CALIFORNIA ADVANCED HOMES PROGRAM

CLIMATE ZONES 13 & 14

The California Advanced Homes Program (CAHP) offers generous incentives for residential new construction projects that are at least 15% above minimum Title-24 compliance. This climate zone fact sheet will help you optimize the energy efficiency of your project.

Any conservation measure that is allowed in Title-24 may be used to exceed minimum compliance. Builders, working with their architect, subcontractors, and energy consultant can determine the best mix of conservation measures for a specific project. For instance, in a hot area like Climate Zone 10, improving cooling efficiency will be more important than it is in a coastal area like Climate Zone 7.

To participate in the California Advanced Homes Program, builders need to complete an application and submit compliance documentation. Upon completion of construction and verification that required measures are installed, the builder will be awarded an incentive based on the Climate Zone and the level of energy efficiency.

We're helping builders today for tomorrow's environment. Our staff has been fully trained in the latest sustainable building practices. Let your local utilities help you turn your blueprints into greenprints.

Measure Description

The energy efficiency of new homes has significantly increased in recent years. Technological advances and improvements in building techniques have both contributed to improvements in energy efficiency.

Low-E glass in new windows is a technical advance that uses a nearly invisible coating on the inside layer of the window glass. The Low-E coating blocks heat energy while allowing nearly all of the visible light to pass through. This new technology reduces summer heat gain and the damaging ultraviolet rays that fade curtains, sofas and other fabrics. The efficiency of the windows is measured in U-factor and SHGC: the lower the U-factor and the SHGC the more efficient the window.

Water Heater .82 Energy Factor or higher provide a major improvement on a home's overall energy budget. Many systems now have improved efficiencies which can help lower utility bills on an annual basis. Tankless water heaters, as an example, can save energy in three ways: heating only the water needed for use, preventing heat loss of hot water stored for long periods of non-use, and preventing the heat cycling of maintaining a set temperature in a tank type water heater. This is just one way to reduce emissions into the environment, differentiate your community, increase the efficiency of your homes and help decrease monthly utility bills.

Attic and wall insulation have long been known as effective tools in saving energy. R-38 attic insulation is increasingly common. New insulation products allow increased insulation in walls without having to increase wall thickness. The biggest advance in insulation is improvements in the installation techniques. Commonly called Quality Insulation Installation (QII), these methods can improve the effectiveness of insulation by simply following specific installation guidelines.

An engineered duct system with properly sized and insulated ducts that are sealed and pressure tested, significantly improves the overall system efficiency. A good duct system helps ensure more uniform airflow throughout the house, improving comfort. And the sealed ducts reduce wasted heating and cooling dollars.

Ducts in Conditioned Space increases the efficiency of the air distribution system for the home. Not having to cool a hot duct in the summer or heat a cold duct in the winter helps to maintain the room temperatures of the home and reduce overall energy use of the system.

Ducts Sealed & Tested help ensure the conditioned air is distributed properly to each room in the residence. This increases both the comfort level of the home and the consumer. Properly sealing ducts helps lower utility bills on an annual basis by reducing the amount of conditioned air that can be lost to an attic or wall through cracks in the ducting system. Also, tested ducts help to improve the indoor air quality of the home by reducing the amount of dust, pollen and other contaminates from entering openings in the duct work and being distributed into the home.

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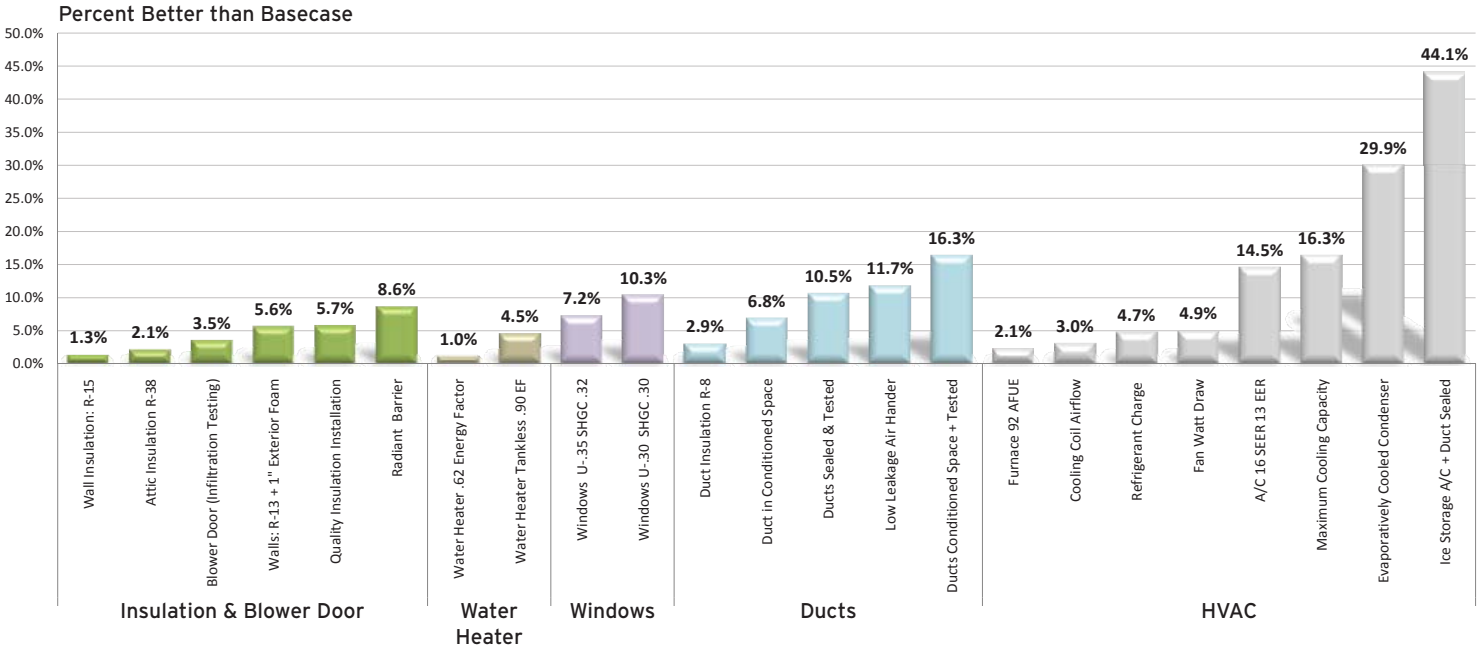
Proper system design and installation also affect overall system efficiency. The efficiency of the furnace and the air conditioner is important, but they are only part of the overall efficiency of the heating and cooling system.

Furnace and air conditioner efficiency is measured in AFUE, SEER, and EER. The higher the AFUE, the greater the heating efficiency. The higher the SEER and EER, the greater the air conditioner efficiency. The proper amount of refrigerant within the air conditioning is critical; either too much or too little reduces performance. Having the contractor check the refrigerant improves performance.

Radiant Barrier installation is another way to improve the performance of attic insulation. This space age material is bonded onto the bottom of the roof sheathing. By purchasing roof sheathing with the Radiant Barrier already installed, there is no additional labor cost. The Radiant Barrier reduces heat gain into the attic keeping the house cooler in the summer and reducing heat gain into attic ducts.



This chart demonstrates the impact of various conservation measures.
The percentage reflects the impact on the Title-24 calculations compared to a base case house† Base case assumptions: Single-family, 2,600 Sq ft, two-story, slab-on-grade, Glazing 20% of floor area, HVAC split gas/electric, Insulation: Attic R-30/Walls R-13, Water Heater 50 gal/.58 EF, Windows: U-40, SHGC .40, Furnace AFUE 80%, A/C 13 SEER 10 EER, No Radiant Barrier. Ducts in attic. More details available upon request.

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† Note: Bar graph above provides energy savings data for measures within CZ13, energy savings for other CZs referenced in this document can expect similar energy savings in most cases. The California Advanced Homes Program is funded by California utility customers and administered by the Southern California Gas Company, San Diego Gas & Electric Company, Pacific Gas and Electric Company, and Southern California Edison under the auspices of the California Public Utilities Commission. This program may be modified or terminated without prior notice, and is provided to qualified customers on a fist-come, fist-served basis until the program funds are no longer available. Additional documents may be required at the utility's discretion.

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