

CALIFORNIA ENERGY COMMISSION

BLUEPRINT

EFFICIENCY DIVISION

MARCH- APRIL 2014

Starting July 1 You must comply with the 2013 Building Energy Efficiency Standards!

Residential Early Adopter Program Available NOW

The California Energy Commission launched an early adopter program to assist members of the residential building industry who would like to show compliance with the 2013 Building Energy Efficiency Standards (Title 24, Part 6 and Part 11) prior to July 1.

Specifically, the Energy Commission offers assistance to early adopters of who use the new approved residential compliance software programs (CBECC-Res or EnergyPro).

- Until a Home Energy Rating System (HERS) Provider is approved by the Energy Commission, registered certificates of compliance (CF-1R's), which are required to be submitted to building departments, will *not* be available.
- Unregistered CF-1R's, however, are being accepted by building departments now.
- For final permits to be issued, unregistered CF-1R's must be replaced with a HERS Provider registered CF-1R's as soon as a HERS Provider is approved by the Energy Commission.
- Approval of a HERS Provider is anticipated by July 1, 2014.

2013 Computer Compliance Software

The Energy Commission is required to develop the California Building Energy Code Compliance (CBECC) software, an open source public domain software program designed for modeling buildings for the 2013 Building Energy Efficiency Standards. Approved compliance software is required if you use the Performance Compliance method. This software also provides an access to source code for development of derivative works by vendors. More information on CBECC for residential and commercial buildings, FAQs and training tutorial videos are available at http://www.energy.ca.gov/title24/2013standards/2013_computer_prog_list.html.

You can choose one of two methods to demonstrate compliance:

Prescriptive Compliance Method: There is no software needed for showing compliance with 2013 Building Energy Efficiency Standards prescriptively.

OR

Performance Compliance Method: A software modeling program provides the necessary Alternative Calculation Methods set forth in the 2013 Alternative Calculation Method Reference Manual.

For the Performance Compliance Method, a list of approved compliance modeling programs for the 2013 Building Energy Efficiency Standards can be found on the Energy Commission's website:

http://www.energy.ca.gov/title24/2013standards/2013_computer_prog_list.html.

Included in the list are two programs: public domain software provided by the Energy Commission and proprietary software programs offered by private vendors. The public domain software programs are:

- California Building Energy Code Compliance - Commercial (CBECC-Com)
- California Building Energy Code Compliance - Residential (CBECC-Res)

The CBECC software programs are available for download at no cost. Training tutorial videos for CBECC-Com are available at: <http://www.energy.ca.gov/title24/training/>.

Utility-Sponsored Compliance Software Training Available

Architects, Engineers, Energy Consultants, and Builders! Be ready to comply with the 2013 Building Energy Efficiency Standards on July 1.

California's utilities, in partnership with the Energy Commission, offer software training to prepare you for compliance with the 2013 Building Energy Efficiency Standards. Below are dates for upcoming training classes in your area. Visit the utility website links on page 4 to register for training today!

Southern California Edison: 2-Day courses on May 21- 22 and June 24- 25

SDG&E: 2-Day course on June 16- 17

PG&E: 2-Day courses on June 4 and 18

Builder Energy Code Training Program

PG&E contracts with ConSol, a third-party energy efficiency implementation specialist, to provide the Builder Energy Code Training Program (BECT). BECT provides in-depth code compliance education at no cost, to help the residential new construction and alterations building industry understand and comply with California's 2013 Building Energy Efficiency Standards. BECT focuses on the most comprehensive and cost-effective ways to bring a residence up to, and above, the California Energy Efficiency Standards requirement through building science techniques, effective application of the compliance documentation workflow, and the operational interaction of different construction trades.

BECT is sponsored by PG&E, funded by California utility ratepayers, and administered by PG&E under the auspices of the California Public Utilities Commission. The number of classes are limited and offered on a first-come, first-serve basis. Eligible attendees include residential builders, subcontractors for builders, architects, building department staff and local government staff throughout the PG&E Service Territory.

The trainings are available in a classroom setting, on-site at a builder job location, or online via webinar. If you or your organization would like to host a BECT class or if you would like to attend the next scheduled

class or learn more about the 2013 Building Energy Efficiency Standards, please contact Lynne Martinez at lmartinez@consol.ws or visit the BECT website at www.bect.ws.

Tubular LED Lamps and the 2013 Energy Standards

Lighting Retrofits (also known as Luminaire Modifications in Place) are now regulated by the 2013 Building Energy Efficiency Standards.

The 2013 Building Energy Efficiency Standards allow for the installation of TLED (Tubular light emitting diode) lamps as replacements for linear fluorescent lamps in existing luminaires. However, an existing linear fluorescent luminaire with TLED lamps is not recognized as an LED lighting system for compliance purposes. For Luminaire Modifications in Place, Section 141.0(b)2li requires luminaires to be classified, and power to be determined, according to Section 130.0(c). Following are the requirements for classifying linear fluorescent luminaires and determining input power:

SECTION 130.0 (c) Luminaire classification and power.

6. Luminaires with permanently installed or remotely installed ballasts. The wattage of such luminaries shall be determined as follows:
 - A. Wattage shall be the operating input wattage of the rated lamp/ballast combination published in ballast manufacturer's catalogs based on independent testing lab reports as specified by UL 1598.
 - B. Replacement of lamps in a luminaire manufactured or rated for use with linear fluorescent lamps, with linear lamps of a different technology such as linear LED lamps, shall not be recognized as converting the fluorescent luminaire to a different technology for compliance with Part 6.

Refer to the 2013 Building Energy Efficiency Standards *Nonresidential Appendix NA8, Luminaire Power* for the recommended method to determine input wattage and compliance for Luminaire Modifications in Place with TLED lamps only. The following is a link to that document:

<http://www.energy.ca.gov/2012publications/CEC-400-2012-005/CEC-400-2012-005-CMF-REV3.pdf>

Appendix NA8 contains a limited list of lamp and ballast combinations. These tables provide an alternate voluntary option to the provision in Section 130(c) for determining luminaire power for any lamp and ballast combination specifically listed in Appendix NA8.

The recommendation is to find the identical type and length of linear fluorescent lamp in Appendix NA8, which matches the type and lengths of lamp the TLED is replacing, and use the lowest wattage available for that lamp in the Appendix.

See examples on the next page

Examples:

1. For a Luminaire Modification in Place which contains two 4-foot TLED lamps after modification, the lowest fluorescent wattage available to use is in Table NA8-3 for two F32T8/30ES, EE reduced output ballast for 45 watts.

Therefore, for input wattage compliance purposes, two 4-foot TLED lamps = 45 watts

2. For a Luminaire Modification in Place which contains three 3-foot TLED lamps after modification, the lowest fluorescent wattage available to use is in Table NA8-3 for three F25T8, Electronic reduced output ballast for 59 watts.

Therefore, for input wattage compliance purposes, three 3-foot TLED lamps = 59 watts

Note: The above recommendation does not apply to lighting in newly constructed spaces or to lighting alterations which do not qualify as a Luminaire Modification in Place.

Utility Sponsored Training Available NOW

Standards and compliance software training is available across the state, at city and county building offices, and utility training centers, and is conveniently available via the Energy Commission website. For training opportunities, please check the following websites:

- <http://www.pge.com/pec>
- <http://www.sdge.com/eic>
- <http://www.socalgas.com/innovation/energy-resource-center>
- <https://www.sce.com/wps/portal/home/business/consulting-services/energy-education-centers>
- <https://www.smud.org/etc>

To receive regular information about training and software updates, please sign-up for the Blueprint, Building Standards, and Efficiency list servers located at <http://www.energy.ca.gov/efficiency/listservers.html>.

The California Energy Commission welcomes your feedback on the Blueprint. Please contact Daniel Johnson at (916) 651-3746 or daniel.johnson@energy.ca.gov.

CALIFORNIA ENERGY COMMISSION

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Need Help? Energy Standards Hotline
(800) 772-3300 (toll-free in CA)

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