



ECOLOGIC
BUILDERS, INC.

919 20th Street
Sacramento, CA 95811

[main] 916.448.8109
[fax] 916.448.3369

info@ecologic-builders.com
www.ecologic-builders.com

license. #571013

The RaVe Roof System™ story:

What is a **RaVe** Roof System™?

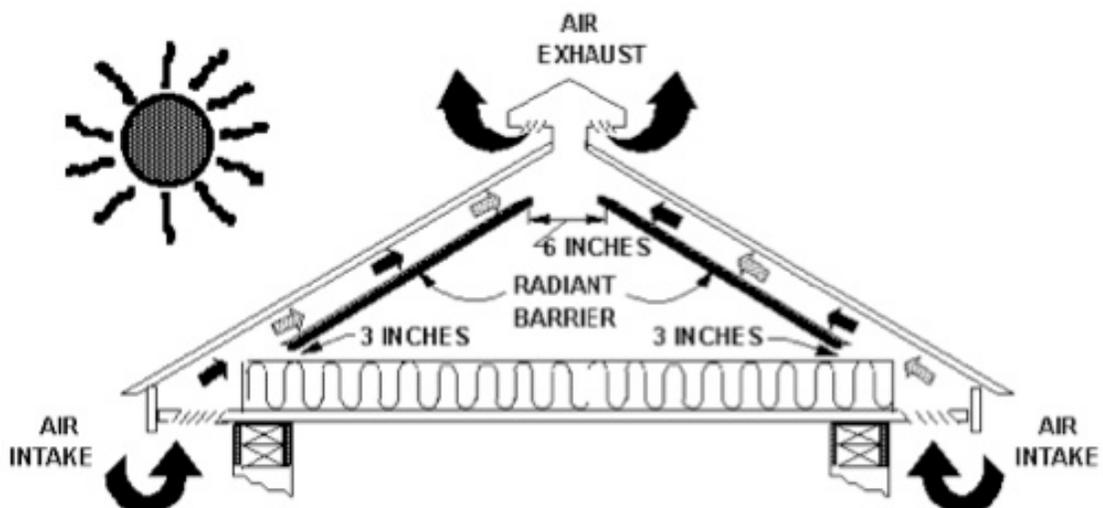
It stands for **R**adiant, **V**entilated Roof – and it was “invented” by Pinerworks Architecture in 2009, and installed by the company now known as EcoLogic Builders, Inc. It was originally created for a particular job – the Crouch Home in Sacramento, CA – but the system provides advantages for most any building. It is a carefully detailed and installed cost effective retrofit or new construction method to provide an existing home with the benefits of *a radiant barrier* and *natural convection venting*.

The system shields the entire building from excess heat in the summer and keeps heat in during winter months.

The system has *no moving parts* and *works passively*, year in and year out for *the life of the roof*.

The Crouch home is the first in the Sacramento area to utilize this system. Sensors placed in the home before and after installation proved it worked, and the Crouches say it has made a remarkable difference in the comfort of their beautiful home.

Diagrammatically, it works something like this (image from the Dept. of Energy Oakridge National Labs):





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The following pictures tell the story of the first installation of this innovative system that can be 100% installed by any Licensed Roofers.

Give us a call for a consult to find out if a RaVe Roof System™ is right for your business. We will provide all information necessary for the materials and methods shown!



Crouch House – Before RaVe Roof...



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Cathedral Ceiling – with NO insulation or barrier – Cold in winter and HOT in the summer.

This is the condition that posed a challenge: How to cost effectively and aesthetically improve this condition. The owners wanted a solution that would not be visible or affect the beauty and integrity of this room. The RaVe Roof System™ is virtually transparent when complete, and it's effectiveness was proven with temperature sensors placed inside and outside both before and after the system was installed.

The owners are thrilled with the results – same exact look and it now stays comfortable year around.



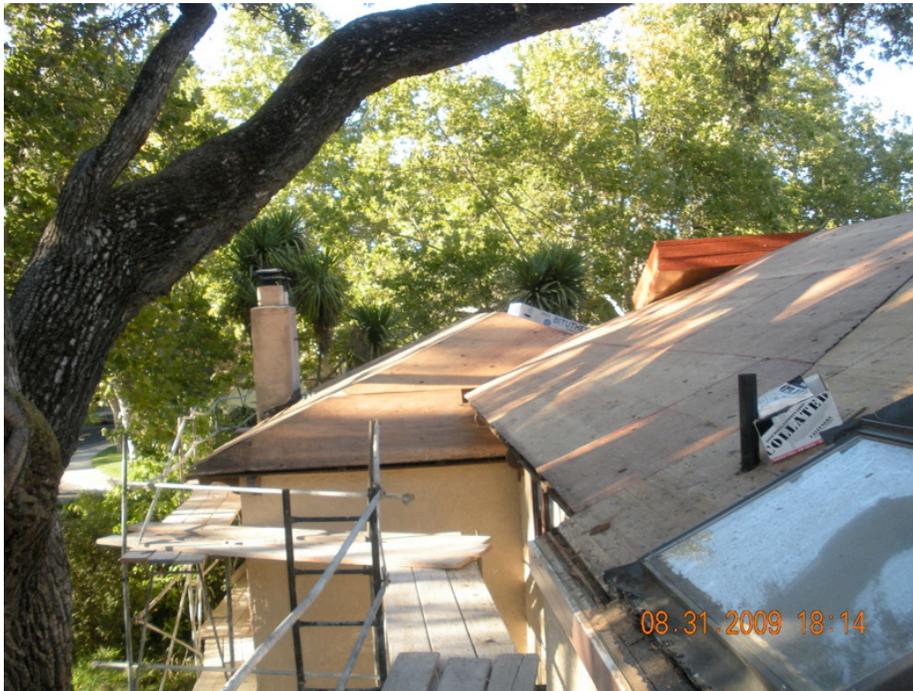
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After the old, worn roof was torn off, existing plywood sheathing is exposed, misc. dry rot is repaired, then it's ready for the system.



Bituthene waterproofing shield applied to all eaves, hips and ridge.



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Radiant barrier “bubble wrap” – provides some R-value, about R-7.
The attic in the rest of the home had R-38 cellulose blown in.



Radiant barrier and battens with holes cut for added attic ventilation.
Added attic ventilation was necessary for optimal whole house fan function.



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A second radiant barrier is pre-laminated onto OSB “Tech” sheathing, installed shiny side down, onto which the new roof will be installed.



The system is carefully installed, creating a new “sandwich” of barrier layers over the entire roof – a total shield that will also “breathe” from low to high.



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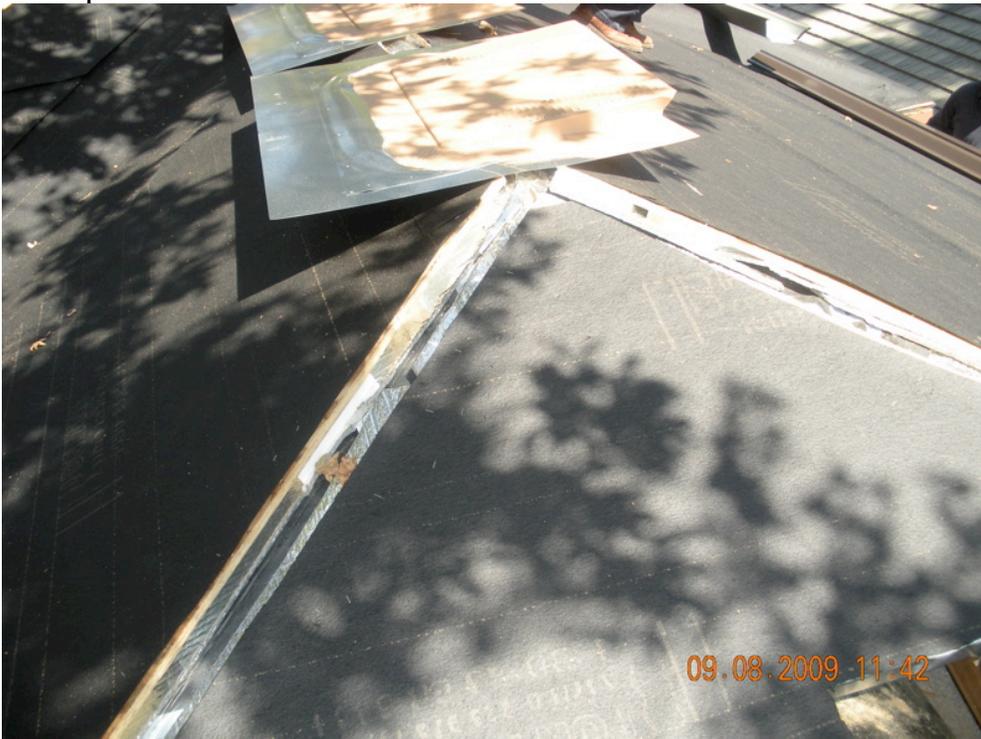
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Detail at the eave shows the radiant barrier lined air space before filter/protection added.



Upper hip and ridge vents – slots cut to allow balance of air flow from eave to ridge – standard building paper added – now can simply be roofed as usual.



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A “cool roof” color was also chosen to amplify the cooling effect – that also got the clients a nice little rebate! The cavity was blown clean prior to sealing.



Shows the ridge vent material laid in place prior to hip and ridge shingles.



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Eave venting material includes a filter fabric to protect from dirt and insects. Note a lower flashing over bituthene layer, to protect from water intrusion.



With flashings installed, ventilation is around entire perimeter, allowing cool air to displace rising hot air from eave to ridge – natural convective air flow.



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With flashing installed but before new gutters, – vent appears as a continuous approx. 1” gap at the fascia.



Detail with the gutter installed – vent is below flashing, hidden from view. Gutters were later outfitted with leaf guard system.



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Completed roof edge with gutters installed. Note oversized downspouts to speed water flow and emptying of gutters.



Finished product with scaffolding removed.
Virtually invisible RaVe Roof System™ at work!