

## An Efficient Roof That Pays You Back

Did you know that your roof can be up to 50 degrees hotter than the outside air? That excess heat is not isolated. It transfers into your attic and your home, resulting in more work for your air conditioner and higher utility bills.

Replacing worn-out shingles with cool roofing material can reduce your annual energy bill by up to 15 percent and help keep the air clean in your community by reducing the demand at neighboring power plants.

Modern cool roofs come in every type and color, and many are aesthetically indistinguishable from traditional roofing – such as asphalt shingles that look like typical shingles, but incorporate engineered granules to reflect light. Expansion in available product choices has allowed more homeowners the opportunity to install cool roofs.

### Energy Ratings

These rating systems have already done the work to determine which materials are more energy-efficient so you don't have to. Look for products that bear these labels and you can feel confident that you are purchasing an energy-efficient cool roof.



### Rules of Thumb

Although these are not hard and fast rules:

- Cooler, more energy-efficient roofs are usually lighter in color and more reflective than conventional roofs.
- In general, painted metal and tile roofing are more energy-efficient than asphalt shingles.

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## Compare Apples to Apples

There are important measurements to help you compare the energy efficiency of any roofing materials you are considering. Even if you can't find the following values on the package or brochure for the product, you can usually get them by contacting the manufacturer.

- Solar reflectance, or reflectivity, is the material's ability to reflect radiation.
- Aged solar reflectance is how well the material reflects radiation after three years of use.
- Thermal emittance, or emissivity, is the material's ability to release absorbed heat.
- Solar Reflective Index, or SRI, is calculated based upon both solar reflectance and thermal emittance.

Higher values, whether represented as a percentage or a numerical value between 0 and 100, represent cooler, more reflective and energy-efficient roofs.

## Icing on the Cake

If you want to make a bigger impact on your roof's efficiency than simply selecting cool roofing materials, you may also want to consider:

- Radiant barriers
- Reflective coatings
- Improved insulation
- Improved ventilation

## Contact us:

If you have further questions, please contact the Oklahoma Department of Environmental Quality's Air Quality Division at (405) 702-4100.