

Cool Roof Resources

California Energy Commission:

<http://www.energy.ca.gov/title24/coolroofs/>

<http://www.consumerenergycenter.org/coolroof/>

Cool Roof Rating Council:

<http://www.coolroofs.org/>

City of Burbank
Building Division

Cool Roofs and Title 24



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Cool Roof Advantages



What is a cool roof?

A **cool roof** is a roofing material with high thermal emittance and high solar reflectance, or low thermal emittance and exceptionally high solar reflectance that reduces heat gain through the roof. A light-color cool roof can reduce the temperature of the roof surface by 50 F under the hot summer sun, thereby reducing the heat transferred into the structure below.

By reducing surface temperatures and preventing the extremes of thermal expansion and contraction, cool roof coatings protect and can extend the life of roofing materials.

A cool roof, therefore, saves building owners money on maintenance and energy costs.

Cool roofs have been a requirement in California since October 2005, when the State implemented them in the Title 24 Building Energy Efficiency Standards.

Cool Roofs and Title 24:

Replacements, recovering or recoating of the exterior surface of existing nonresidential low-sloped roofs shall meet the code requirements where more than 50 percent or 2,000 square feet of roof is being replaced, recovered or recoated. A building permit is required for this type of work.

The code allows for exceptions to the requirements when the existing and new roof will have a rock gravel surface, no removal of existing roof layers is taking place, there is no recoating and there is no installation of a recover board, rigid insulation or other smooth substrate to separate and protect the new roof covering from the existing roof. The code also offers options for buildings that comply the Overall Envelope Approach as stated in the Building Energy Efficiency Standards.

On January 1, 2010, stricter energy efficiency standards will go into effect statewide. The new standards will apply to all buildings, in particular nonresidential, high-rise residential, and hotel/motel buildings.

Benefits of Cool Roofs:

- Save on annual electricity bills by reducing summer air conditioning costs.
- Save peak electricity demand costs with optional time-of-use metering.
- Reduce roof maintenance and replacement expenses by extending roof life.
- Increase indoor comfort in summer by reduction of infrared conversions from visible light.
- Reduce the heat island effect in cities and suburbs.
- Reduce air pollution and smog formation.
- Reduce roofing waste added to landfills.
- Help builders and property owners meet California's Title 24 Energy Efficiency Building Standards.

(From the California Energy Commission Consumer Energy Center)

