

alternative systems

make for a RESOURCE-WISE home



by **John Michel**
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Today, many of us are concerned with energy efficiency – from transportation to appliances and everything in between. As a society, we are more dedicated to doing our part in reducing our “carbon footprint,” but we are also motivated by our wallets.

Adding to the immediate concern of many homeowners is the expiration of PPL’s rate caps at the end of 2009 as part of Pennsylvania’s energy deregulation plan. The remaining utility companies will follow soon after. Residential customers can anticipate a 30 to 35 percent increase in their electric bills.

In these tight economic times, and with the fast-approaching changes to the price of electricity, it is imperative to think about how conserving energy can help our bottom line. And this fall is the perfect time to start – by reviewing your home’s KWh usage and finding ways to conserve energy.

Where should you begin, you ask? Well, here are a few places in your



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home where alternatives to the traditional mechanical systems can really save you energy and money.

Water Heaters

One of the biggest energy wasters in your home is your traditional hot water heater. Why? Because you are paying to constantly heat your water while it’s being stored in the tank.

While the traditional water heater is around 75 percent efficient, technology has advanced to the point where water heating products are now in the 80-95+ percent efficiency range. Bottom line? They use less energy to heat the water you need. Two smart solutions to gain efficiency (and save money) are the Takagi tankless hot water heater and the Vertex water heater.

The Takagi tankless hot water heater provides hot water only when needed. Here’s how it works: When a hot water tap is turned on, cold water travels through a pipe to the Takagi unit. The heat exchanger instantly heats the water to the designated temperature (this takes only five seconds). Like all tankless hot water heaters, the Takagi is more energy efficient than a traditional storage water heater, with energy efficiency ratings from 82-95 percent.



The American Recovery and Reinvestment Act of 2009 (aka the Stimulus Bill) makes significant changes to the energy-efficiency tax credits. The provisions of the Act increase the percentage of costs and the lifetime cap, and expand the list of eligible energy-efficiency improvements.

Not only do these types of home improvements save homeowners a considerable amount of money on their utility bills over time, but the tax credits now offer an even greater incentive for making a home more energy efficient.

Existing Homes Only

Tax credits are available at 30% of the cost, up to \$1,500, in 2009 and 2010 for:

- HVAC, including Central A/C; Air Source Heat Pumps; Natural Gas or Propane Furnaces; Oil Furnaces; Gas, Propane or Oil Hot Water Boilers; and Advanced Main Air Circulating Fans.
- Water Heaters, including Gas, Oil, Propane and Electric.

Existing Homes and New Construction

Tax credits are available at 30% of the cost, with no upper limit:

- Geothermal Heat Pumps
- Solar Water Heating
At least half of the energy generated by the “qualifying property” must come from the sun. Homeowners may only claim spending on the solar water heating system property, not the entire water heating system of the household. The credit is not available for expenses for swimming pools or hot tubs. The water must be used in the dwelling, and the system must be certified by the Solar Rating and Certification Corporation (SRCC).

Remember, not all products on the market qualify for the tax credits. Consult your tax advisor to be sure your home improvement projects qualify. For more information about the tax credits available, visit www.hallerenterprises.com.

Another clever option is the Vertex Water Heater from A.O. Smith. The Vertex may have the shape of a traditional water heater, but it is far from it. Just like the tankless water heater, a Vertex water heater delivers continuous hot water. It works by forcing hot gases down through a helical coil heat exchanger, which provides a much greater heat transfer surface than the standard straight flue tube. The Vertex holds these gases in longer, using the energy more efficiently to deliver an uninterrupted supply of hot water for shower after shower.

Geothermal Systems

Another energy waster may be your method of heating and cooling your home. Geothermal systems are the most energy-efficient systems on the market today. In fact, heating and cooling your home with a geothermal unit will help you save significantly on your electric bill – between 25 and 50 percent (when compared to traditional systems).

So how does a geothermal system work? A few feet below the ground surface, the earth's temperature remains fairly consistent year-round (ranging between 50° to 55° F in this part of the country). Geothermal takes advantage of this stable temperature to supply your home with extremely efficient heating and cooling.

In the winter, a fluid circulating through pipes buried in the ground absorbs heat from the earth and carries it into the home. From there, the heat pump concentrates the earth's thermal energy and transfers it into your home's interior. In the summer, the process is reversed. Heat is extracted from inside your home and transferred through the heat pump to the ground loop piping where the fluid carries the heat back to the earth.

The reason the geothermal is so cost effective is because there is no burning of fuel involved. No wood, coal, oil or

natural gas is used. The only energy needed for geothermal systems is a small amount of electricity to operate the heat pump, ground loop pump, and distribution fan or pump. Additionally, by using the consistent earth temperature, the system is starting at a temperature much closer to your needs thus requiring less energy for heating and cooling.

Does a geothermal system cost more? Not necessarily. It depends on how you measure cost. While geothermal systems will probably cost more to install than conventional systems (because of the ground loop piping), geothermal systems typically have the lowest lifecycle cost of any heating and cooling system. Furthermore, geothermal systems also save homeowners in repair, maintenance and hot water bills.

When you add it all up, the amount saved by homeowners every month in energy costs is more than enough to offset the higher installation cost. Additionally, installing such an energy-efficient system increases the overall value of your



Did you know?

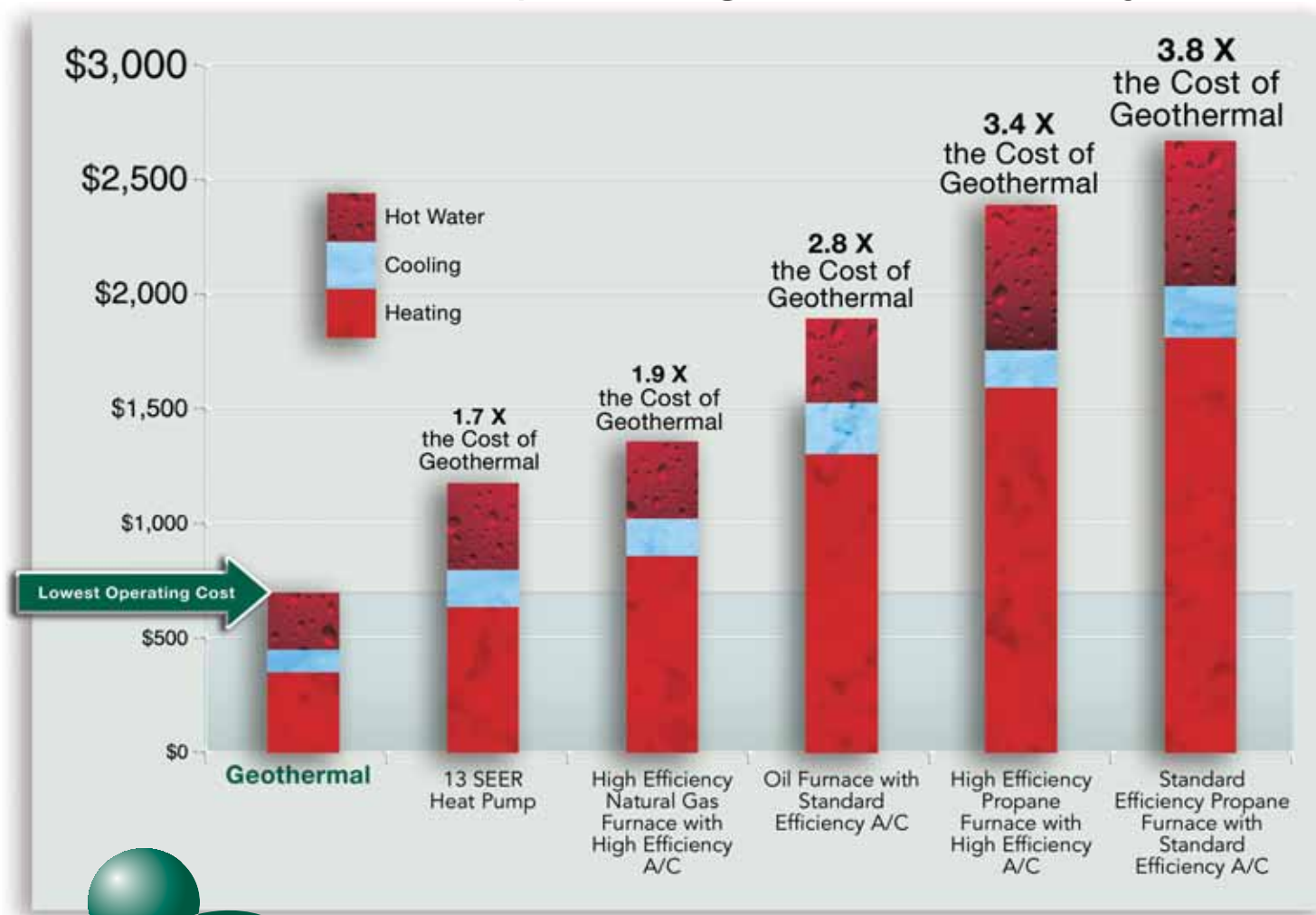
Heating and cooling costs eat up about half of a typical house's energy bill.

home and with the available tax credits you can't find a more cost effective time to make the switch.

To learn more about how alternatives to traditional systems can help convert your home to a more resource-wise one, call (717) 625-1500 to schedule a free consultation with a Haller comfort consultant.

R&A

Estimated Operating Cost Summary



NOTES: Calculations in above chart are based upon current utility costs for a typical home in the U.S. Midwest. Your ClimateMaster dealer can provide customized savings estimates for your home.

Ask Hallerman

Q: I just spent thousands of dollars on a new heating/cooling system for my home and now the contractor is telling me I should purchase an agreement for maintenance on the equipment. Is this really necessary?

A: Heating/cooling equipment is often the single most expensive equipment in your home - easily amounting to 10% of the home's purchase price. It is a sizeable investment and should be cared for accordingly, no matter its age!

To keep your system operating at optimum efficiency levels, major manufacturers advise routine maintenance. In fact, if you purchased an extended warranty on your equipment, your system must be serviced on an annual basis in order for it to remain in effect.

Like your car, your heating/cooling system also needs regular attention. Through a maintenance agreement program, your equipment is cleaned and inspected using a comprehensive checklist, which helps achieve peak performance and detects



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with a little help from **Don Mumma, Service Manager**

minor problems before they escalate into major emergencies. This, in turn, keeps your

energy usage, and bills, in check.

Because Haller Enterprises believes strongly in the importance of regular maintenance, we offer a variety of options through our *Preferred Customer Program*. As a participant, not only do you receive annual tune-ups on your heating/cooling equipment, but you will also experience priority customer service and discounted pricing on any work completed by our service department.

Call a Haller Customer Service Representative today to schedule the first of your *soon-to-be-regular* maintenance visits.

Email questions for Hallerman to: info@hallerent.com
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