



DRAFT ENERGY STAR Qualified Homes, Version 3 Program Requirements for the State of California

These guidelines may only be used in the State of California

Qualifying Homes

The following homes are eligible to earn the ENERGY STAR:

- Single-family homes;
- Units in multi-family buildings that are three stories or less;
- Units in multi-family buildings that are four or five stories and have their own heating, cooling, and hot water systems, separate from other units

Homes may earn the ENERGY STAR using the following ENERGY STAR Performance Path in the State of California. There is not a Prescriptive Path for the State of California. Note that compliance with these guidelines is not intended to imply compliance with all local code requirements that may be applicable to the home to be built.¹

ENERGY STAR Performance Path

The performance path provides flexibility to select a custom combination of measures for each home that is equivalent in performance to at least 15% better than the California 2008 Building Energy Efficiency Standards. Equivalent performance is assessed through energy modeling. Follow the steps below to use the performance path:

1. For all single-family detached homes, townhomes, rowhomes, duplexes and triplexes, calculate the Size Adjustment Factor (SAF) using the following equation:

$$SAF = [CFA_{\text{Benchmark Home}} / CFA_{\text{Home To Be Built}}]^{0.25}, \text{ not to exceed } 1.$$

Where:

$CFA_{\text{Benchmark Home}}$ = Conditioned Floor Area of the Benchmark Home, using Exhibit 2 below

$CFA_{\text{Home to be Built}}$ = Conditioned Floor Area of the Home to be Built, as calculated using RESNET Standards

Because the SAF cannot exceed 1.0, it only modifies the California ENERGY STAR Savings Target for homes with conditioned floor area greater than the Benchmark Home. For condos and apartments in multi-family buildings the SAF shall always equal 1.0.

2. Calculate the target energy savings, rounded to the nearest whole number:

$$\text{California ENERGY STAR Savings Target} = 1 - [SAF \times [100\% - 15\%]]$$

3. Using a computer program designed in accordance with the California Code of Regulations: Title 24, Part I, Article I, Section 10-109, configure the preferred set of energy measure for the rated home and verify that the results meet or exceed the California 2008 Building Energy Efficiency Standards requirements by the California ENERGY STAR Savings Target.
4. Construct the home using the measures selected in Step 1 and the Mandatory Requirements for All Qualified Homes, Exhibit 1.
5. Using a Rater, verify that all requirements have been met in accordance with the Mandatory requirements for All Qualified Homes and with RESNET's On-Site Inspection Procedures for Minimum Rated Features.²

Mandatory Requirements for All ENERGY STAR Qualified Homes in California

All ENERGY STAR Qualified New Homes must meet the requirements of the checklists in Exhibit 1. The Water Management System Builder checklist is not required for homes that also qualify for Indoor airPLUS.³

Exhibit 1: Mandatory Requirements for All Qualified Homes

Area of Improvement	Mandatory Requirements
1. Thermal Enclosure System	<ul style="list-style-type: none"> • Completed Thermal Enclosure System Rater Checklist
2. Heating, Ventilation, & Air Conditioning (HVAC) System	<ul style="list-style-type: none"> • Completed HVAC System Quality Installation Contractor Checklist • Completed HVAC System Quality Installation Rater Checklist
3. Water Management System	<ul style="list-style-type: none"> • Completed Water Management System Builder Checklist (or Indoor airPLUS Verification Checklist)³



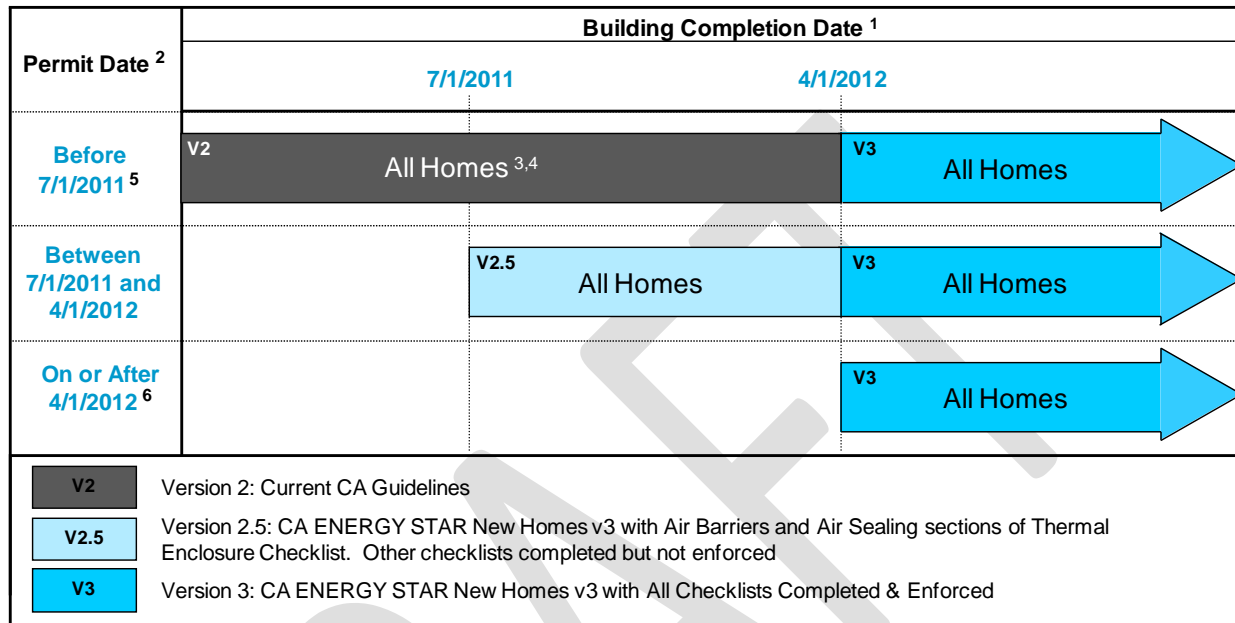
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Exhibit 2: Benchmark Home^{4,5}

Bedrooms in Home to be Built	1	2	3	4	5	6	7	8
Conditioned Floor Area Benchmark Home	1,000	1,600	2,200	2,800	3,400	4,000	4,600	5,200

Exhibit 3: California ENERGY STAR New Homes Version 3 Implementation Schedule



- The date of the final inspection for the home (i.e., the date at which all of the field inspections are complete for the home, not necessarily the date when the label is issued).
- The rater may define the 'permit date' as either the date that the permit was issued or the date of the contract on the home.
- All low-income projects financed through low-income housing agencies may earn the ENERGY STAR under the last iteration of the guidelines, Version 2, until April 1, 2013 as long as the application for funding for those homes was received by the low-income housing agency before July 1, 2011 and the housing project includes at least one unit reserved for low-income tenants. If the application for funding is received between July 1, 2011 and April 1, 2012, then the homes must earn the ENERGY STAR under the Version 2.5 guidelines if completed before April 1, 2012, and under the Version 3 guidelines if completed after April 1, 2012. If the application for funding is received on or after April 1, 2012 then the homes must earn the ENERGY STAR under the Version 3 guidelines.
- EPA recommends, but does not require, that Raters complete the v3 inspection checklists.
- Homes can be qualified under the Version 2.5 guidelines in advance of the dates above at the discretion of builders and their raters. However, homes may not be qualified as Version 3 until April 1, 2012.
- Where a utility or state sponsor is mandating or incentivizing early adoption of Version 3 in their area, EPA will allow the labeling of ENERGY STAR Version 3 prior to April 1, 2012 on a pilot program basis, provided that the sponsor meets certain requirements.

Notes

- Where requirements of the local codes, manufacturers' installation instructions, engineering documents, or regional ENERGY STAR programs overlap with the requirements of these guidelines, EPA offers the following guidance:
 - In cases where the overlapping requirements exceed the ENERGY STAR guidelines, these overlapping requirements shall be met;
 - In cases where overlapping requirements conflict with a requirement of these ENERGY STAR guidelines (e.g., slab insulation is prohibited to allow visual access for termite inspections), then the conflicting requirement within these guidelines shall not be met. Qualification shall only be allowed if the rater has determined that no equivalent option is available that could meet the intent of the conflicting requirement of these ENERGY STAR guidelines (e.g., switching from exterior to interior slab edge insulation).
- The term "Rater" refers to the person completing the third-party inspections required for qualification. This party may be a certified Home Energy Rater, BOP Inspector, or an equivalent designation as determined by a Verification Oversight Organization such as RESNET.
- A completed and signed Indoor airPLUS Verification Checklist may be submitted in lieu of the Water Management System checklists. Indoor airPLUS is a complimentary EPA label recognizing new homes equipped with a



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comprehensive set of Indoor Air Quality (IAQ) features. Indoor airPLUS verification can be completed by a Rater during the ENERGY STAR verification process. For more information, see www.epa.gov/indoorairplus

4. The average-size home with a specific number of bedrooms is termed the "Benchmark Home". The conditioned floor area of a Benchmark Home (CFA Benchmark Home) is determined by selecting the appropriate value from Exhibit 3. For homes with more than 8 bedrooms, the CFA Benchmark Home shall be determined by multiplying 600 sq. ft. times the total number of bedrooms and adding 400 sq. ft.

Example: CFA Benchmark Home for a 10 bedroom home = (600 sq. ft. x 10) + 400 sq. ft. = 6,400 sq. ft.

A bedroom is defined by RESNET as a room or space 70 sq. ft. or greater size, with egress window and closet, used or intended to be used for sleeping. A "den", "library", or "home office" with a closet, egress window, and 70 sq. ft. or greater size or other similar rooms shall count as a bedroom, but living rooms and foyers shall not.

An egress window, as defined in IRC section R310, shall refer to any operable window that provides for a means of escape and access for rescue in the event of an emergency. The egress window definition has been summarized for convenience. The egress window shall:

- have a sill height of not more than 44 inches above the floor; AND
 - have a minimum net clear opening of 5.7 sq. ft.; AND
 - have a minimum net clear opening height of 24 in.; AND
 - have a minimum net clear opening width of 20 in.; AND
 - be operational from the inside of the room without the use of keys, tools or special knowledge
5. The conditioned floor area of a Benchmark Home (CFA Benchmark Home) is determined by selecting the appropriate value from Exhibit 2. For homes with more than 8 bedrooms, the CFA Benchmark Home shall be determined by multiplying 600 sq. ft. times the total number of bedrooms and adding 400 sq. ft. Example: CFA Benchmark Home for a 10 bedroom home = (600 sq. ft. x 10) + 400 sq. ft. = 6,400 sq. ft.