



CALIFORNIA ENERGY COMMISSION

2016 CALGreen Energy Efficiency Voluntary Provisions

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2016 Building Energy Efficiency Standards

2016 CALGreen

August 6, 2014



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Energy Commission Goals CALGreen Voluntary Provisions

- The Provisions of Tier I should be shown to be cost effective.
- Establish an Energy Rating Based on Plans system within the compliance software.
- To have Zero Net Energy available for newly constructed residential buildings.



New Definitions

New Definitions

- Energy Rating Based on Plans
 - Unit-less score – compared to 2008 Standards home & HERS complimentary.
 - Scale is based on 2008 Standards set to 100.
 - Zero Net Energy to be defined as zero on the scale.
 - 2013 Standards compliant home will be approximately 85-90 on scale.
 - Incorporate comparative scales based on available national standards.
- Zero Net Energy Design Score
 - Energy Design Score of zero
 - Onsite renewable generation
 - Take into consideration PV trade offs provided in Part 6.



Targets for Newly Constructed Residential Buildings

Prerequisites:

- ~~Energy Design Rating~~
- Quality Insulation Installation
- Lighting Provisions

Potentially altered based on new requirements in Part 6



Targets for Newly Constructed Residential Buildings

Tier I :

Set the goal for the Tier I goal to be approximately half way between the 2013 Standard on the scale (85-90) and the energy efficiency goal for ZNE buildings (30-40).

Approximately 60-70

Tier II:

Set the Tier II goal to the energy efficiency goal for ZNE.

Approximately 30-40

Tier III:

Set Tier III to the definition of Zero Net Energy Design Score.

Note: The Energy Commission is actively engaged in directing research to determine the appropriate numeric goals for Tier I and II



New Provisions for Additions ~~and Alterations~~ to existing Residential Buildings

- Re-focus the provisions to consider Additions only.
- Prerequisite lighting provisions in consideration of 2016 Part 6.
- Tier I Energy Projected Rating Based on Plans - cost effective.
- Tier II: Energy Projected Rating Based on Plans - more stringent.



Targets for Newly Constructed Nonresidential Buildings

Existing Prerequisites

- Outdoor lighting provisions
- Service water heating in restaurants
- Areas where residential lighting standards are required.

New Provision

- **Energy Design Score**
 - Will not be the same scale as the residential scale.
 - Will be developed using existing studies.
 - Will be based on compliance with 2008 Standards.



Targets for Newly Constructed Nonresidential Buildings

Tier I

Projects that include indoor lighting OR mechanical systems - An Energy Design Score set to a level that is shown to be cost effective.

Projects that include indoor lighting AND mechanical systems - An Energy Design Score set to a more restrictive level than above, but a level that is shown to be cost effective.

Note: The Energy Commission is actively engaged in directing research to determine the appropriate numeric goals for Tier I and II



Targets for Newly Constructed Nonresidential Buildings

Tier II

Projects that include indoor lighting OR mechanical systems - An Energy Design Score set to a level more restrictive than this project under Tier I.

Projects that include indoor lighting AND mechanical systems - An Energy Design Score set to a level more restrictive than this project under Tier I.

Note: The Energy Commission is actively engaged in directing research to determine the appropriate numeric goals for Tier I and II



Questions and Comments

