

## Energy Saving – Facts, Options & Resources

It seems like everyone is talking about energy conservation so we thought you might enjoy some information to help you reduce your home's operating expense. The following information should help you decrease expenses today and into the future.

### Facts

The average home's energy dollar is used as follows:

- Heating and cooling = 44%
- Lighting, cooking & other appliances = 33%
- Water heating = 14%
- Refrigeration = 9%

Energy loss (typically winter) or gain (typically summer) in the home is the result of four factors:

1. Conduction through materials, roofs, floors, windows, etc. (*Heat always flows from warm to cool areas*)
2. Infiltration - air movement through cracks, openings, in the home. (*Influenced by convection & conduction*)
3. Convection - heat loss is greatest from heated air rising through interior openings
4. Radiation from sunlight through windows (49% of the sun's energy is heat) averages around 40-50% of the cooling load in a home during the summer.

### Options

#### Less Expensive easy options:

1. Monitor and change furnace filter regularly.
2. Install compact fluorescent low energy light bulbs (average savings per bulb over 6 years \$37.00 (2007 dollars))
3. Install "Smartstrip Surge Protectors" that turn off peripherals when not in use. (standby modes still use energy)
4. Seal openings in walls, doors, windows & ceiling attic hatches to reduce infiltration air movement.
5. Upgrade appliances to "Energy Star" models.
6. Vacuum/clean refrigerator coils.
7. Install energy efficient window coverings to reduce radiation heat loss in the winter and heat gain in the summer.
8. On older homes (drywall or plaster), consider installing a moisture vapor barrier paint on interior side of exterior walls and ceilings.
9. Installing a blanket (jacket) on your water heater will reduce standby losses between 25-40%
10. Install programmable thermostats to reduce heating and cooling costs.

#### Long -Term Options/Considerations:

1. Add or increase insulation in exterior walls and attic spaces.
2. Consider passive solar for future remodeling/building plans to take advantage of the sun's free energy.
3. Research solar energy (water & electric) and geo-thermal heating options for long-term savings.
4. Incorporate roofing materials, colors and methods that reduce solar heat gain in the summer.
5. Consider replacing single pane or older double pane windows with insulated windows.

### Free Online Resources

[www.phi.bz](http://www.phi.bz) (Professional Home Inspection Company post inspection support and consulting service)  
<http://www.toolbase.org/> (The Home Building Industry's Technical Information Resource)  
[http://www.ornl.gov/sci/roofs+walls/insulation/ins\\_01.html](http://www.ornl.gov/sci/roofs+walls/insulation/ins_01.html) (Department of Energy)  
<http://www.energystar.gov/> (U.S. Environmental Protection Agency U.S. Dept of Energy)  
<http://www.solarpathfinder.com> (Solar Pathfinder – Fast accurate solar site analysis)  
<http://www.efficientwindows.org> (Efficient Windows Collaborative-how to choose energy-efficient windows)

### Need More Information?

Schedule a "Home Energy Tune-up Inspection" from Professional Home Inspection Company to quantify current energy costs, identify specific ways to reduce your energy usage and estimate savings from recommended improvements. The inspection comes with Professional Home Inspections exceptional post-inspection support.

**La Crosse: 608-782-8831**

**Winona: 507-452-6659**

**www.phi.bz**