newly constructed ADUs, and to ADUs that are classified as additions.

**Does a newly installed kitchen hood require Home Energy Rating System (HERS) verification?**

Yes. All kitchen hoods installed in ADUs must have their certification, airflow, and sone rating verified by a HERS rater.

The CEC welcomes feedback on Blueprint. Please contact the editor at: **Title24@energy.ca.gov**.

## Residential Non-HERS Compliance Forms

**Are residential compliance documents always required to be registered with a HERS provider?**

No. However, if HERS verification is required or modeled for compliance credit, then all residential compliance documents must be registered. Examples of residential prescriptive projects that do not require registered compliance documents include:

- Roof surface replacements
- Water heater replacements
- Window replacements
- Non-ducted wall furnace replacements

**Dynamic non-HERS residential forms** are available for these type of projects.

**Do all residential projects require compliance documents?**

No. **Section 10-103(a)1C** and **Section 10-103(a)3C** state that enforcement agencies may, at their discretion, choose not to require compliance documents for prescriptive residential alteration projects that do not require HERS verification. Prescriptive additions less than 300 square feet, which do not require HERS verification, may also be exempted from submitting compliance documents.

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## Residential Duct Testing

**Are duct systems exempt from duct testing after asbestos abatement or removal or encapsulation?**

No. Exception 3 to **Section 150.2(b)1E** exempts systems from duct testing if existing duct systems are constructed, insulated, or sealed with asbestos. A duct system that has been completely remediated would no longer fall within this exemption. Energy Code regulations do not specify when remediation is effective. The Energy Code defers to the authority having jurisdiction in making this determination.

More information on asbestos may be found in the California State Licensing Board's **asbestos guide for consumers**.

## Camp Dwelling Occupancy

**Is a dwelling associated with an organized camp under Occupancy Group C required to meet Energy Code?**

No. Dwellings classified under group C would be exempt from Title 24, Part 6 requirements. However, occupancy group C is restricted to certain structures or activities associated with an organized camp. Confirm the occupancy group classification of the dwelling with the enforcement agency. All other covered occupancies listed in **Section 100.0(a)** within the organized camp would need to meet the Energy Code requirements.

## FOR MORE INFORMATION

**Online Resource Center (ORC):**  
[www.energy.ca.gov/orc](http://www.energy.ca.gov/orc)

**Home Energy Rating System (HERS):**  
[www.energy.ca.gov/HERS](http://www.energy.ca.gov/HERS)

**Acceptance Test Technician Certification Provider Program (ATTCP):** [www.energy.ca.gov/ATTCP](http://www.energy.ca.gov/ATTCP)

**2019 Approved Compliance Software:**  
<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency-2>

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