

## A Metal Roof Keeps Your House Cool

BY JAMES DULLEY

**Dear Jim:** I need to replace my shingle roof, and I heard metal roofs qualify for an energy efficiency tax credit. How does a metal roof conserve energy? Are they worth the additional cost? And what type of metal roof is best?—Robert K.

**Dear Robert:** Many—but not all—metal roofs qualify for the Federal energy conservation tax credit for 2010. Metal roofs save energy by keeping your house cooler during the summer, which can dramatically improve comfort inside and reduce electric bills if your home is air-conditioned. During the winter, a metal roof has a negligible impact on the energy efficiency of your house.

In general, in order to qualify for the energy tax credit the roof must meet Energy Star qualification standards. For roofing, this means the TSR (total solar reflectivity) must be greater than 25 percent when new and 15 percent after three years of aging. To be sure the roofing qualifies, ask for the specifications and a manufacturer's certification statement (MCS). It pays to be diligent these days: I recently got quotes on a roof installation, and several roofers told me their asphalt shingles qualified for the tax credit. In actuality, they did not qualify.

The amount of the tax credit is 30 percent of the material cost of the roof (not installation expenses) up to a maximum of \$1,500. Use IRS

### QUICK TIP

Metal roofs save energy by keeping homes cooler during summer. And they look good, too.



The completed metal roofing with new flashing and decorative hip trim over the seam makes an attractive presentation.

form 5695 to apply for the tax credit and save the payment receipt and MCS in case of a tax audit.

For my own home project, I eventually selected a Classic Metal Roofing Systems aluminum roof. It is made from 98 percent recycled aluminum, and the one-by-two-foot panels are formed to simulate a cedar shake roof. It's attractive and certainly unique: many neighbors were stumped trying to figure out exactly what it is.

To install the aluminum panel roof, a special film underlayment was nailed down with plastic clips and stainless steel fasteners over the existing shingles (which saved the expense of tearing off the old shingles). Each aluminum panel interlocks with the adjacent ones on all four sides. The top of each panel is held down by a stainless steel nail through a hole in the upper corner and an aluminum clip attached midway across the top. It is designed to withstand up to a 120-mph wind.

Although it is more expensive to install than an asphalt shingle roof, my new metal roof will never have to be replaced. From a lifetime cost comparison, it is cheaper than installing an asphalt roof every 20 to 30 years. I also get a three percent reduction on my homeowner's insurance because of reduced fire hazard.

Most metal roofs reflect more of the sun's

## WHERE TO SHOP

The following companies offer metal roofs:

- ▶ Classic Metal Roofing, 800-543-8938, [www.classicmetalroofingsystems.com](http://www.classicmetalroofingsystems.com)
- ▶ Conklin Metal, 800-282-7386, [www.metalshingle.com](http://www.metalshingle.com)
- ▶ Follansbee Steel, 800-624-6906, [www.follansbeeroofing.com](http://www.follansbeeroofing.com)
- ▶ Met-Tile, 909-947-0311, [www.met-tile.com](http://www.met-tile.com)

“Many metal roofs qualify for the Federal energy conservation tax credit for 2010.”

heat than do asphalt shingles, particularly black shingles. My Classic metal roof has a TRS of 0.43 whereas a black asphalt shingle roof has a TRS of only 0.05. This keeps the roofing materials cooler, so less heat is radiated down through the ceilings to the living area. Also, the underside of the aluminum metal surface has lower “emissivity” (the ability to emit heat) than shingles, so even less heat radiates downward.

It was warm, sunny weather when my metal roof and ridge vent were installed, and the second floor was noticeably cooler than before.

The final energy advantage is the Classic Metal Roofing aluminum panels are relatively thin with the contour of shakes formed into them. This contour creates an air gap between most of the roofing and the roof sheathing or shingles below it. This gap allows some outdoor air to naturally circulate up under the metal roof panels to keep them cooler. I sealed off my gable vents so outdoor air is now drawn in the soffit vents and exhausted out the ridge vent.

One minor drawback to the aluminum shake panels is they can dent if you indiscriminately walk on the high points of the contour. This can be avoided by stepping on the lower nailed area of the panels. Contoured insulating foam pieces were placed under areas of panels to provide walkways on the roof to clean my skylight and service the ridge vents.

Steel roofing is another option becoming more popular on homes. Painted standing seam or tile steel roofing is very durable. Instead of trying to simulate some type of standard roofing



This is a 1x2-foot aluminum roofing panel with a heat reflecting buckskin colored finish. Notice the interlocking flanges on the side and top.

material, the bright colors and unique appearance are signatures of upscale homes. The finish coating on aluminum and steel often uses a Kynar-based paint with heat reflecting additives in a multistep process. **KCL**

Have a question for Jim? Send inquiries to: James Dulley, Kansas Country Living, 6906 Royalgreen Dr., Cincinnati, OH 45244 or visit [www.dulley.com](http://www.dulley.com).

JAMES DULLEY