



August 6, 2019 Meeting Minutes

Redwood Empire Association of Code Officials

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

The August 6th meeting was held at Cattleman's Restaurant in Petaluma

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

The meeting was called to order at 12:06 pm by Charles Lucas, which was followed by the pledge of allegiance.

2. SELF INTRODUCTIONS (Officers, Guests, Members)

There were 29 members and guests in attendance.

3. APPROVAL OF MINUTES -

A motion by Mike Enright and second by Glenn Schainblatt were made and the minutes of the May meeting were approved.

4. OFFICERS REPORTS

President: Charles Lucas – Officers met last week to discuss upcoming issues.

Vice President: Jay Bradford – No report.

Treasurer: Steve Buffenbarger - Checking account report for the months of May, June, and July:

Checking beginning balance (May): \$26,089.75

Deposits (all 3 months): \$392.40 – includes 1 membership lunch and misc.

Withdrawals (all 3 months): \$1,101.19 – includes payments for WIX, 2 officer lunches, 1 membership lunch, donation to Veteran family's ICC Region I.

Checking ending balance (July): \$25,380.96

Secretary: David Willoughby – Announced that the May, June, and July bank statements for the Treasure's report was verified by the Secretary.

Past President: Tony Piazza – No report.

5. LIAISON REPORTS

AIARE: No Report

CSI: Christian Holbrook: No meeting in August. Next meeting is the 1st Thursday of the month, September 5th.

SCFPO: Glenn Schainblatt: Devon Gambonini and Ian Hardage from SCFPO gave the report and said that the last meeting was in Sebastopol and had a good turnout. The focus right now is getting the youth fire center program up and running, the first youth fire academy is scheduled for September (youth involved in fire setting – setting them on a better path). Still ICC scholarships available for ICC Hearings. Talked about the Red Flag program (fire danger days). Talked about 2019 code adoptions and almost done.

ICC: Chris Ochoa: Announced that the Building Safety Month Program was successful, 47 building and safety events nationwide, 2 congressional resolutions, 34 gubernatorial proclamations, and 350 proclamations from local jurisdictions. July 25th ICC partnered with CALBO for a roundtable in Sacramento with help from SEAC and assemblyman Adrin Nazarian. Theme was functional recovery. FEMA was present and had great speakers and breakout sessions. Successful event and will continue. If interested there is some video of the session available at ICC or CALBO website – called the Seismic Roundtable. Online testing, PRONTO, is now available. ICC offering a free trial called PRONTO 101. ICC's Annual Conference coming up October 20th. Deadline for scholarships is August 9th. Get hotel booking early, they are going fast.

CBOAC: Glenn Schainblatt: Glenn said they are working on the conference for next year at Morrow Bay in May, in contact with FEMA and will come back for ½ day presentation for flood plain managers.

CALBO: Brad Wungluck: Not present. He sent Charles an email stating several CALBO board members attended the Seismic Roundtable, preparing for the 4 ed weeks, If anyone has ideas for classes or wants to be an instructor let him know. He hopes to attend our meeting next month.

CEC: Amie Brousseau: Amie mentioned that the software for the 2019 code is ready to go. The CEC has a new website. Already talking about 2022 Codes, the first meeting is August 22nd and thru the fall. If interested go to the <https://title24stakeholders.com/> website.

IAEI: Doug Hughes: Not Present.

BayREN: Carolyn Glanton: Carolyn said they have been following the REACH Codes for 2019, a lot of interest statewide. Working with NCBE on a workshop for contractors at NCBE on Wednesday, August 14th, 9:00 a.m. to 11:00 a.m. Residential new construction, talk about the energy codes, what Reach codes are, new technology, and cost and marketability. Chris Conden said she is working with the BayREN Codes and Standards Committee and they are putting on training next Tuesday, August 13th, on Residential Net Zero and Heat Pump Water Heaters 11:30 to 3:30. Looking at offering more training on 2019 codes and are willing to have training at other locations. Get ahold of Chris to schedule something. For BayREN events please visit www.bayrencodes.org/events/.

ICC Region 1: Glenn Schainblatt: Charles attended the meeting by phone. Glenn mentioned that they are looking for chapters to host or donate to the hospitality suite.

6. COMMITTEE REPORTS

Education Committee: Glenn Schainblatt mentioned that the 2-day disabled access training is scheduled and that the flyer and registration are up on the REACO website. Thanks go to Darrel Philips for putting the training together. The instructor is John Caprarelli and he has some videos on YouTube you can check out. The class will be at the North Coast Builders Exchange on September 16th and 17th. Also coming up will be an electrical class put on by Mike Stone on Electrical Residential and Commercial inspection, the day is TBD. CALBO Ed Week coming up at 4 locations in the fall and winter.

Mike Enright made a motion to have the cost of the training be free for members and he brought up the point that originally When Daryl Phillips announced he would be organizing the accessible training that he wanted to make the training free for members and that has not happened with the training scheduled for September 16th and 17th. A discussion ensued that included:

1. Use of REACO's ICC education benefit in which we can receive a reimbursement of up to \$1,200.
2. Mike Renner from Four Leaf pledging to cover up to ½ the cost of providing members free training.
3. Steve Buffenbarger reported the costs for the training which include \$4,800 for the instructor, \$10 per workbook (\$1,000 est.), Lunch and break food and drinks and room (\$1,800 est. and Phillips/Seabrook is covering the cost), continental breakfast (\$500 est.). Total = \$8,100, cost to REACO = \$6,300.
4. Mike Enright would like to see a portion of the \$25,000 reserve that REACO has be used for free training for members.
5. Charles feels folks would come more if they had to pay something like \$50.
6. Eric Seabrook said he is in support of free or very reduced training pricing for members, but since the upcoming disabled access training has already been set up and flyers are already out it would be better to work this into future trainings.
7. Steve Buffenbarger also mentioned that jurisdictions have been charging the BSC fee which a portion goes back to the local jurisdiction to be used specifically for disabled access training. Therefore jurisdictions have plenty of money to send folks to these type of trainings.
8. Mike Enright tabled his motion and Eric Seabrook said that perhaps we could look at making it a policy that members would receive free or reduced training costs in the future. Mike asked to have the Education Committee make a recommendation to the board to incorporate free trainings for members and Eric said that they would be happy to do that.

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

Audit Committee: no report

PV Committee: No report. Will give a report under New Business.

7. PROGRAM

Amie Brousseau with the Energy Commission: Presentation of the summary of changes for the upcoming 2019 Energy code for both residential and commercial occupancies and touched on REACH Codes.

8. CORRESPONDENCE AND ANNOUNCEMENTS

Charles Lucas: Announced that REACO had numerous people lobby for their support in seeking elections to board positions for ICC including Alan Boswell, Cindy Davis, Michael Boso, and Nancy Springer. All but Nancy are from out of state and we already gave our support for Randy Metz, the Fire Marshal for Carlsbad. Chris Ochoa gave us a rundown on the folks asking for support: Michael Boso is currently on the board and is running for 2 more positions for 3-year terms in Section D (Midwest); Nancy Springer the CBO for Sac. County and Randy Metz the FM for Carlsbad and past president of Region I are running for the same seat; Cindy Davis is currently the Secretary for the ICC Board and she is running for Vice President; Alan Boswell is currently on the board in Southern Section and running for another. Charles said he would send out an email with both applicants resumes and we could have a vote at the September meeting (after the meeting Glen Schainblatt sent out an email confirming that REACO approved a support letter for Randy Metz at our February 5, 2019 meeting). Kevin McOsker, the President of ICC Region I, thanked REACO for our \$250 donation to the Military Families Program. The BSC produced IB-02 regarding invalidation for recycled water standards for outdoor irrigation. Code of Honor Scholarship still available, must apply by August 9, 2019. One of the scholarships is for a local ICC Chapter Officer to attend the ICC Hearings in October; Glenn Schainblatt, Mike, Ian, Justin, and Doug Hughes are going. Mike Renner mentioned that NorCal FPO is having a golf tournament in Vallejo coming up and that Susan Dowdy, Stuart Tom, and Mia Marvelli from the BSC put together a video on California Code adoption for local jurisdictions, the video is on the BSC or ICC website.

Here is the link to the YouTube video https://www.youtube.com/watch?time_continue=15&v=rW0H3XaWdk4

NEW BUSINESS

The solar sub-committee consisting of Charles Lucas, Carolyn Glanton, Christian Holbrook, and David Willoughby has finalized the revised "Expedited Residential Rooftop Photovoltaic Systems Plan Review, Fees, and Inspections" handout and checklist. This process has taken 6 – 8 months and we are now ready to ask the members to approve the document so that it can be posted on our website and distributed throughout the region. There was some discussion and Mike Enright made a motion to allow any local agencies to use the document, but if the agency does not want to use the document then their logo should be removed from the bottom of the form. Mike added to the motion that the form be sent out to the jurisdictions whose logo is on the bottom and if they don't want to use it then their logo be removed. Jay Bradford amended the motion to approve the content of the document and that the logos can added or removed as needed. Glenn Schainblatt seconded the motion. A vote was taken all in favor and no opposed.

Glenn Schainblatt and Ian discussed the CSFM's 2019 CRC amendment that if a residential fire tank and pump are used then the pump shall be connected to a 220v circuit breaker shared with a common household appliance. This requirement is in conflict of the Electrical Code and the purpose of the discussion is to come up with local amendments that would not require combining motors/appliances on the same circuit. An ad-hoc committee was formed to come up with a solution for this. A lot of discussion followed. The committee came up with adding an option that would allow the intent of the code to be met by providing a visual and audible alarm on the pump circuit so that if the electrical power fails the alarm will sound. The code language was provided in the agenda that can be locally adopted. Mike Enright made a motion for REACO to adopt standardized language that Building Officials may use as an alternative method of compliance to meet the CSFM's CRC amendment for the use of the tank and pump fire sprinkler system. Mike Renner said that Four Leaf is approving systems in the rebuilding going on in Paradise currently. Glenn Schainblatt seconded the motion, Charles called for a vote and all in favor, no opposed.

9. OLD BUSINESS

1. The Board has updated By-Laws on the website
2. The Bylaw amendment voted on in 2017 that approved the change to the Treasurer's term of office was never completed (signed by 4 officers), so we are starting over to complete the process. The proposed bylaw amendment was submitted to the board and contains the signatures of 5 members, and it was discussed at this meeting. All members will be notified of the proposed Bylaw amendment and a ballot will be sent out to all the voting members to vote on and the results will be reported at the next meeting and if passed by a minimum of 2/3 voting members then the officers will sign the amendment and it will be completed. Once the amendment is signed by the officers the amendment will become effective 30 days after the approved vote and signing.

10. LEGISLATIVE NEWS

11. CODE ISSUES

1. New Code adoption discussion. Ian and Devon from SCFPO spoke about the efforts the fire folks have been making to get as many as the jurisdictions in the area adopt the same or similar local amendments. The next FPO code discussion meeting will be the 4th Wednesday of September (September 25th). The members asked if we could postpone next month's program and use the time to discuss and compare our local amendments. Eric Seabrook suggested everyone send out an email outlining their local amendments and discuss at the September meeting or at least bring the amendments to the meeting to share.

12. ADJOURNMENT

The meeting was adjourned at 2:23 pm by Charles Lucas.

The next meeting will be held on September 3rd, 2019 at Cattlemen's Restaurant, 512 Petaluma Blvd. Petaluma. Registration is \$25, lunch is provided. The meeting starts at 12 noon.



REACO ICC Monthly Meeting
August 6, 2019

Efficiency Division Updates

- At the business meeting on May 15, the commission approved the 2019 Residential Compliance Software, CBECC-RES, the 2019 Nonresidential Compliance Software, CBECC-COM, and the 2019 ACM manuals. The next business meeting is August 12. [Business Meetings Agendas and Minutes](https://www.energy.ca.gov/proceedings/business-meetings): <https://www.energy.ca.gov/proceedings/business-meetings>
- The [2019 Residential Compliance Software, CBECC-RES 2019.1.0 and Nonresidential Compliance Software, CBECC-COM 2019.1.0 and the ACM manuals](https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency) are available: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>
- Updated [Energy Commission website](http://www.energy.ca.gov): www.energy.ca.gov
- New [2016 Energy Code covered processes resources](https://www.energy.ca.gov/title24/orc/coveredprocesses/2016_coveredprocess.html), Elevators fact sheet, and Escalators and Moving Walkways fact sheet, are available: https://www.energy.ca.gov/title24/orc/coveredprocesses/2016_coveredprocess.html
- New [Blueprint Newsletter, Issue 126, April - June 2019](https://www.energy.ca.gov/newsroom/blueprint-newsletter) is now available: <https://www.energy.ca.gov/newsroom/blueprint-newsletter>
- 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/>

Energy Standards Training and Events

- [Energy Commission training](http://www.energy.ca.gov/title24/orc/schedule_oe/index.php) upcoming dates and locations: www.energy.ca.gov/title24/orc/schedule_oe/index.php
 - 8/6: REACO ICC Chapter - 2019 Energy Standards Changes
 - 8/9: City of Watsonville – 2019 Nonresidential Energy Code changes
 - 8/26-8/29: CALBO Ed Week Newport Beach – 2019 Energy Code, 2019 Submittal Requirements, and exhibit booth.
- [Energy Code Ace training](http://www.energycodeace.com/training): www.energycodeace.com/training
- [PG&E training](http://www.pge.com/pec): www.pge.com/pec
- [BayREN training](http://www.bayrencodes.org/services/trainings/): 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): <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center>
- [Energy Standards Hotline email](mailto:Title24@energy.ca.gov) 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): <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): <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): <https://www.energy.ca.gov/rules-and-regulations/appliance-efficiency-regulations-title-20>

2022 Energy Code Pre-rulemaking Utility Sponsored Stakeholder Meetings

Stakeholder Meeting Topic	1st Meeting Date	2nd Meeting Date (Tentative)
Multifamily HVAC & envelope	August 22, 2019	January 9, 2020
Lighting	September 5, 2019	January 16, 2020
Grid harmonization	September 10, 2019	January 23, 2020
Covered processes	September 19, 2019	January 30, 2020
Multifamily water heating	October 3, 2019	January 30, 2020
Single family HVAC	October 10, 2019	February 11, 2020
Nonresidential HVAC	October 17, 2019	February 13, 2020
Nonresidential envelope	October 24, 2019	February 20, 2020
Single family whole building & nonresidential software improvements	November 12, 2019	February 27, 2020

2019 Building Energy Efficiency Standards

Frequently Asked Questions

The effective date of the 2019 Building Energy Efficiency Standards is January 1, 2020

What are Building Energy Efficiency Standards?

Building energy efficiency standards are designed to reduce wasteful, uneconomic, inefficient or unnecessary consumption of energy, and enhance outdoor and indoor environmental quality. The standards are adopted into the California Code of Regulations (Title 24, Part 6). They apply to newly constructed buildings and additions and alterations to existing buildings.

"The buildings that Californians buy and live in will operate very efficiently while generating their own clean energy. They will cost less to operate, have healthy indoor air and provide a platform for 'smart' technologies that will propel the state even further down the road to a low emissions future."

- Commissioner Andrew McAllister

Standards ensure that builders use the most energy efficient and energy conserving technologies and construction practices, while being cost effective for homeowners over the 30-year lifespan of a building.

The California Energy Commission is responsible for adopting, implementing and updating the standards every three years. Local city and county enforcement agencies have the authority to verify compliance with all applicable building codes including these standards.

How much energy will the 2019 standards save?

Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. This will reduce greenhouse gas emissions by 700,000 metric tons over three years, equivalent to taking 115,000 fossil fuel cars off the road. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.

How much will the 2019 standards add to the cost of a new home?

On average, the 2019 standards will increase the cost of constructing a new home by about \$9,500 but will save \$19,000 in energy and maintenance costs over 30 years. Based on a 30-year mortgage, the Energy Commission estimates that the standards will add about \$40 per month for the average home, but save consumers \$80 per month on heating, cooling and lighting bills.

What is new to the 2019 standards?

The standards require solar photovoltaic systems for new homes.

For the first time, the standards establish requirements for newly constructed healthcare facilities.

On the residential side, the standards also encourage demand responsive technologies including battery storage and heat pump water heaters and improve the building's thermal envelope through high performance attics, walls and windows to improve comfort and energy savings. In nonresidential buildings, the standards update indoor and outdoor lighting making maximum use of LED technology.

For residential and nonresidential buildings, the standards enable the use of highly efficient air filters to trap hazardous particulates from both outdoor air and cooking and improve kitchen ventilation systems.

Do the 2019 residential standards get us to zero net energy?

Homes built in 2020 and beyond will be highly efficient and include photovoltaic generation to meet the home's expected annual electric needs. Because smarter buildings perform better and affect the grid less, the standards also include voluntary options to install technology that can shift the energy use of the house from peak periods to off-peak periods.

In 2008, California set energy-use reduction goals targeting zero-net-energy use in all new homes by 2020 and commercial buildings by 2030. The goal meant that new buildings would use a combination of energy efficiency and distributed renewable energy generation to meet all annual energy needs.

However, California's energy landscape has changed since then. Two important policies – the Renewable Portfolio Standards (RPS) and net energy metering rules (NEM) – affect the value of rooftop solar generation.

The RPS requires utilities to have 50 percent of their electrical resources come from renewables by 2030. As a result, electricity produced for the grid is already much cleaner than 10 years ago.

NEM rules limit residential rooftop solar generation to produce no more electricity than the home is expected to consume on an annual basis. If the home generates more, the surplus is compensated at much lower than the retail rate (which can be a difference of \$.10 a kilowatt-hour or more).

The Energy Commission's standards must be cost effective and bring value to the grid and environment.

Because the grid is cleaner and residential rooftop solar customer compensation for over generation is very limited, it is critical that rooftop solar generation does not substantially exceed the home's electricity use. It is ideal to generate the electricity and have it used onsite versus exporting it to the grid at a time it may not be needed. When the rooftop solar generation is entirely used to offset on-site electricity consumption, then the home has virtually no impact on the grid, reducing the home's climate change emissions.

Looking beyond the 2019 standards, the most important energy characteristic for a building will be that it produces and consumes energy at times that are appropriate and responds to the needs of the grid, which reduces the building's emissions.

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CALIFORNIA
ENERGY COMMISSION

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CALIFORNIA'S 2019 RESIDENTIAL BUILDING ENERGY EFFICIENCY STANDARDS

CALIFORNIA ENERGY COMMISSION

The state's energy efficiency standards for new buildings and appliances have saved consumers billions in lower electricity and natural gas bills. The 2019 Building Energy Efficiency Standards for residential buildings includes a first-in-the-nation requirement to install solar photovoltaic systems. Other features enable homes to reduce the electricity demand from the grid, helping to reduce energy bills and the carbon footprint.

\$19,000 SAVINGS OVER A 30 YR. MORTGAGE | INITIAL COST \$9,500



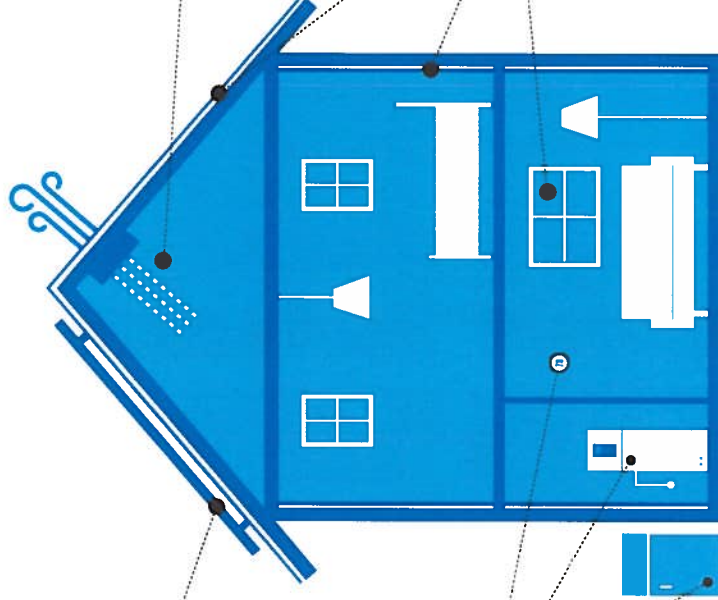
SOLAR PHOTOVOLTAIC SYSTEM

Promote installing solar photovoltaic systems in newly constructed residential buildings. The systems include smart inverters with optional battery storage. This will increase the self-utilization of the electricity generated to power the home's electricity loads including plug-in appliances. California is the first state in the nation to require smart systems on homes.



DEMAND RESPONSE COMPLIANCE OPTIONS

Encourage battery storage and heat pump water heaters that shift the energy use of the house from peak periods to off-peak periods. Utilities moving to time-of-use pricing assists the grid to meet the state's climate change goals and helps homes reduce energy bills.



HEALTHY INDOOR AIR QUALITY

Enable using highly efficient filters that trap hazardous particulates from both outdoor air and cooking and improve kitchen ventilation systems. Moving air around and in and out of the home while filtering out allergens and other particles makes the home healthier.



BUILDING ENVELOPE

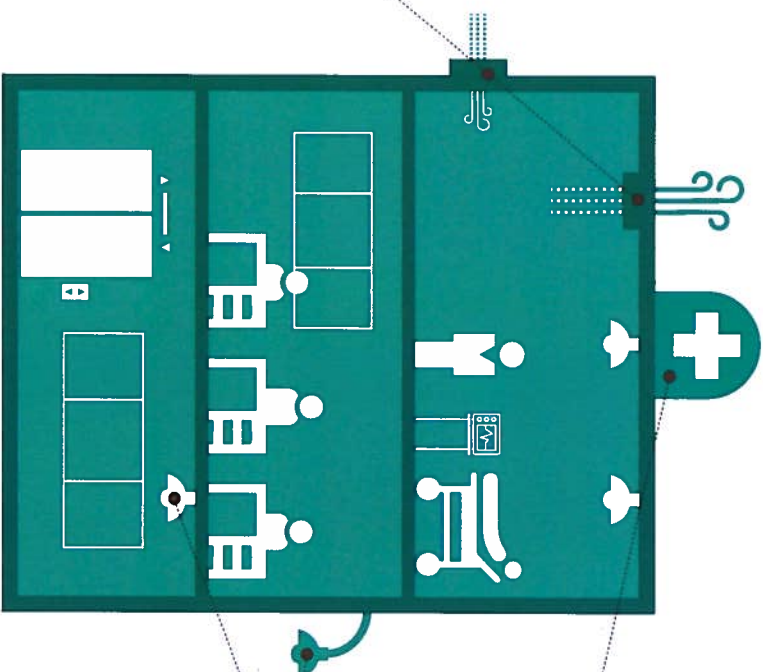
Strengthen insulation in attics, walls and windows to improve comfort and energy savings. Keeping the heat out during the summer and warm air during the winter makes a home more resilient to climate change.

CALIFORNIA'S 2019 NONRESIDENTIAL

BUILDING ENERGY EFFICIENCY STANDARDS

CALIFORNIA ENERGY COMMISSION

The state's energy efficiency standards for new buildings and appliances have saved consumers billions in lower electricity and natural gas bills. The 2019 Building Energy Efficiency Standards for nonresidential buildings include better lighting and ventilation. The standards also extend requirements for the first time to newly constructed healthcare facilities.



HEALTHY INDOOR AIR QUALITY

Enable using highly efficient filters that trap hazardous particulates from both outdoor air and cooking and improve kitchen ventilation systems. Moving air around and in and out of the home while filtering out allergens and other particles helps improve the health of a building. The standards add airflow requirements specific to small duct, high velocity systems, and sets, sensor control requirements.



HEALTHCARE FACILITIES

For the first time, energy efficiency standards extend to newly constructed healthcare facilities and incorporates the appropriate application of standards.



LIGHTING

Update indoor and outdoor lighting values to assume the use of LED lighting. LED lights use little energy and will save money on monthly electricity bills meaning smaller operating budgets for commercial buildings. Maintenance costs are reduced because bulbs do not need to be changed as often. The standards also add occupancy sensing requirements for restrooms.



Free Training:

Residential Zero Net Energy and Heat Pump Water Heaters

Explore How to Make Sustainable Low Carbon Building Choices in Rebuild, New Construction and Home Improvement Projects

Date: August 13, 2019

Time: 11:30 Am – 3:30 PM

Location: North Coast Builders Exchange, 1030 Apollo Way, Santa Rosa CA 95407

Lunch will be provided for class participants.

The County of Sonoma Energy and Sustainability Division is partnering with the Bay Area Regional Energy Network (BayREN) and the Sonoma County Regional Climate Protection Authority (RCPA) to present the following free training at the North Coast Builders Exchange in Santa Rosa.

Residential Zero Net Energy for New Construction

Instructor: Ann Edminster, M.Arch., Design AVenues LLC

Ann Edminster will introduce ZNE fundamentals and practices that are the basis of ZNE projects. Topics covered will include; What is ZNE, how ZNE impacts energy use, home performance with ZNE and how to meet remaining energy needs of a building.

Continuing Education Units: 0.2 ICC CEUs for the 2 hour course

Residential Heat Pump Water Heaters

Instructor: Russ King, M.E., CalCERTS Senior Director of Technical Services

Heat pump water heaters (HPWHs) are an increasingly popular technology that are a highly efficient means of providing hot water to houses. This training will describe HPWHs, when HPWHs are allowed under the 2016 and 2019 Codes, code requirements for installation, and how to complete compliance forms. Topics covered will include; an overview of water heater technologies and trends, identifying HPWHs in the field, Energy Code requirements for HPWH installations and replacements, Energy Code compliance forms, and requirements specific to HPWHs.

Continuing Education Units: 0.1 ICC CEUs for the 1 hour course

For more information:

<https://sonomacounty.ca.gov/General-Services/Energy-and-Sustainability/Calendar/2019-08-13-Residential-Zero-Net-Energy-and-Heat-Pump-Water-Heaters/>

Please register at the following link: <https://forms.gle/GdnNirtxkQ1jKnTB9>

You may also RSVP by contacting our office directly at GSenergy@sonoma-county.org or 707-565-6470.



Lead Locally Pilot Program:

Commercial energy-saving equipment at no cost.

Sonoma Clean Power is offering proven energy-saving equipment at **no cost**- you only pay for installation.

The Lead Locally team is seeking pilot commercial sites for the following technologies:

- **Daylighting.** Bring more daylight indoors and improve your working environment.
- **Insulation.** Next generation insulation is installed underneath your existing drop ceiling to make your building feel cooler in the summer, and warmer in the winter.
- **Induction Cooking.** Increase your cooking speed, staff safety, and kitchen cleanliness.
- **Exhaust Heat Recovery for Commercial Dishmachines.** Keep your dish room cooler by re-using exhaust heat from your dishmachine.

A better energy future for everyone.

By becoming a Lead Locally pilot site, you're building a better future for all of California.

To learn more about the technologies and how to participate:

sonomacleanpower.org/programs/lead-locally
programs@sonomacleanpower.org

Eligible participants must be a Sonoma Clean Power customer and each site located within the Sonoma Clean Power territory. Funds are limited, incentives may vary, and sites will be selected on a first-come, first-served basis after eligibility criteria are met. Other restrictions may apply.

sonomacleanpower.org



California State Fire Marshal Information Bulletin 18-010

Issued: 09-11-18

Tank and Pump Residential Fire Sprinklers

The Office of the State Fire Marshal (OSFM) amended the 2016 California Residential Code (CRC) during the Intervening Code Cycle to clarify that the use of a “tank and pump” water supply for a residential fire sprinkler system was acceptable. The amendment also provided guidance on the installation. These proposals were based on the recommendations of the OSFM 2016 Residential Fire Sprinkler Working Group. The use of the tank and pump system provides home owners with an option when there are limitations with achieving the required water demand to residential fire sprinklers.

Shared power

CRC R313.3.5.2.1 item 2.1 The pump shall be connected to a 220-volt circuit breaker shared with a common house hold appliance (E.g. range, oven, dryer).

The intent of CRC section R313.3.5.2.1 is to provide a reliable source of power that is sufficient during a fire event.

The sharing of power with an appliance will monitor the power source, so that the power supply to the pump is not turned off. The circuit breaker must be listed for the total amperage demand. If the amperage draw exceed the circuit breaker's listing, another circuit breaker should be considered that “monitors” the power supply.

110-Volt supply

There are residences that do not have 220-volt capability. CRC section R313.3.5.2.1 requires a 220-volt circuit for the pump. The intent of requiring the 220-volts is that the residential fire sprinkler pump may not be operated for extended periods of time. It has been found that the 220-volt pump is more reliable in this situation.

Residences where 220-volt power is not available the Authority Having Jurisdiction may consider a reliable 110-volt source through an alternate means of compliance as allowed by CBC section 1.11.2.4. Consideration should include a means to ensure a working pump that may include a method where the pump is operated more frequently.

NFPA—continued

13D—16: Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes as amended*
903.3.1.3, 903.3.5.1.1

***NFPA 13D, Amended Sections as follows:**

Revise Section 6.2.2 to read as follows:

6.2.2 Where a well, pump, tank or combination thereof is the source of supply for a fire sprinkler system, the configuration for the system shall be one of the following:

- (1) The water supply shall serve both domestic and fire sprinkler systems.
 - (a) A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.
 - (b) Any disconnecting means for the pump shall be approved.
 - (c) A method for refilling the tank shall be piped to the tank.
 - (d) A method of seeing the water level in the tank shall be provided without having to open the tank.
 - (e) The pump shall not be permitted to sit directly on the floor.
- (2) A stand-alone tank is permitted if the following conditions are met:
 - (a) The pump shall be connected to a 220-volt circuit breaker shared with a common household appliance (e.g., range, oven, dryer),
 - (b) The pump shall be a stainless steel 240-volt pump,
 - (c) A valve shall be provided to exercise the pump. The discharge of the exercise valve shall drain to the tank, and
 - (d) A sign shall be provided stating: "Valve must be opened monthly for 5 minutes."
 - (e) A means for automatically refilling the tank level, so that the tank capacity will meet the required water supply duration in minutes, shall be provided.
 - (f) A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.
 - (g) Any disconnecting means for the pump shall be approved.
 - (h) A method for refilling the tank shall be piped to the tank.
 - (i) A method of seeing the water level in the tank shall be provided without having to open the tank.
 - (j) The pump shall not be permitted to sit directly on the floor.

Add new Section 6.2.2.1 as follows:

6.2.2.1 Where a fire sprinkler system is supplied by a stored water source with an automatically operated means of pressurizing the system other than an electric pump, the water supply may serve the sprinkler system only.

Add new Section 6.2.4 as follows:

6.2.4 Where a water supply serves both domestic and fire sprinkler systems, 5 gpm (19 L/min) shall be added to the sprinkler system demand at the point where the systems are connected, to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler. For multipurpose piping systems, the 5 gpm (19 L/min) demand shall be added at the domestic connection nearest the design area. This demand may be split between two domestic connections at 2.5 gpm (10 L/min) each.

Revise Section 8.3.4 as follows:

8.3.4* Sprinklers shall not be required in detached garages, open attached porches, carports with no habitable space above, and similar structures.

Add new Sections 8.3.10 and 8.3.10.1 as follows:

8.3.10 Solar photovoltaic panel structures

8.3.10.1 Sprinklers shall be permitted to be omitted from the following structures:

- (1) Solar photovoltaic panel structures with no use underneath. Signs may be provided, as determined by the enforcing agency prohibiting any use underneath including storage.
- (2) Solar photovoltaic (PV) panels supported by framing that have sufficient uniformly distributed and unobstructed openings throughout the top of the array (horizontal plane) to allow heat and gases to escape, as determined by the enforcing agency.

Revise Section 6.2.2 to read as follows:

6.2.2 Where a well, pump, tank or combination thereof is the source of supply for a fire sprinkler system, the configuration for the system shall be one of the following:

- (1) The water supply shall serve both domestic and fire sprinkler systems.
- (a) A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.
- (b) Any disconnecting means for the pump shall be approved.
- (c) A method for refilling the tank shall be piped to the tank.
- (d) A method of seeing the water level in the tank shall be provided without having to open the tank.
- (e) The pump shall not be permitted to sit directly on the floor.

(2) A stand-alone tank is permitted if the following conditions are met:

(a) The pump shall be connected to a 220-volt circuit breaker shared with a common household appliance (e.g., range, oven, dryer), or have a power failure alarm installed acceptable to the Authority Having Jurisdiction that provides an audible and visual signal within the residence at an approved location. The alarm and components shall be listed by an approved agency.

- (b) The pump shall be a stainless steel 240-volt pump,
- (c) A valve shall be provided to exercise the pump. The discharge of the exercise valve shall drain to the tank, and
- (d) A sign shall be provided stating: "Valve must be opened monthly for 5 minutes."
- (e) A means for automatically refilling the tank level, so that the tank capacity will meet the required water supply duration in minutes, shall be provided.
- (f) A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.
- (g) Any disconnecting means for the pump shall be approved.
- (h) A method for refilling the tank shall be piped to the tank.
- (i) A method of seeing the water level in the tank shall be provided without having to open the tank.
- (j) The pump shall not be permitted to sit directly on the floor.

REACO

Overview: Procedure for Amendments to Bylaws

Article V Section 1: Proposed amendments of this Constitution and Bylaws may be submitted at any regular or special meeting provided that the proposed amendment or amendments shall be signed by five (5) members of the Organization. The proposed amendments shall be discussed and all members notified, and shall receive a majority vote of 2/3 of the eligible voting members qualified under ARTICLE II and the California Corporations Code Sec 211 and 152, for final adoption. Upon receipt of affirmative vote of the eligible voting members to approve the amendment(s), certification of final adoption shall be complete when signed by four (4) officers/directors of the Organization at the next regular meeting after the ballots are

Proposed Bylaw Amendment: The underlined and highlighted text below is new and is the only proposed amendment.

Amending Article III:

Section 3: Term of office. The President, Vice President, Secretary, and Treasurer, shall take office at the annual business meeting and shall serve until the succeeding annual business meeting. No officer, other than the Treasurer, shall serve for more than two consecutive terms in the same office.

Reason for this Bylaw Amendment:

With regard to the financial responsibilities of the organization, there is a lack of consistency due to the yearly outgoing Treasurer and the incoming Treasurer and the transfer accounting duties such as; bank account signatory and transactions, reporting receipts and expenses, and assisting with tax preparation.

Steps Necessary to Amend the Bylaw:

1. The proposed amendment must be signed by five (5) members of the Organization.
2. The proposed amendments must be discussed and all members notified.
3. The proposed amendment must receive a majority vote of 2/3 of the eligible voting members.

Action Needed - Step #1: The proposed amendment must be signed by five (5) members of the Organization. By signing and returning this correspondence, you SUPPORT the proposed REACO Bylaw amendment, as noted above.

REACO Member Name (print): Charles Lucas (sign) Charles Lucas

REACO Member Name (print): Jay Bradford (sign) Jay Bradford

REACO Member Name (print): Eric Seabrook (sign) Eric Seabrook

REACO Member Name (print): Steve Buffenburger (sign) Steve Buffenburger

REACO Member Name (print): Tony Piazza (sign) Tony Piazza

Please Scan & Return to: Charles Lucas, REACO President

Email: CLucas@cityofpetaluma.org

Notice: This Bylaw amendment will be discussed at the regular REACO meeting August 6, 2018



Expedited Residential Rooftop Photovoltaic Systems Plan Review, Fees, and Inspections

For Jurisdictions within and around Sonoma County

1. PURPOSE

In an effort to promote a consistent methodology for processing permits by all jurisdictions within and around Sonoma County, this standardized permit submittal has been developed for residential (one and two family dwellings and legally permitted accessory buildings) roof mounted PV systems in cooperation with the Redwood Empire Association of Code Officials and Solar Sonoma County. If the project is located in a historical district, in a homeowner's association, or is a ground mount system, additional requirements for review may be required.

2. APPROVAL REQUIREMENTS

- Installed on a single family home or duplex.
- Maximum power output of 10kW or less.
- The solar system when installed on the roof does not exceed the maximum legal building height.
- The solar system is utility interactive.

3. SUBMITTAL REQUIREMENTS

- Eligibility Checklist** - this form needs to be completely filled out, signed, and dated (the form is included with this handout).
- Electrical Plan** - includes the following:
 - Location of main service, disconnects, inverters, etc. Indicate service size and bus bar rating.
 - Total number of modules, number of modules per string and total number of strings.
 - Make, model, and specification sheets for all equipment including panels, racking, attachment hardware, inverters, optimizers, disconnects, combiner boxes, etc.
 - One-line diagram of system including all components and wire sizes.
 - Specify grounding/bonding, conductor type and size, conduit type and size and number of conductors in each section of conduit.
 - Labeling of equipment as required by CEC, Sections 480, 690, and 705.
 - Site diagram showing the arrangement of panels on the roof, north arrow, lot dimensions and the distance from property lines to adjacent buildings/structures (existing and proposed).



A standard electric plan - PV Toolkit Document #3 or #4 can also be downloaded from the most current edition of the California Solar Permitting Guidebook (CSPG) at [www.opr.ca.gov/docs/20190226-Solar Permitting Guidebook 4th Edition.pdf](http://www.opr.ca.gov/docs/20190226-Solar_Permitting_Guidebook_4th_Edition.pdf).

c. **Roof Plan** – which includes:

- Roof layout.
- PV panel layout, racking attachment points, and conduit runs.
- PV system fire classification and the locations of all required labels and markings.
- Location of code-compliant access pathways are available in Section 324 of the California Residential Code, <https://codes.iccsafe.org/content/chapter/15524/>
- Notes that indicate the type of roof and number of layers, the type, size, and spacing of roof framing members, and roof slope.

d. **Structural Plan** - based on the jurisdiction's one and two-family housing stock and code compliance history, a structural plan may be required. Where there are no visible structural deficiencies or deflection in the roof structure and the maximum racking attachment spacing is 6 foot on center, then complete structural plans are not required. The 6-foot spacing is applicable to conventional framing as well as factory-built trusses where the contractor confirms no attachment points within 1 foot of any splices on the top chord of the truss. If this cannot be confirmed, or the truss spacing is 16 inches on center, then the anchor spacing for factory-built trusses is 4 foot on center alternating.

If a complete structural plan is required, then comply with the submittal requirements for the Structural Criteria for Residential Rooftop Solar Energy Installations - PV Toolkit Document #5 which can be downloaded at,

[www.opr.ca.gov/docs/20190226-Solar Permitting Guidebook 4th Edition.pdf](http://www.opr.ca.gov/docs/20190226-Solar_Permitting_Guidebook_4th_Edition.pdf)

For systems that do not qualify for using the Toolkit Document #5, provide structural drawings and calculations stamped and signed by a California licensed engineer along with the following information:

- Roof framing plan showing the type, size, and spacing of members
- Type of roof covering and number of overlays
- Weight of panels, support locations and method of attachment
- Framing plan and details for any work necessary to strengthen the existing roof structure.
- Site-specific structural calculations

3. **PLAN REVIEW**

- a. Permit applications can be submitted in person or electronically.
- b. Permit applications utilizing and complying with these submittal requirements may be approved “over the counter” at our office when staff is available or may be submitted “over the counter” electronically.
- c. Permits not approved over the counter should be reviewed within 1 to 3 days.

4. **FEES**

Building Department	
Building Standards Commission fee	
Plan Retention fee (depends on # sheets)	
Inspection fee for PV system	
Plan review fee for PV system	
Total Building Department Fees	

5. **INSPECTIONS**

Once all permits to construct the solar installation have been issued and the system has been installed, it must be inspected before final approval and activation is granted for the solar system. On-site inspections can be scheduled by contacting the [JURISDICTION] at [PHONE NUMBER] during working hours. Inspection requests received are typically scheduled for the next business day. Permit holders must be prepared to show conformance with all requirements in the field at the time of inspection. The approved plans and permit shall be onsite for the inspector.

6. **DEPARTMENTAL CONTACT INFORMATION**

For additional information regarding this permit process, please consult our departmental website at [LINK]. Or contact:

[JURISDICTION BUILDING DEPARTMENT]

[ADDRESS]

[PHONE NUMBER]

ELIGIBILITY CHECKLIST FOR EXPEDITED SOLAR PHOTOVOLTAIC PERMITTING OF ONE AND TWO FAMILY DWELLINGS

GENERAL REQUIREMENTS

A. System size is 10 kW alternating current nameplate rating or less	Y <input type="checkbox"/>	N <input type="checkbox"/>
B. The solar array is roof-mounted on one- or two-family dwelling or accessory structure	Y <input type="checkbox"/>	N <input type="checkbox"/>
C. The solar panel/module arrays will not exceed the maximum legal building height	Y <input type="checkbox"/>	N <input type="checkbox"/>
D. Solar system is utility interactive	Y <input type="checkbox"/>	N <input type="checkbox"/>
E. Permit application is completed and attached (if required)	Y <input type="checkbox"/>	N <input type="checkbox"/>

ELECTRICAL REQUIREMENTS

A. For central/string inverter systems, strings are not combined prior to the inverter	Y <input type="checkbox"/>	N <input type="checkbox"/>
B. For central/string inverter systems: No more than two inverters are utilized	Y <input type="checkbox"/>	N <input type="checkbox"/>
C. The PV system is interconnected to a single-phase AC service panel of nominal 120/220 V ac with a bus bar rating of 225 A or less	Y <input type="checkbox"/>	N <input type="checkbox"/>
D. A Solar PV Plan and supporting documentation is completed and attached	Y <input type="checkbox"/>	N <input type="checkbox"/>

STRUCTURAL REQUIREMENTS

A. A completed Structural Criteria and supporting documentation is attached (if required)	Y <input type="checkbox"/>	N <input type="checkbox"/>
B. No visible structural deficiencies or deflection in the roof structure	Y <input type="checkbox"/>	N <input type="checkbox"/>
C. The dwelling is located in a ZERO snow load area	Y <input type="checkbox"/>	N <input type="checkbox"/>
D. The dwelling is not located in Wind Exposure D (structure is not on a hill with an average slope greater than 15%, or within 200 yards of the ocean or large coastal bay)	Y <input type="checkbox"/>	N <input type="checkbox"/>
E. Only one roof covering is installed on the roof	Y <input type="checkbox"/>	N <input type="checkbox"/>
F. I have verified that all rail attachments points are > 1 foot from any splices or connectors on the top chord of trusses (when the roof framing consists of manufactured plated wood trusses), which are spaced at 24 inches on center. <i>If the splice locations are not verified or the truss spacing is 16 inches on center then the rail spacing is required to be 4 foot on center and alternating instead of 6 foot on center.</i>	Y <input type="checkbox"/>	N <input type="checkbox"/>
G. Anchor fastener data: Are 5/16" diameter lag screws with 2.5" embedment into the rafter, used, OR does the anchor fastener meet the manufacturer's guidelines?	Y <input type="checkbox"/>	N <input type="checkbox"/>

FIRE SAFETY REQUIREMENTS

A. Clear access pathways provided	Y <input type="checkbox"/>	N <input type="checkbox"/>
B. Fire classification solar system is provided	Y <input type="checkbox"/>	N <input type="checkbox"/>
C. All required markings and labels are provided	Y <input type="checkbox"/>	N <input type="checkbox"/>
D. A diagram of the roof layout of all panels, modules, clear access pathways and approximate locations of electrical disconnecting means and roof access points is completed and attached	Y <input type="checkbox"/>	N <input type="checkbox"/>

PROPERTY OWNER _____

PROJECT LOCATION _____

INSTALLER COMPANY NAME _____

INSTALLER BUSINESS ADDRESS _____

INSTALLER BUSINESS PHONE _____

INSTALLER LICENSE NUMBER _____

INSTALLER SIGNATURE _____ DATE _____

* By signing this form, I am confirming that all the information I have indicated by a checkmark is true.