



## Hot Options for Hot Water

By Tom Lienhard, PE, CEM

If you're thinking about purchasing a new water heater, knowing the available options and doing research can help you get the model that is best for you.

*Storage or conventional water heaters* are the most common, using fuels such as natural gas or electricity to keep water constantly heated. High efficiency models provide the best cost savings with natural gas heaters and typically having the shortest payback time.

New technologies have added different approaches to providing hot water, while offering energy saving. Higher initial costs and longer payback times are considerations for these models.

A *tankless water heater*, also known as demand or instantaneous, heats water only when needed. While more expensive with a longer payback, a tankless water heater typically lasts five to 10 years longer than a traditional storage water heater and requires less space since it is mounted on a wall.

A *solar water heating system* uses outdoor panels to preheat water before sending it to a traditional storage water heater for additional heating, if necessary. This model may save money over time by reducing the water heating portion of your monthly energy bill by 50-80 percent.

A *heat pump water heater* draws in the ambient air while condenser coils transfer this heat into the tank to heat the water. It has the side benefit of cooling and dehumidifying air inside the house as it removes heat, but a heat pump water heater creates sound while operating.

This type of water heater functions most effectively in a moderate to warm climate where it can draw heat from warmer air. You can buy a heat pump as an add-on to your current storage water heater, or you can purchase an integral heat pump in which the heat pump and storage tank come as one unit.

Before buying any type of water heater, make sure to do your homework. A good source of information is at [www.eere.energy.gov](http://www.eere.energy.gov).

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