

# [ ABOVE-SHEATHING VENTILATION ]

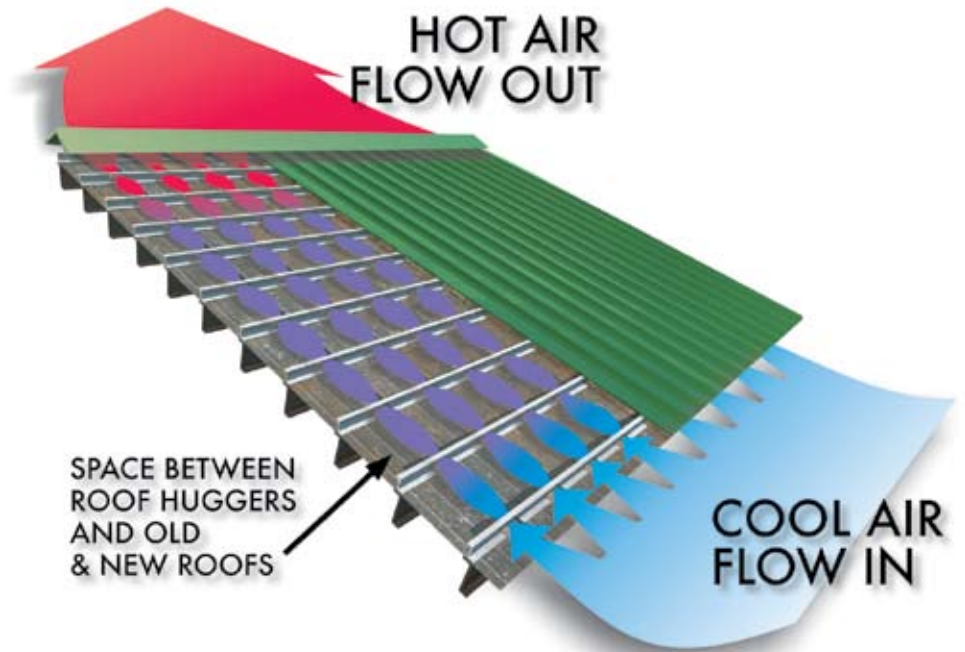
A Testimonial from DALE NELSON, PRESIDENT ROOF HUGGER INC.

It was early in our business, some 16 years ago, when we started hearing from our customers about how their buildings seemed cooler in the summer, warmer in the winter and how their utility bill were lessened after retrofitting their facilities.

We didn't really give it much thought at first, but over the years we have heard similar stories time and time again. One particularly interesting story came from a builder we sold some Huggers to on the Caribbean Isle of Curacao, in the Netherlands Antilles. He used our Huggers to retrofit part of a long, narrow, uninsulated, flea-market building. The first section of the building was over 25 years old and in need of new roofing. An addition to that same building constructed some years later that was in good condition and, therefore, was not to be retrofitted. According to our customer, after retrofitting the older portion of the building there was an 8 to 10 F drop in temperature in that portion of the building. A change so pronounced that soon complaints began to pour into the building owner from the "fleas" in the newer portion of the building. Shortly after we received an order for material to retrofit the newer roof.

to find a couple of interesting things going on.

**First:** I think we will find that anytime you can create an air space between the roof/deck and building interior you will significantly improve the insulating properties of that system.



## COOL FACTOID

**A survey of more than 250 home builders by Green Building Media revealed that home buyers are willing to pay a premium of 11%-25% for green-built homes.**

That got us thinking that maybe there is something to this vented air space between the old and new roofs. Through our association with the Metal Construction Association we were introduced to Bob Scichili who in turn introduced us to the folks at the Oak Ridge National Laboratory who were deeply involved in the testing of above sheathing ventilation. The initial results of their testing of the air space benefits in residential roofing are pronounced and demonstrate an easy path to large energy savings. In the near future we hope to be able to model a commercial low-slope type of retrofit to see if we can quantify exactly what those benefits are.

As a result of what I have observed so far I believe we are going

**Second:** I think we will find that the depth of this air space does not have to be significant. In the case of Roof Huggers, the space we create is usually between 1.75 - 4 inches in depth.

**Third:** We know that the steeper the roof slope the greater the chimney effect of drafting air through any cavity -- but even lower sloped roofs will see a benefit.

**Fourth:** I think we will find, particularly in the retrofitting of metal over metal roofs, in warm climates there will be a significant benefit from the new roof "shading" the old roof. I believe it significantly reduces the heat radiating from the exposed upper roof panel, which can reach temperatures of 120 - 160 F, to the building interior and heavier structural members below. In cold climates I think we will find this space will slow the loss of heat from within the existing building to the exterior.

All this, of course, is subject to test confirmation, but it certainly would help explain what we have been hearing for many years from many of our customers.

This is an exciting new area of research, and we look forward to participating in these new studies. [cmr<sup>f</sup>](#)

**Dale Nelson, President of Roof Hugger Inc.**