

## Guidelines for California ENERGY STAR<sup>®</sup> Qualified Homes

All homes enrolled in a utility rebate program after January 1, 2006 must be qualified using this version of the California ENERGY STAR guidelines<sup>1</sup>.

ENERGY STAR Qualified Homes built in California must be at least 15% more energy efficient than the energy code under which they were permitted<sup>2</sup>. 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<sup>3</sup>. Homes must be inspected by a CEC certified third party HERS Rater<sup>4</sup>. In addition, ENERGY STAR Qualified Homes must:

- Have verification of adherence to the California ENERGY STAR Homes combined Quality Insulation Installation and Thermal Bypass Checklist Procedures<sup>5</sup>.
- Utilize HVAC system sizing calculations that adhere to the latest editions of the ACCA Manuals J and S, ASHRAE 2001 Handbook of Fundamentals, or the equivalent computation procedure<sup>6</sup>.
  - Oversizing of air conditioning systems shall follow the Maximum Cooling Capacity guidelines presented in Appendix RF of the Residential ACM Manual (RF.3)<sup>7</sup>. When specifying equipment the next available size may be used.

Design Cooling Capacity (Btu/hr)	Maximum Cooling Capacity (Btu/hr)
< 48,000	Design Cooling Capacity + 6,000
48,000 - 60,000	Design Cooling Capacity + 12,000
> 60,000	Design Cooling Capacity + 30,000

- Have ductwork leakage verified to be less than 6 cfm to outdoors per 100 square feet of conditioned space, though duct leakage tests can be waived if ducts and equipment are located in conditioned space and the home's envelope leakage is less than 0.25 CFM<sub>50</sub> per square foot of building envelope. Meeting the T-24 tight duct standard of 6% or less leakage of total air flow satisfies this requirement.

**Please note that all of the additional requirements bulleted above can be utilized to achieve the 15% performance margin.** EPA also recommends, but does not require, that ductwork be located in conditioned space with a minimum of R-4 insulation to prevent condensation and moisture problems.

<sup>1</sup> Homes that were enrolled in a utility rebate program by December 31, 2005 had until July 1, 2007 to be qualified using the old ENERGY STAR guidelines.

<sup>2</sup> Homes built under the 2001 T-24 code had until December 31, 2006 to complete construction. All homes completed on or after January 1, 2007 must be 15% more energy efficient than the latest T-24 code (2005 T-24).

<sup>3</sup> 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. Furthermore, qualification shall still 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).

<sup>4</sup> Sampling is allowed and shall follow the CEC HERS protocols.

<sup>5</sup> For the period January 1, 2007 to June 30, 2007 homes will not be denied the ENERGY STAR label due to non-compliance with requirements of this additional inspection. As of July 1, 2007, all homes **must pass** the combined QII/TBC Procedures to earn the ENERGY STAR label.

<sup>6</sup> Equipment oversizing calculations shall use 99.0% and 1.0% outdoor design temperatures as published in the ASHRAE Handbook of Fundamentals for the most representative city. However, a prevailing outdoor design temperature used by the local HVAC industry that can be documented with available weather data is an acceptable alternative. The indoor temperature shall be 75°F for cooling and 70°F for heating. Infiltration rate shall be selected as tight. Indoor and outdoor coils shall be matched in accordance with ARI standards.

<sup>7</sup> Homes that achieve the Maximum Cooling Capacity Credit under T-24 (including adequate airflow verification) automatically meet the sizing requirements for ENERGY STAR.