

2013 California Building Energy Efficiency Standards



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2013 Update to California Title 24

Part 6 (of 12): Energy Code
Establishes Building Energy Efficiency
Standards for all new construction and retrofits



All other portions of the 2013
Code went into effect January 1,
2014 (including CALGreen).

Overview

Building Energy Efficiency Standards are codified in California Code of Regulations, Title 24, Part 6

- Updated every 3 years
- Must incorporate only cost-effective energy efficiency measures
- On a path to ZNE (2020/2030)

Cost Effectiveness

New Standards raise cost of construction for average new home by \$2,290. Reduce energy costs over 30 years by \$6,200.



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\$11/mo



Mortgage



Bills

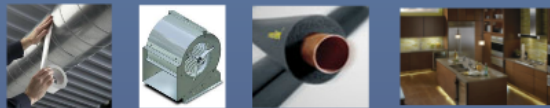


\$27/mo

2013 Changes - Residential

Mandatory Measures

Duct sealing in all climate zones
Return duct/fan & airflow testing
Insulation on DHW pipes 3/4" or larger
Solar Ready roofs
New high efficacy lighting



Prescriptive Measures

High performance windows: U-Factor 0.32 and SHGC 0.25
Duct Insulation (from 4.2 to 6.0) in cold climate zones
Whole house fan or better required in warm climate zones
Radiant barrier now required
Wall insulation minimum raised to R15/R4



25% more efficient than
2008 Standards (on
average)

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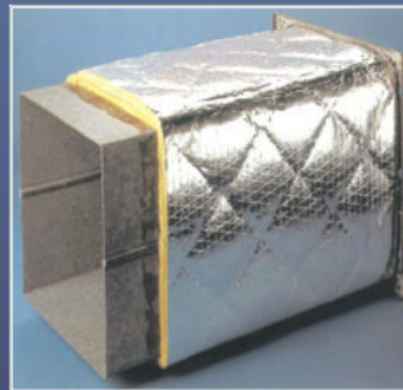
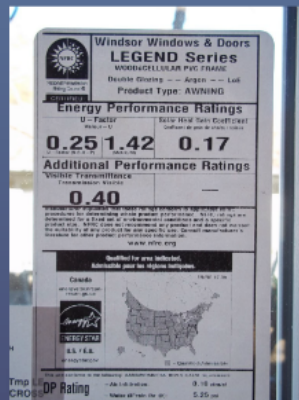
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2013 Changes Nonresidential

30% more efficient than 2008 Standards (on average)

Too many to show...

47 new prescriptive standards
added to the Nonresidential code!

Cooler roofs, better windows, better
lighting, more insulation, more controls,
more testing, fewer system losses,
addition of plug loads, more special
systems, and more.

But here are some of the interesting ones.

Lighting systems: more daylighting; controls
for outdoor lights, smaller spaces, hotels; DR

Acceptance Testing: Specialized tests and
certifications for lighting and mechanical

Electrical systems: load
disaggregation, occupancy
controls, demand response

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So What's Really Going on?

Senate Bill 407

Beginning January 1, 2014, all building alterations or improvements to single-family residential homes must upgrade all non-compliance plumbing fixtures to current standards.

Toilets > 1.6 GPF
Urinal > 1.0 GPF
Showerhead > 2.5 GPM
Faucet > 2.2 GPM



2017 - nonresidential properties triggered
- must update prior to sale of home or disclose

Compliance Software - the 800 lb. gorilla in the room

2008: Designers use EnergyPro,
EQuest, DOE-2

2013 (starting in one week): CBECC-
COM, IES
- brand new software
- not many trained staff
- still buggy, undergoing changes

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CALBO
CALIFORNIA BUILDING OFFICIALS

CALBO Legislative Analysis

**Installation of Water Use Efficiency Improvements:
SB 407 (2009) | California Civil Code Section 1101.1-1101.8**

The Application of SB 407 (2009)

Based on the California Building Officials' analysis of Senate Bill 407 (SB 407) and current building codes we recommend the following application of SB 407 within your local jurisdiction. Please note this is not a legal opinion and we strongly advise each jurisdiction consult with their legal counsel.

As of January 1, 2014, SB 407 requires non-compliant plumbing fixtures to be replaced by water-conserving plumbing fixtures when a property is undergoing alterations or improvements. Based on definitions found within the California Building Code and California Green Building Code, alteration and improvements are interpreted to mean any construction to an existing structure which enhance or improve the structure. Construction related to repairs or maintenance of the structure is not considered to be an alteration or improvement.

Through this interpretation, SB 407 only applies to permitted additions, alterations and improvements. Additionally, permits can be pulled for property maintenance and repair without triggering the SB 407 requirements. Below is a list of permits that are considered to be repair or maintenance.

Permitted Repairs That Will Not Trigger SB 407
Electrical Service Change Out
HVAC Change Out
Re-Roof
Sewer Line Replacement
Siding or Stucco
Site Work: Retaining Walls, Fences, Walk Ways, Etc.
Water Heater Replacement
Window Replacement
Other Repairs as Determined by the Building Official

For CALBO's complete legislative analysis [click here](#).

If you would like to continue to receive information on this bill and other legislation please email Kelly Sherley at ksherley@calbo.org.

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