

Case Study #1

Greenovative Homes, LLC.

12/1/2011



Madrid Home Retrofit Greenstar Panels

Case Study #1 is a 2551 SF single family residence located in Bartow, Florida with a gable and hip roof configuration and tan shingles.

The attic temperature was consistently very hot. Summer temperatures were matching or exceeding the roof temperature (see below) at approximately 145 degrees.

A ridge vent was installed at the top of the roof, and 3.5-inch thick Greenstar panels made of expanded polystyrene (XPS) with reflective foil facing were installed between the truss elements, leaving a one-inch thick gap beneath the roof deck for convection channels. Gable ends were also covered with ½-inch thick foam panels. Expansive spray foam was used to plug major voids at the joint seams within the panels.

On August 5, 2011 temperature readings were taken within the attic space as shown below. After panel installation, readings were obtained on September 16, 2011. Temperature readings within the attic space both dropped over **40 degrees**.

Also, in the first month after the installation, the owner reported an 18% decrease in his electric bill compared to the same month (September) of the previous year. There are many variables to consider when determining how much less energy the house will use after the installation of the Greenstar panels, so several months of utility bills will be collected to better determine the effect of this retrofit.

Construction Photographs



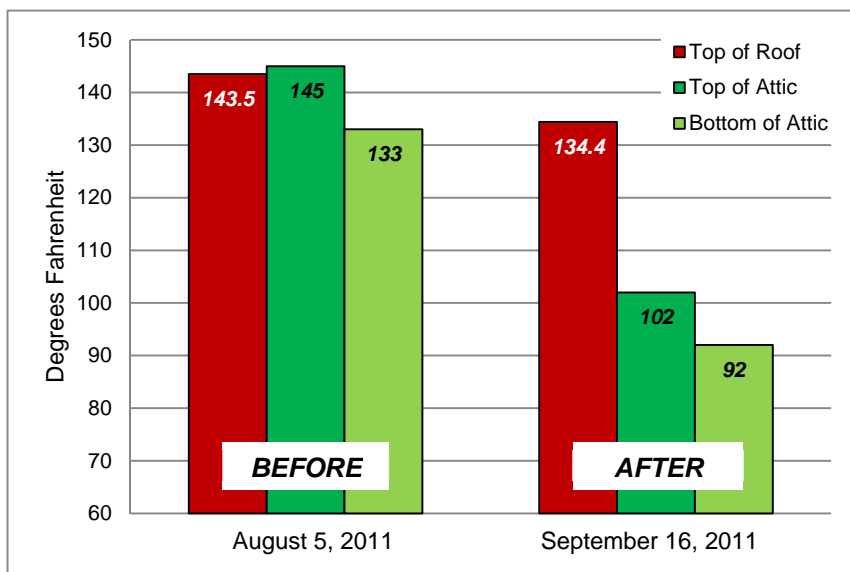
Pre-Construction



During Construction



Post-Construction



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