

Ever wonder what appliance is eating up the most energy in your house? Water heating accounts for about 20% of the typical home utility bill, and conventional water heaters use far more than other household appliances. This is partly because they continuously heat the whole tank of water, even when it isn't being used. Doing so wastes money and scarce fossil fuels, and produces significant amounts of carbon dioxide, a greenhouse gas.

The good news is that there are many ways available to us to reduce the amount of energy needed to heat our water. For instance, simply installing low-flow aerating showerheads and faucets, turning down the thermostat on the water heater, and/or insulating the tank and hot water pipes, will cut energy use dramatically.

Another option is to install a tankless, or "on demand" water heater. Common in Japan and Europe, they began appearing in the United States about 25 years ago. Unlike conventional tank water heaters, tankless units heat water only as it is used, or on demand, so are vastly more efficient and less polluting.

On demand water heaters are available in propane, natural gas, or electric models. They come in a variety of sizes, and can be installed centrally or at the point of use. For example, you can use a small electric unit as a booster for a dishwasher, remote bathroom or laundry.

Another option is to harness pollution-free solar power with a solar collection system. Solar panels are installed on a south-facing location that receives unobstructed sun between 10 am and 2 pm, and the energy collected is stored in a supplementary solar tank attached to your existing water heater. This system can provide more than half of the hot water needs of a Michigan residence (100% in summer, less in winter).

Currently, more than 1.5 million homes and businesses in the United States, and 3 million in Europe, are using solar heated water. Over the course of its lifetime, each solar domestic water heater typically prevents as much as 50 tons of greenhouse gas emissions.

Both tankless and solar water heaters require an initial investment, but they pay for themselves through significant energy savings. And according to the U.S. Department of Energy, they have much longer lives than conventional water heaters. For more information on these options, go to the "water heating" section of their website at [www.eere.energy.gov/consumerinfo/](http://www.eere.energy.gov/consumerinfo/).

An excellent opportunity for homeowners and businesses currently exists: the State of Michigan Energy Office is offering rebates of up to 50% towards the cost of a solar hot water system, with a maximum of \$4,000. Rebate applications will be accepted for consideration through October 1, 2005. For applications and more information (including a list of trained, certified installers), contact Urban Options at [www.urbanoptions.org](http://www.urbanoptions.org), or at 866-846-7349.

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