2013 Standards Update

Interview with Martha Brook, California Energy Commission

BP: What are the reasons for updating the Building Energy Efficiency Standards?

MB: The Standards are updated periodically to comply with the Warren-Alquist Act, which mandates that the California Energy Commission create and periodically update building energy efficiency standards. Updating the Standards is also consistent with the Energy Commission’s Integrated Energy Policy Report, California Air Resources Board’s Climate Change Scoping Plan, and the California Public Utilities Commission’s Long-Term Energy Efficiency Strategic Plan, all of which articulate the importance of the state’s energy policy goal of zero net energy for new residential construction by 2020 and new nonresidential construction by 2030.

BP: What is the process for updating the Standards?

MB: The update to the Standards is based on the combined research and experience of Energy Commission staff, technical experts who advise the Energy Commission, and utility consultants. Energy-efficient techniques and technologies are evaluated to determine whether they are ready for inclusion into the Standards. Considerations of cost effectiveness, technical feasibility, constructability, and potential energy savings are documented in Codes and Standards Enhancement reports. The content of these reports is shared with industry stakeholders in public workshops to raise, discuss, and resolve potential issues. Based on the results of these public workshops, staff decide on a set of updates to include in the proposed Standards. The proposed updates then become the basis of an Energy Commission rulemaking proceeding, in which the Energy Commissioners hear comments on the proposed Standards and make the decision to modify and ultimately adopt the proposed Standards.

BP: How much energy will the 2013 Standards save as compared to the 2008 Standards?

MB: A newly constructed residential building built to the prescriptive requirements of the 2013 Standards will use 25% less energy for lighting, heating, cooling, ventilation, and water heating than one built to the prescriptive requirements of the 2008 Standards. For (nonresidential buildings, there

(Continued on Page 3.)
Where do I find the forms I need to demonstrate compliance with the residential requirements of the 2008 Building Energy Efficiency Standards?
The residential forms are located here.

How do I know which climate zone my project is in?
The Energy Commission’s Climate Zone Page provides several methods for determining which climate zone your project is in.

What is Package D, and where can I find it?
Package D is the standard design package that prescribes the minimum energy efficiency requirements for a home. Package D is found in Table 151-C of the 2008 Building Energy Efficiency Standards.

What is Joint Appendix JA4, and where can I find it?
Joint Appendix JA4 contains insulation values for building materials that must be used in compliance calculations. It can be found in the 2008 Reference Appendices.

How do I know whether an appliance or device I am considering has been approved by the California Energy Commission?
Certification to the Energy Commission is required for certain products to be used in a Building Energy Efficiency Standards-compliant project. To see whether a product you are considering has been certified to the Energy Commission, visit the Commission’s Appliance Efficiency Database.

Which forms are required to be submitted with the application for a building permit?
Every residential construction project will require the appropriate CF-1R form and the Mandatory Measures List (MF-1R) form. The project often will require other forms and worksheets when applicable; refer to the Residential Compliance Manual, Section 2.3 (Table 2-1).

I am reroofing a house. Which forms will I need to submit?
You will need to submit both the CF-1R-ALT form (only complete the “General Information” box on Page 1, the “Roofing Products” table on Page 3, and the signature boxes on Page 5) and the MF-1R form.

I will be installing a new air conditioner or furnace in my house. What forms will my licensed C-20 contractor need to submit? Does the installation need to be verified by a HERS rater?
The contractor will need to submit the CF-1R-ALT-HVAC form for the appropriate climate zone and the MF-1R form. The installation may need to be verified by a Home Energy Rating System (HERS) rater; refer to the Residential Compliance Manual, Section 8.4.2.

Who can sign a form as the Designer or Documentation Author?
Section 2.4 of the 2008 Residential Compliance Manual details who may sign a form as a Designer or Documentation Author.

Whom can I hire to help with completing these forms?
To locate a Certified Energy Analyst or Certified Energy Plans Examiner, visit the website for the California Association of Building Energy Consultants (CABEC) and click “Find an Energy Consultant” or call CABEC at (877) 530-3045.

When can I use electric resistant heating?
Electric resistant heating can be used when there is no gas available to the home, when the existing system is electric resistant heating (even if gas is available), or when using the performance compliance method.

Whom can I hire to do an energy rating of my home?
You can hire a HERS Rater, trained by CalCERTS, which has been certified by the Energy Commission to conduct California whole-house ratings. You can find a list of certified HERS Raters through CalCERTS at www.calcerts.com/Rater_Directory_new.cfm.
(Continued from Page 1.)

will be a 30% reduction in energy use.

BP: What are some of the major changes to the Standards for 2013?

- This is the first Standards update designed to put newly constructed homes on a path to achieve California’s Zero Net Energy goals by 2020.

- This is the first Standards update to establish a photovoltaic compliance option, which allows a portion of the energy generated by a solar electric system to count toward meeting the energy budget in the performance Standards.

- Wall insulation requirements for residential buildings are increased to prevent heat transfer and reduce HVAC loads.

- Process equipment installed in grocery stores, commercial kitchens, data centers, laboratories, and parking garages is now covered by the Standards.

- All 3/4-inch and larger residential hot water pipes must be insulated to avoid wasting water and energy, and reduce the time it takes to get hot water to where it is needed.

BP: When will the 2013 Standards go into effect?

MB: The 2013 Standards were adopted by the Energy Commission on May 31, 2012, and will go into effect in January 2014.

Residential HVAC Cards

The California Energy Commission and Contractors State License Board have created quick reference cards for residential contractors and homeowners replacing a heating, ventilating, or air-conditioning (HVAC) system. The cards detail what is required by law and what work needs to be performed to ensure optimum HVAC system performance. There are two versions of the card, one for HVAC contractors and one for homeowners.

HVAC contractors are encouraged to provide a copy of the homeowners card when bidding on HVAC projects to differentiate themselves from contractors who fail to pull permits and comply with the Standards and California contractor law.

The cards are available for download here.

Energy Efficiency Hotline
- Toll-free in California: (800) 772-3300
- Outside California: (916) 654-5106
- Title24@energy.ca.gov

Standards Training
- Energy Education Center: www.energyvideos.com
- Additional training: www.energy.ca.gov/title24/training

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