



February: Insulate Your Water Pipes

Task: Reduce wasted energy by insulating pipes.

Most water pipes in homes are uninsulated, which results in lost heat and causes the water heater to work harder, thereby increasing energy costs. If you have pipes which are warm to the touch, which “sweat,” or go through unheated areas, the fix is simple and very inexpensive.

From http://eartheasy.com/live_cheapheat.htm

Advanced: If you have already completed this task, consider doing the following:

- Install a timer and use off-peak power if you have an electric water heater: <http://waterheatertimer.org/9-ways-to-save-with-water-heater.html>
- Reduce water use for additional savings (see below)

How to insulate water pipes (From http://eartheasy.com/live_cheapheat.htm):

- There are various materials for insulating pipes, but the easiest to use is pre-slit foam pipe insulation. It is available at most hardware stores and usually comes in 3' lengths. Look for the size that fits the diameter of your pipes, and choose the one with the highest R-value.
- Simply snap the insulation over the pipe and run a strip of duct tape over the seam where pieces butt together. Join the split so it is facing downward on horizontal runs, and tape the long seam as well. Cut short lengths of the foam insulation with a razor knife. For corners, cut the insulation at 45° angles and wrap with duct tape.
- Do not wrap too tightly as it will lose some of its insulation value. Any part of the insulation that is outside should be painted.
- While you're at it, insulate the cold water pipes too – this will help keep them from freezing in unheated areas or during cold weather if you're away from home. (In areas of sustained freezing temperatures, the pipes will ultimately freeze; the insulation will only slow the process. The only way to prevent freezing is to drain the water or add heat (i.e. heat tape).

For more information on insulating water pipes, see these sites:

- <http://www.diynetwork.com/how-to/how-to-insulate-pipes/index.html> - includes a short video demonstrating application of different kinds of insulation
- http://www.energysavers.gov/your_home/water_heating/index.cfm/mytopic=13060 - features links to other helpful water-saving information

What else you should know:

In some cases, it may be advisable to reroute pipes. Check here for some information: http://www.leaningpinesoftware.com/hot_water_pipes.shtml

Reduce hot water use for additional energy savings:

The following is excerpted from the [US Department of Energy](#) website.

You can lower your water heating costs by using and wasting less hot water in your home. To conserve hot water, you can fix leaks, install low-flow fixtures, and purchase an energy-efficient dishwasher and clothes washer.

Fix Leaks

You can significantly reduce hot water use by simply repairing leaks in fixtures—faucets and showerheads—or pipes. A leak of one drip per second can cost \$1 per month.

If your water heater's tank leaks, you need a [new water heater](#).

Install Low-Flow Fixtures

Federal regulations mandate that new showerhead flow rates can't exceed more than 2.5 gallons per minute (gpm) at a water pressure of 80 pounds per square inch (psi). New faucet flow rates can't exceed 2.5 gpm at 80 psi or 2.2 gpm at 60 psi. You can purchase some quality, low-flow fixtures for around \$10 to \$20 a piece and achieve water savings of 25%–60%.

Purchase Energy-Efficient Dishwashers and Clothes Washers

The biggest cost of washing dishes and clothes comes from the energy required to heat the water. You'll significantly reduce your energy costs if you purchase and use an energy-efficient dishwasher and clothes washer.

For an impressive list of ways to save hot water, [see this page](#).