

December 15, 2007

Honey, I shrunk the hot water heater

You don't keep your car running 24 hours a day so that it's always ready. And you don't leave your lights on all the time just in case you come in a room. (At least I hope you don't!) So why keep water hot all day just for the few times that you take a shower or wash some dishes?

That's effectively what you're doing if you have a conventional hot water heater at home. Fifty gallons or so of water are being kept at over 100 degrees all the time, regardless of whether you're using it or even at home. Wouldn't it make a lot more sense to heat the water only when it is actually is needed?

Well, yes, it would, and you can do it with a system that's been in use in other parts of the world for a long time. Tankless or on-demand hot water systems are similar to the instant hot water taps at kitchen sinks, only at a larger scale. They can be found in sizes to supply anything from a single shower to a whole house. The advantages are that the water is heated only when needed and, if the unit is located near (or in) the bathroom, the hot water gets there much faster than it would from a tank in the basement. (So it wastes less water, too.) Depending on how your plumbing is set up, you can have smaller heaters at each location that needs hot water or you can have a single central one.



The pictures above show a gas unit that is supplying two full bathrooms, a kitchen and laundry room. The unit is hidden behind an access door in a recess in the master bathroom.

Like regular hot water heaters, they come in gas and electric versions. Electric ones don't require venting, but they do need quite large electrical supplies. Gas tankless heaters, on the other hand, use a standard gas connection and are usually less expensive to operate (depending on your utility rates), but require both a source of fresh air and venting to the outside. Gas models also are available for larger capacities than electric ones.

Which type is better environmentally? Natural gas is produced domestically and does not involve electricity from coal or oil or nuclear power plants. On the other hand, an increasing amount of our electricity should be coming from renewable and clean sources so it would have a lower carbon footprint.

Either way, your utility bill should be friendlier, unless you're the type who leaves the hot water running (and the lights on).

David Bergman
Columnist, Going Green Blog