green sense

By John Imes

Staying Warm and Saving Money

With growing economic uncertainty, including volatile swings in the price of fuel and energy, we must pursue home-grown solutions that make our homes warm, comfortable and energy efficient.

Fortunately, there are valuable programs and comprehensive tools to help you make decisions that can save money, improve your family's health, safety, and comfort and provide the added benefit of helping protect our precious natural resources.

Energy audits

The Home Performance with ENERGY STAR® Program is designed to provide Wisconsin homeowners a cost effective way to reduce their energy bills and enhance the comfort, safety, durability and energy efficiency of their homes. A qualified consultant or contractor conducts a comprehensive evaluation of the home, including testing and measuring the house for air leaks, inspecting insulation levels, mechanical systems, exhaust fan ventilation, identifying sources of excessive moisture and evaluating safety issues like combustion appliance venting and carbon monoxide levels. The customer then receives a list of home improvement recommendations, as well as a list of partnering contractors who will do the work to program standards. At the end of the project, the consultant will return to retest the house and verify the work was completed correctly. Homeowners may be eligible for cash-back rewards and limited-income homeowners may be eligible for a no-cost energy evaluation and 90-percent coverage of the improvement costs.

Installing insulation

A well-insulated home will be warmer in the winter, cooler in the summer, and your energy bills will be lower throughout the year. Consider healthier insulation alternatives including formaldehyde-free, spray foam, cotton and recycled content insulation. Cellulose insulation is primarily made with post-consumer recycled newspaper, has an R-value of 3 to 4 per inch, and is treated with fire retardants.

Windows, doors and skylights

Windows and doors typically cover 10 percent to 25 percent of the exterior walls of homes, and if poorly insulated or installed incorrectly can contribute significantly to heating and cooling costs and condensation problems.

Installation of ENERGY STAR qualified windows, doors, and skylights with proper attention to sealing

focus on energy℠
The power is within you.

Green-it-yourself resources

- Use the Green Built Home™ program and online resources. The Green Built Home Remodeling Checklist has more than 300 ideas to save money, protect our natural resources and improve your family's health, safety and comfort. To learn more about Green Built Home visit www.greenbuilthome.org
- Home Performance with ENERGY STAR: www.wifocusonenergy.com

around the openings can greatly reduce air leakage that causes rooms to gain or lose excessive heat. Shading south and west facing windows in the summer with deciduous trees or vine covered trellises can also further reduce heat gain.

What to look for when buying doors, windows or skylights:

- The ENERGY STAR label
- A U value less than or equal to .35
- Air leakage rating of less than or equal to .06 cfm/ft.
- Solar heat-gain coefficient less than .40
- Frames that have integral insulation with a high R-value
- High-quality, durable weather-stripping

Fireplace options

Natural gas fireplaces are generally more energy efficient than wood burning fireplaces and emit fewer emissions. Efficiencies range from about 50 percent to 70 percent and by choosing a higher rating you'll enjoy more energy savings. Despite its cleaner burning reputation, however, natural gas is still a non-renewable resource.

Wood fireplaces offer the romance and aesthetic of an open fire. Low temperature fires, however, can generate a great deal of smoke, soot, and other pollutants. Conventional open radiant fireplaces are also only about 5 to 10 percent efficient. Using EPA certified catalytic or non-catalytic wood fireplaces or pellet stove inserts can improve thermal efficiency up to 70 percent or more.

Rumford fireplaces are the most efficient open masonry fireplace and throat design available. In this type of fireplace the side walls are angled out to allow more heat transfer into the room. Efficiencies of 30 to 40 percent are possible compared to conventional open radiant fireplaces.

Masonry heaters use a wood-burning technology developed in central and northern Europe over several hundred years to burn a load of wood very quickly at high temperatures, capture the heat, and release it over long periods of time through the masonry mass. ▲