



Proposed Energy Provisions of the California Green Building Standards Code

Part 11 of the California Building Code (also known as CalGreen)

Patrick Saxton, P.E.

patrick.saxton@energy.ca.gov

916-651-0489

**High Performance Buildings and Standards Development Office
California Energy Commission**

September 20, 2012



Past Milestones and Outreach

- Staff workshops (2011) – Aug 23, Oct 13-14, Nov 7
- 45 day language – Feb 7
- 45 day language hearings – Mar 12-13
- 15 day language – May 15
- Withdrawal of 15 day language – May 30
- Webinar – Aug 6
- CBSC Code Advisory Committee – Aug 8



Changes since May 2012

- Removal of Maximum Hot Water Pipe Volume from Prerequisites for Newly Constructed Residential
- Removal of QII from Prerequisites for Additions & Alterations to Existing Residential
- Removal of Design Electricity Limit for Newly Constructed Residential Buildings
- Reformat and renumber to match CBSC format
- Zero net energy not included as elective measure or definition
- Revised High Efficacy Lighting for Residential



Voluntary Appendix A4 Newly Constructed Residential



Prerequisites

- Whole Building Energy Design Rating
- Quality Insulation Installation (QII)
- High Efficacy Indoor Lighting
- High Efficacy Outdoor Lighting

Tier I

- 85% of Part 6 Energy Budget

Tier II

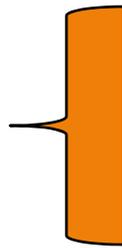
- 70% of Part 6 Energy Budget



Whole Building Energy Design Rating



~ 45% of
energy use
regulated
by Part 6



Space Cooling
Space Heating
Water Heating

Refrigerator
Dishwasher
Range/Oven
Clothes Washer
Dryer
Interior Lighting
Outdoor Lighting
Miscellaneous Plug Loads



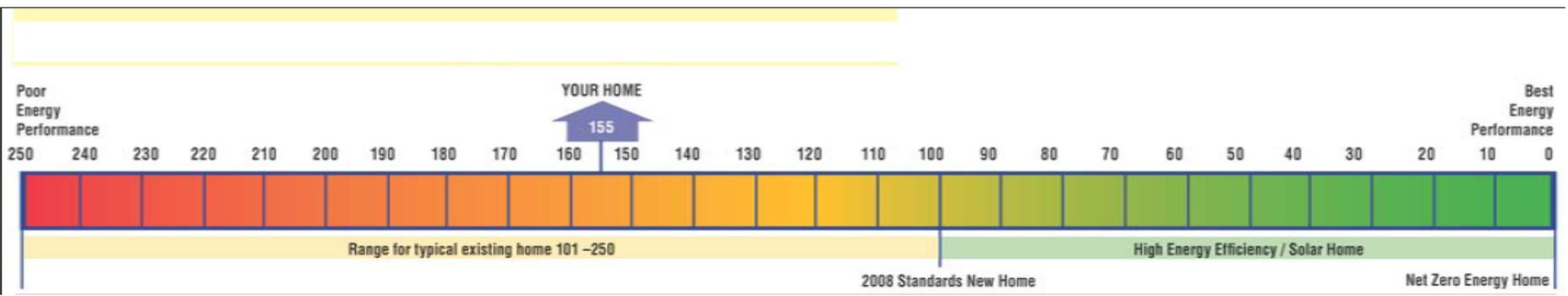
~ 55% of
energy
use not
regulated
by Part 6



Voluntary Appendix A4 Newly Constructed Residential Whole Building Energy Design Rating



- Calculated by Part 6 compliance software based on default values
- Compares to 2008 Building Energy Efficiency Standards
- Assumptions for loads not covered by Part 6 come from Chapter 4 of HERS Technical Manual





Voluntary Appendix A4 Additions and Alterations to Existing Residential Buildings



Prerequisites

- High Efficacy Indoor Lighting
- High Efficacy Outdoor Lighting

Tier I

- 95% of Energy Budget – one mechanical system
- 90% of Energy Budget – two or more mechanical systems

Tier II

- 90% of Energy Budget – one mechanical system
- 85% of Energy Budget – two or more mechanical systems

If the addition or alteration changes the envelope with no change to the mechanical systems, then no additional efficiency measures above Title 24, Part 6 are required.



Voluntary Appendix A5 All Nonresidential Buildings



Prerequisites

- 10% Reduction in Outdoor Lighting Power
- Service Water Heating in Large Restaurants – 15% Solar Fraction or 95% water heater efficiency

Tier I

- 95% of Energy Budget – lighting OR mechanical
- 90% of Energy Budget – lighting AND mechanical

Tier II

- 90% of Energy Budget – lighting OR mechanical
- 85% of Energy Budget – lighting AND mechanical

If the permit is only for the building envelope, then just the prerequisites must be met.



Next Steps

- Notice and 15-Day Language published on September 24th
- Possible Adoption at Energy Commission Business Meeting on October 10thComments

Comments

Comments should be emailed to DOCKET@energy.state.ca.us

Identify docket number 12-BSTD-1 in the subject line