

# HOME ENERGY CONSERVATION

## Summary of my home projects and the "Return on Investment"

1. **Caulking and Weather-stripping:** (ROI = 520%) Close up cracks, gaps and leaks. Include the openings where pipes pass through basement ceiling and where the utilities enter the house.
2. **Add Attic Insulation:** Savings depends on how much you already have. Increasing from 3" to 6" resulted in an ROI of 110%. Increasing from 6" to 14" gave an ROI of 25%.
3. **Magnetic Insider Windows:** (ROI = 98%) Savings are based on aluminum frame window with existing outside storm windows. Savings would be less for wooden frame windows.
4. **Insulate some walls:** (ROI = 37%) I installed 2x4 studs and insulation in part of our bedroom and around the basement. When covered with paneling it looks nice, reduces drafts and save heat.
5. **Furnace Combustion Air Supply with Power Damper; Night Thermostat:** (ROI = 31%) The power air shut-off was key. Lowering the night temp 10 Degrees will save about 3% on you bill.
6. **Insulate the Hot Water Heater:** (ROI = 23%) Mine was already insulated, but I added 3 ½ inches more and insulated the hot water pipe. (Savings would be more if the heater was electric.)
7. **Furnace Improvements:** (Only applies to older gas furnaces.) Add a power operated flu damper, another cold air return duct, and replaced the throw-away filters with a permanent cleanable filter.
8. **Use Energy Efficient Lamps:** Great for lamps that are used a lot. Shop around, prices vary.
9. **Check Attic Ventilation** – Houses with roofs in full sun need 1 square foot of unobstructed vent inlet area for 300 square feet floor of area. Inlet low and outlet high with gable, roof, or ridge vent.
10. **Replaced an old Refrigerator.** (Newer units are much more efficient.) (ROI = 16%) Buy the freezer-over-refrigerator type, not side-by-side. Unscrew one of the inside bulbs. Put solid (clear plastic) shelves over grill shelves to reduce loss of cold air when the door is open.

## Home energy savings that are FREE

- A Lower the water temperature setting at the hot water heater to just above lowest setting.
- B Turn off the electric range and oven a few minutes before you are done – let it 'coast'.
- C Clean the reflectors in the stove and the coils behind (or under) the refrigerator.
- D Remove screens from south facing windows in the winter. (Solar heat saves about \$6 each)
- E Raise the kid's allowance by x% of the utility bill then have them pay x% each month.
- F Use trees and vines to shade your house in the summer.
- G Turn off the gas pilot in furnace for the summer. Use a clothesline instead of a dryer.
- H Avoid using the clothes dryer or vent fans during extreme outside temperatures.

## Is it all "worth it"?

Between 1984 and 1994 I invested \$826 on projects to save electricity. Those projects and some no cost items saved \$150 to \$200 per year initially, then grew larger as electric rates increased. The accumulated savings through Sept 2011 is \$5,349.

During an earlier ten year period (1974-1984), I spent \$2,111 for the materials to do projects 1 – 9 above. Most of these were DIY items. The natural gas savings from those projects last year was \$1,308. The accumulated saving through Sept 2011 is \$32,244. Need I say more?