



## PRESS RELEASE

Stacy Wemhoff  
Communications Coordinator  
[swemhoff@loup.com](mailto:swemhoff@loup.com)  
(402) 562-5711

FOR IMMEDIATE RELEASE  
9/9/2019

# EnergyWise<sup>SM</sup> Tip: Attic Insulation

By Cory Fuehrer, NPPD Energy Efficiency Program Manager

Why would you insulate your attic to keep heat out of your home in summer, keep heat in during winter, then turn around and purposely allow outside air to enter the attic through vents? Though it may sound strange, this is exactly what must be done to ensure a durable and energy-efficient home!

When you think about it, it makes sense. In summer, the sun beats down on your roof, making it hot up there. Natural air flow in a well-vented attic moves super-heated air out of the attic. While the insulation will resist heat transfer into the house, the inherent property of warm air to rise helps remove heat buildup in your attic to reduce the work your air conditioner must do if this heat finds its way into living areas.

A well-designed attic ventilation system has a combination of intake vents at the lowest point in the attic, typically in the soffit or near the roof's edge, and exhaust vents at or near the ridge or peak of the attic. Since warm air tends to rise and cooler air tends to fall, this thermal effect creates a natural circulation of air through your attic.

While it may be hard to imagine, this effect can have even greater value during the winter. At this time, heat does not travel from an attic into the living quarters. Instead, heated indoor air travels from the home into the attic – along with moisture. Keep in mind that the warmer air is, the greater its capacity to hold moisture.

Problems start when warm, moist air hits cooler rafters, trusses and roof sheathing. The moisture condenses and forms water droplets or frost. Eventually, condensation drips on the insulation below. If the insulation gets too wet, its volume compresses and its effectiveness reduced. This leads to greater heat loss, which leads to colder rooms. Colder rooms lead to a greater need for heat and greater use of the furnace leads to higher energy bills.

But that is not the only problem. Not all the condensing moisture drips into insulation. Structural elements of the house absorb some, leading to wood rot and the deterioration of roofing materials. Other moisture is

likely to soak into the attic floor and eventually into ceiling materials, causing water stains and paint damage in the rooms below.

To make matters worse, attics that become too warm have the potential for ice damming (snow that melts off a roof and re-freezes at the gutters). Ice dams can cause significant structural damage to your roof. Proper insulation and ventilation keep attics cold in winter by reducing the entry of heat and moist air from below and expelling moisture that does make it through.

Note that the most common mistake homeowners make when installing insulation is to block the flow of air at the eaves. Never cover soffit vents with insulation! Rather, check all attic vents periodically and remove any obstructions to ensure proper airflow. It will keep you cooler this summer and warmer next winter!

For additional information on how to make your home, business or school EnergyWise<sup>SM</sup>, contact Loup Power District, Cornhusker Public Power District, Nebraska Public Power District, or your local public power utility. While you're at it, check out the EnergyWise<sup>SM</sup> programs designed to help you save money. Find energy efficiency information online at [www.loup.com](http://www.loup.com), [www.cornhusker-power.com](http://www.cornhusker-power.com), and [www.nppd.com/save-energy](http://www.nppd.com/save-energy).

###