

CUT YOUR UTILITY BILLS

Keep Pets and Energy Bills Comfortable

We hope these answers are helpful as you work to save energy while caring for your furry friends.

Will a pet door affect your energy bill?

Pet doors are convenient for pet owners and pets, but they can affect energy bills. A poorly made or improperly installed pet door will create unwanted drafts that increase energy bills and reduce the overall comfort level of your home. The wrong type of door also may be pushed open during high winds.

Consider installing a pet door certified by the Alliance to Save Energy, or one that has a double or triple flap. These types of pet doors can reduce energy loss and make life easier for you and your furry friends.

The best solution may be a high-quality electronic door that is activated by a chip on your pet's collar.

It's difficult to undo a pet door installation, so we

suggest doing your homework before taking the leap. There may be other strategies that will give you and your pet some of the convenient benefits without the downsides.

How much hot and cold can your pup and tabby handle?

Cats and dogs can handle the cold better than humans. The U.S. Department of Agriculture, which regulates facilities that house cats and dogs, requires facilities to maintain temperatures above 50 F.

Some exceptions are allowed for breeds accustomed to the cold or if some form of insulation is provided for the animals. Your pet's tolerance really depends on their breed and coat thickness.

A report by the Purdue Center for Animal Science says

This column was co-written by Pat Keegan and Brad Thiessen of Collaborative Efficiency. For more energy tips, go to www.collaborativeefficiency.com/energytips.



Don't let winter weather and thermostat confusion ruin your winter. Learn to control costs and maintain comfort.

Siberian huskies can tolerate temperatures below freezing, but some short-haired dogs require temperatures of 59 F or warmer. Older animals may require warmer temperatures than younger ones.

During summer, cats and dogs handle the heat in different ways. Cats clearly enjoy warmer temperatures more than dogs, and do a good job reducing their activity level as temperatures climb. But both cats and dogs can get overheated. The USDA says room temperatures in facilities housing dogs or cats should not exceed 85 F for more than four hours at a time.

Is it OK if your pet sleeps in the garage overnight?

USDA rules suggest this should be fine if your garage

temperature stays between 50 F and 85 F. Pets might be able to handle a lower temperature if they have a warm, insulated bed.

I do not recommend heating or cooling your garage for your pet. This could lead to extremely high energy bills, which makes sense. An uninsulated, but heated, garage could easily cost more to heat than a home. A better solution is a heated pet house, which you can buy from multiple retailers. If you're willing to spend a little more, you can find climate-controlled pet houses that include heating and cooling options.

You can also buy heated beds for cats and dogs. Some beds use as little as 4 watts of electricity, so they won't drain your energy bill. ■

Natural Light Saves Electricity, Improves Vision

Question: Are rectangular or tubular skylights better for more natural light and energy savings?

Answer: Although the amount of electricity used for lighting in a house is only a fraction of what is used for heating, cooling and water heating, it still constitutes a significant annual cost. Using more natural light instead of lightbulbs is not a difficult task.

If saving electricity is your primary concern, replacing all your lightbulbs with LEDs is a less expensive option than installing either a typical or tubular skylight. Although not as natural as true sunlight, higher temperature bulbs—rated at 4000+ degrees Kelvin—produce a more natural, whiter light. Bulbs with a high color rendition index make colors look more realistic.

Most people's vision is better under natural lighting—even at a somewhat lower brightness level—than under typical artificial lighting. I can read a magazine easier by a window even on a cloudy day. Some businesses now use special lights that closely simulate natural light. They can reduce bulb wattages by more than 15% for big savings, and the workers cannot tell the light is dimmer.

A tubular skylight is generally a more efficient and less expensive choice than a traditional rectangular skylight. A

traditional skylight provides more lighting and a view of the sky, but it creates a large hole in the insulation envelope of your roof and loses energy.

I installed a tubular skylight in my garage. It provides adequate light for most activities during the daytime. When there is a full moon, it produces enough light for me to walk to my car in the garage without switching on the light.

Tubular skylights are available in several diameters, depending on how much light you need and the space available. As a reference, a 10-inch-diameter model produces as much light as three 100-watt incandescent lightbulbs. A 14-inch model is equivalent to using five 100-watt bulbs.

If you are still using incandescent bulbs, the annual electricity savings from installing a large tubular skylight is about \$90. If you typically use compact fluorescent bulbs or LEDs, the annual savings is about \$20. This might not sound like a lot, but the tubular skylight should last for many years.

A tubular skylight requires no maintenance other than wiping off the glass or globe in the home. The dome on the roof should stay clean from the rain. It is not difficult to install



A tubular skylight is installed on a shingle roof. Notice how the shingles fit over the flashing to eliminate leaks.

PHOTO BY SOLATUBE

one yourself, especially if you have an asphalt shingle roof.

Tubular skylights use a sheet metal tube that extends from above the roof to the ceiling below. The interior of the sheet metal has a reflective coating, so little brightness is lost as the sunlight bounces back and forth on its way down. A clear dome seals the top of the tube above the roof and a flat diffuser snaps over the bottom in the ceiling.

To control the brightness, optional dimmer flappers are available to reduce light intensity. These can be operated by an electric motor or a solar panel with a remote control. Another nice feature for bathrooms is a model that also works as an exhaust fan.

Most natural light comes in through windows. If you have relatively efficient windows, open the curtains or use just sheers during the daytime to

allow light in. If you have old single-pane windows, use insulating shades. Opening them loses more energy than you save on lighting. Prune back shrubs that have grown up and block the window.

Placing decorative mirrors opposite windows can be effective. One method uses mirrors on opposite walls. This reflects light, and the repeating images in the mirrors add a sense of depth to the room. For a window near a corner, place the mirror on the adjacent wall close to the window. It will reflect the light out at 90 degrees from the window to brighten the entire room. ■



For more information or to ask a question about energy savings, go to www.dulley.com. (c) 2020 James Dulley