



#5 WATER HEATING

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After space heating and cooling, water heating is typically the second largest user of energy in the home, accounting for approximately 15 percent of total home energy use and costing an average house-

This Brief will cover the following topics:

- Start with efficiency;
- Storage tank heaters or demand water heaters;
- Setpoint thermal water heating;
- Low-flow water fixtures.

hold over \$200 a year. While most homes that don't meet these requirements. If you have fixtures that are ten years old or older, consider replacing them. Typically they can be replaced for less than \$10 apiece, and the new devices

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See: www.rmi.org/HomeEnergy

water heating costs. Using hot water more efficiently, for example, is one of the quickest and easiest ways to save energy and water in the home. Switching to water-efficient shower and faucet fixtures and making a few simple adjustments to your existing heater are great ways to start.

The U.S. Environmental Protection Agency (EPA) has calculated that a household of four can reduce water use by one-third just by installing efficient fixtures and appliances (dishwashers and clothes washers). Though efficient appliances can cost a little more than conventional appliances, you will get your money back (and then some) via lower water heating bills.

Fixtures

Federal Regulations enacted in 1994 set low-flow standards for water fixtures. All showerheads manufactured after January 1, 1994 cannot have flowrates greater than 2.5 gallons per minute (gpm) at a pressure of 80 pounds per square inch (psi) and faucets cannot have flows greater than 2.2 gpm. While the standards have not changed since then, it is still possible to find fixtures in older

these efficient water fixtures have advanced considerably. So although they use less water, they do not significantly compromise your showering or washing experience.

Your water pressure should be set at 20–80 psi or else your low-flow fixtures will not work properly. You will likely already be experiencing problems if your water pressure is too high or too low, but a low-cost water pressure gauge—available at most hardware stores—will allow you to check your home's actual water pressure. Low pressure could be a sign of leaks in the plumbing system, which can waste large amounts of water.

Other titles in Rocky Mountain Institute's Home Energy Briefs include:

- No. 1 Building Envelope
- No. 2 Lighting
- No. 3 Space Cooling
- No. 4 Space Heating
- No. 5 Water Heating
- No. 6 Cleaning Appliances
- No. 7 Electronics
- No. 8 Kitchen Appliances
- No. 9 Whole System Design



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