ENERGY STAR Qualified Homes, Version 3 (Rev. 03) Program Requirements for the State of California

These Program Requirements shall only be used in the State of California

Qualifying Homes

The following homes are eligible to earn the ENERGY STAR:

- Detached dwelling units [1] (e.g. single family homes); OR
- Dwelling units [1] in any multifamily building with 4 units or fewer; OR
- Dwelling units [1] in multifamily buildings with 3 stories or fewer above-grade[2,3]; OR
- Dwelling units [1] in multifamily buildings with 4 or 5 stories above-grade[2,3] that have their own heating, cooling, and hot water systems[4], separate from other units, and where dwelling units occupy 80% or more of the occupiable[3] square footage of the building[5]. When evaluating mixed–use buildings for eligibility, exclude commercial / retail space when assessing whether the 80% threshold has been met.

Dwelling units [1] in multifamily buildings that are not eligible to earn the ENERGY STAR through the New Homes Program may be eligible through the Multifamily High Rise Program.

Homes may earn the ENERGY STAR using the following ENERGY STAR Performance Path in 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.[6]

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, triplexes, and quadplexes, calculate the Size Adjustment Factor (SAF) using the following equation:

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

   Where:

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

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

   For the purposes of this step, calculate the number of bedrooms and the CFA of the home to be built using RESNET standards with the following exception: floor area in basements with at least half of the gross surface area of the basement's exterior walls below grade shall not be counted.[7] 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:

   $$\text{California ENERGY STAR Savings Target} = 1 - [SAF \times [85\%]]$$

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 measures 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 3 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 Data Input requirements and On-Site Inspection Procedures for California HERS Ratings.[8]

Partnership, Training, and Credentialing Requirements

Builders, Raters, and HVAC contractors must meet the following requirements prior to qualifying homes under these guidelines:

- Builders are required to be ENERGY STAR partners and complete the online Version 3 Builder Orientation. Partnership Agreements and Version 3 Builder Orientation can be found at www.energystar.gov/homesPA.
- HVAC contractors must be credentialed by an EPA-recognized HVAC Quality Installation Training and Oversight Organization (H-QUITO). An explanation of this process and links to H-QUITOs can be found at www.energystar.gov/newhomesHVAC.
- Raters and Field Inspectors are required to complete Version 3 Training which can be found at www.energystar.gov/newhomestraining.

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.

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Exhibit 1: Mandatory Requirements for All Qualified Homes

Area of Improvement	Mandatory Requirements
1. Thermal Enclosure System	• Completed Thermal Enclosure System Rater Checklist
2. Heating, Ventilation, & Air Conditioning (HVAC) System	• Completed HVAC System Quality Installation Contractor Checklist • Completed HVAC System Quality Installation Rater Checklist
3. Water Management System	• Completed Water Management System Builder Checklist (or Indoor airPLUS Verification Checklist) [10]

Exhibit 2: Benchmark Home [11]

Bedrooms in Home to be Built	0	1	2	3	4	5	6	7	8
Conditioned Floor Area $_{\text{Benchmark Home}}$	1,000	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

Version # [12]	Applicable to Homes with the Following Permit Date [9]	Version Description
Version 2	Before 01/01/2012	• ≥ 15% above 2008 Building Energy Efficiency Standards • Duct leakage to outdoors ≤ 6 CFM / 100 sq. ft. of conditioned floor area • QII and Thermal Bypass Checklist enforced
Version 2.5	01/01/2012 to 09/30/2012	• ≥ 15% above 2008 Building Energy Efficiency Standards • Duct leakage to outdoors ≤ 6 CFM / 100 sq. ft. of conditioned floor area • Section 3 & 5 of the Thermal Enclosure System Rater Checklist completed and enforced; all other checklists completed but not enforced
Version 3	After 09/30/2012	• ≥ 15% above 2008 Building Energy Efficiency Standards • Size Adjustment Factor applied and enforced • All checklists completed and enforced

Notes:

1. A dwelling unit, as defined by the 2009 IECC, is a single unit that provides complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.
2. Any above-grade story with 20% or more occupiable space, including commercial space, shall be counted towards the total number of stories for the purpose of determining eligibility to participate in the program. The definition of an 'above-grade story' is one for which more than half of the gross surface area of the exterior walls is above-grade. All below-grade stories, regardless of type, shall not be included when evaluating eligibility.
3. Per ASHRAE 62.2-2010, occupiable space is any enclosed space inside the pressure boundary and intended for human activities or continual human occupancy, including, but not limited to, areas used for living, sleeping, dining, and cooking, toilets, closets, halls, storage and utility areas, and laundry areas.
4. Central systems for domestic hot water are allowed if solar energy provides at least 50% of the domestic hot water needs for the residential units.
5. Units in multifamily buildings with 4 or 5 stories above-grade, including mixed–use buildings, that have their own heating, cooling, and hot water systems, separate from other units, but where dwelling units occupy less than 80% of the residential (i.e., excluding commercial / retail space for mixed-use buildings) occupiable square footage of the building may qualify for the ENERGY STAR through either the New Homes Program or the Multifamily High Rise Program if permitted prior to July 1, 2012. Units in buildings of this type that are permitted after this date shall only be eligible to earn the ENERGY STAR through the Multifamily High Rise (MFHR) Program.
6. 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:

a. In cases where the overlapping requirements exceed the ENERGY STAR guidelines, these overlapping requirements shall be met;

b. 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). Note that, under the Performance Path, a home must still meet or exceed the California 2008 Building Energy Efficiency Standards requirements by 15%. Therefore, other efficiency measures may be needed to compensate for the omission of the conflicting requirement.

7. To determine whether at least half of the basement wall area is below grade, use the gross surface area of the walls that are in contact with either the ground or ambient outdoor air, measured from the basement floor to the bottom of the basement ceiling framing (e.g., the bottom of the joists for the floor above). Note that the exception regarding the floor area in basements is only for the purpose of determining a home's Benchmark Home Size and Size Adjustment Factor. The full conditioned floor area, per RESNET's standards, should be used when rating the home (e.g., determining compliance with duct leakage requirements).
8. The term "Rater" refers to the person completing the third-party inspections required for qualification. This person shall: a) be a certified Home Energy Rater, Rating Field Inspector, BOP Inspector, or an equivalent designation as determined by a Verification Oversight Organization such as RESNET; and, b) have attended and successfully completed an EPA-recognized training class. See www.energystar.gov/newhomestraining.
9. 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. In cases where permit or contract dates are not available, Providers have discretion to estimate permit dates based on other construction schedule factors. These assumptions should be both defensible and documented.
10. A completed and signed Indoor airPLUS Verification Checklist may be submitted in lieu of the Water Management System Builder Checklist. Indoor airPLUS is a complimentary EPA label recognizing new homes equipped with a 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.
11. 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 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.
12. Example: CFA Benchmark Home for a 10 bedroom home = (600 sq. ft. x 10) + 400 sq. ft. = 6,400 sq. ft.
13. 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.
14. An egress window, as defined in 2009 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 in. 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.
15. All low-income projects financed through low-income housing agencies may earn the ENERGY STAR under the CA Version 2 guidelines until January 1, 2014 as long as the application for funding for those homes was received by the low-income housing agency before January 1, 2012 and the housing project includes at least one unit reserved for low-income tenants. If the application for funding is received between January 1, 2012 and December 31, 2012, then the homes must earn the ENERGY STAR under the CA Version 2.5 guidelines and under the Version 3 guidelines if application for funding is received on or after January 1, 2013.