

## Why Has My Electric Bill Gone Up?

Listed below are some possibilities of why your electric bill may have increased. Recall if any of the following situations have transpired during the time your usage increased.

Have you had guests over the past month? An increase in occupancy means more meals, more showers taken, more lights on and more use of the spa.

Are there more days of service on your bill this month? One week can add up to a quarter more energy usage for a particular billing period. Holy Cross Energy's meter reading will vary between 28 and 35 days per month. Look at your bill for the days of service for the particular month in question.

Has there been a change of temperature in the region? Many winter loads are temperature driven. If there is a prolonged cold spell or temperatures go below zero, heating devices will run longer. Devices such as heat tape, furnace fans and boilers will operate longer and thus use more energy when it's colder.

Have you added something new in the last month or year? Additional appliances or devices will add to your electrical usage. Additional space added to your home will require more heating and add to your general electric load.

Has something been left on that should be shut off at the end of the season? Many people rely on the thermostat to control heat tape and other winter appliances. The safest way to make sure winter appliances shut off is to manually turn them off at the breaker in the breaker box or with a switch.



**Note:** Meters **do not** speed up if they malfunction. They only slow down or stop. There has to be electrical load in order for the meter to spin and register usage.

### Holy Cross Energy Member Services

#### Member Service Direct Line

#### Phone

(970) 947-5421

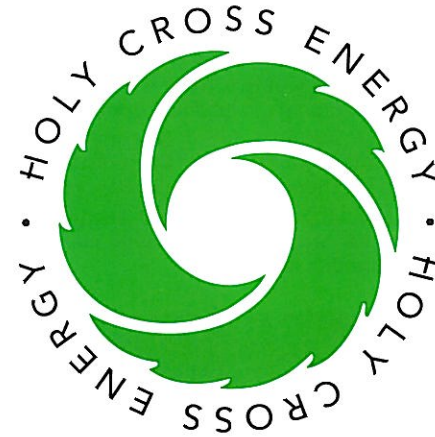
#### Fax


(970) 947-5465

#### E-mail

ctate@holycross.com

**Energy Efficiency  
is Everyone's  
Business**



A Touchstone Energy® Cooperative 

## Residential Energy Savers

Holy Cross Energy

P. O. Box 2150

Glenwood Springs, CO 81602

3799 Highway 82

(970) 945-5491

## Energy Savings Starts With A Home Assessment



Your home is your greatest investment. You want it to operate at its peak efficiency. In order to do that, you need to know how your home works.

Your home can be broken down into three major parts: the building envelope, the mechanical systems and the controls.

The building envelope consists of your walls, ceiling, floors and windows. Your mechanical systems are the devices that heat your home and water, light your rooms, and include all your larger appliances. The controls refer to the thermostats and timers that tell your mechanical systems when and how long to operate. All these work together to make your home comfortable and your life easier.

Act as if you are an investigator in your own home searching for the energy use and loss mystery. You will be amazed at what you come up with.



Take note of what fuel type is used to heat your home. Observe which appliances run on gas and which are electrical. Find out which appliances use the most energy and if there is a way to operate them differently making them more efficient. Feel around your windows for any drafts and take notice of any gaps or cracks. Check your attic and note how much insulation exists. Go down into your crawlspace and see if there is any insulation and if it's on the walls or between the floor joists. Look to see if there is light around your exterior doors. Note any drafts coming in around the doors.

Make sure you write down what you find. Think about what can be done.

## Building Envelope

The building envelope consists of four components: walls, ceiling, floors and the windows of your home. Think of it as a cocoon around your living space.

## Insulation

Insulation is the key to retaining heat in the winter and keeping cool in the summer. Insulation is measured by R-value. R-value represents the resistance to heat flow. The higher the R-value, the better.

Prior to 1986, insulation levels in homes were minimal. Now, most building codes require R-30 in the ceiling, R-19 in the walls, and R-11 in the floors or crawlspace perimeter. Check if your attic has six inches of insulation. If it has six inches or less, add insulation cross-ways to a level of 12 inches. Crawlspaces can be insulated under the floor or on the perimeter walls. Check with your insulation contractor to see what is best for your home.



## Windows

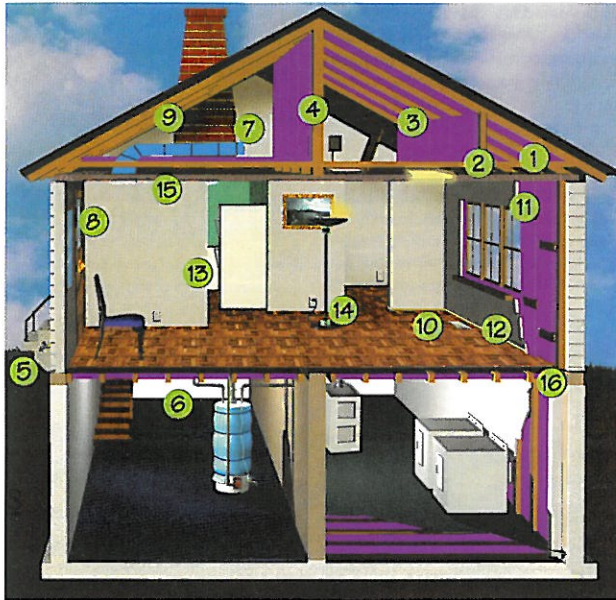
Windows are the weak link in your building envelope. You typically go from an R-19 wall to an R-2 window. Caulking around any gaps between your window openings and the window frame is the first step. Indoor window treatments are the next best way to stop heat loss from your windows. The least expensive treatments are the "indoor plastic storm windows." These kits come with double-stick tape and pre-sized sheets of plastic. Once they are shrunk with a hair dryer, you will barely notice them.

For a permanent window treatment, there are lined curtains, roman shades and honeycomb shades. The honeycomb shades are the best value for the money. Close these window treatments at night when the temperature difference is the greatest between the indoors and outdoors.



## Air Infiltration

One of the laws of thermal dynamics states that "heat flows to cold." When warm air from your house is pulled through little gaps and holes from the interior to the outside, cold air replaces it. The most common areas where air gets into your home is where plumbing and electrical penetrations (inlet holes) have been drilled. Silicone caulk or liquid urethane foam are the best products to seal these holes. For larger holes, foil-faced bubble-pack can be glued on with silicone and stapled in place. Don't forget to look under your sinks.



## Sources of Air Leaks in Your Home

1. Dropped ceiling
2. Recessed lights
3. Attic entrance
4. Electrical wires and box
5. Plumbing and wiring inlets
6. Water and furnace flues
7. All ducts
8. Door sashes and frames
9. Chimney penetrations
10. Warm air register
11. Window sashes and frames
12. Baseboards, coves and trim
13. Plumbing access panel
14. Electrical outlets and switches
15. Light fixtures
16. Sill plates (between top of foundation and the first framing member)

## Mechanical Systems

### Space Heating

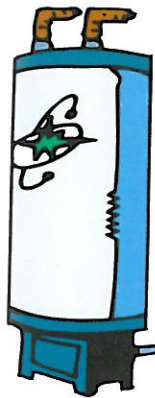
If you have forced air heat, change your furnace filter every two months. Make sure you have a heating contractor inspect your furnace annually. Open the vents in the rooms that you use and close vents in rooms that aren't used as much.

If you have radiant floor heat, don't raise and lower the thermostat setting. Leave it at one temperature constantly.

If you have electric baseboard heat, make sure you have at least four to six inches of clearance between any furniture and your baseboard heaters. Turn thermostats down to 50° when no one is using the rooms or when you're gone. Close the doors to unused rooms.



### Water Heaters



Water heaters can be the second biggest load in an all-electric household. By wrapping your water heater with an insulating blanket, you can save energy all year long. Water heater blankets come in standard sizes and can be purchased at most hardware stores. Turning down the temperature on your water heater will also reduce the energy consumption. The normal range for water heater temperature is 120°-140°. The lower you set your water heater, the more it saves. Low flow shower heads are also a great way to conserve water and energy. A low flow shower head can cut the flow by nearly half without feeling a loss of pressure.

### Lighting

Lighting can be one of the largest electrical uses in your home. Fortunately, there have been improvements in lighting over the past few years. Compact fluorescent bulbs can save up to 75% of your lighting usage without the loss of lighting quality. These lights screw into most conventional sockets and may last up to 10 times longer than conventional incandescent bulbs. Use these in fixtures that are on for four hours or more, or they can lose their life expectancy. If you have to use incandescent bulbs, see if you can tolerate a lower wattage bulb in your fixture.



## Appliances

- Vacuum under or behind refrigerator to keep coils free of dirt, dust and pet hair.
- Keep freezers full or add a jug of water or ice to retain cold temperatures.
- Defrost "non-frost free" freezers once 1/4" of frost builds up.
- Use "air dry" button or shut off "heated dry" setting on dishwasher.
- Do full loads and use cold water in your clothes washer.
- Always clean your lint filter after every dryer load.
- Use a clothesline in warm weather.
- Make sure the dryer exhaust vent is not kinked or has too many bends.
- Use a microwave instead of your stove for cooking.
- Keep range-top coils and reflectors clean.
- Cook with lids on pans.
- Turn spas down when on vacation.
- Turn off computers when not in use.
- Replace old appliances with Energy Star® certified appliances.



## Controls

### Timers

Timers can be very beneficial when you have a device such as a stock tank heater, engine block heater or snowmelt. Timers will automatically control heaters so that they don't run 24 hours a day. Timers can plug in between the device and your receptacle. Some heat tape timers have to be hard-wired by an electrician. Make sure you use an "outdoor timer" for cold weather applications.

### Thermostats

A programmable thermostat can save energy by setting back your home's temperature during the day while you're gone and again at night when you're asleep. Programmable thermostats are available at most hardware stores. If you have electric baseboard heat, you will need a "line-voltage" thermostat that will handle 240 volts. Ask your local hardware person or an electrician what thermostat suits your home's heating system best.

