



ECOBROKER International

Green Topic Pages

Water Heating - Instantaneous Water Heaters

Technology Snapshot & Benefits:

Easy economic savings can accrue from instantaneous or the on-demand type of water heaters. In contrast to the traditional method of keeping 40 to 80 gallons of hot water at-the-ready in an insulated tank, on-demand heaters produce hot water only when it is needed. Since hot water is generally required for less than a few hours each day instead of 24, owners and occupants can easily benefit from high efficiency modern designs that provide hot water on demand. Less fuel is required for a given volume and temperature of water, with corresponding cost savings and pollution savings. Some manufacturers claim 50% savings when compared to conventional hot water tanks.

Estimated Cost Savings:

Assuming that you consume the same amount of hot water at the same temperature as before, you can save a lot of energy and money by eliminating the slow leakage of heat from the hot water tank and piping. Actual savings will depend upon how much water you use, how far it must be piped from your existing heater, and the extent to which that piping travels through unheated spaces. It is reasonable to expect improvements in your hot water bill of 20 cents on the dollar. For a monthly water-heating cost of \$50 dollars, you may expect savings of \$10 per month on your energy bill. If the switch to on-demand water heating is made when your old hot water tank conks out, the effective net cost of change will be much lower and your monthly cash-flow will improve immediately.

Issues:

Installation will be required in the immediate vicinity of bathroom, kitchen and/or laundry room. Space may be a concern.

Regional Issues:

If the new units are electric, you may wish to consider the stability of the electrical grid in your part of the country. Additionally, electricity is most often produced by large central-station plants and is delivered to you at an overall efficiency of about 30%. Unless your electricity is produced with renewable energy equipment, natural gas or LP gas are the fuels of choice for hot-water heating (just as with traditional hot water tanks). These fuels provide total system efficiencies of 80-90%.

Installation (Getting It Done):

If the new water heaters are fueled by natural gas or LP gas, there may be some fuel delivery piping and exhaust venting issues to be addressed by the installer. If the new units are electric, expect some minor rewiring and the installation of new circuit breakers.

Be sure to get bids from at least two or three installers and/or plumbing contractors to gain immediate perspective on the true costs of equipment and installation in your area.

More Information On This Topic:

[U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy - Demand \(Tankless or Instantaneous\) Water Heaters](http://www.eere.energy.gov/consumerinfo/factsheets/bc1.html)

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[U.S. Department of Energy, Building Technologies Program - Demand \(Tankless or Instantaneous\) Water Systems](http://www.eere.energy.gov/buildings/info/components/waterheating/demand.html)

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