



## Should I put a blanket on my hot water heater?

While it's true that installing a blanket on your storage water heater will make the water heater more efficient, it still doesn't always make sense from a whole building energy use point-of-view. In most cases, the blanket will save you some water-heating dollars, but in other cases, the jacket losses from the water tank serve to provide heat to a conditioned room at a greater efficiency than the space heating appliance can. Either way, it won't have a major impact on your energy costs. CCHRC looked at the most common boiler and water heater efficiencies and found that adding a water blanket, even with a highly efficient boiler and inefficient water heater, would only save about 2 gallons of heating oil a year.

The amount of money you can save by insulating a hot water tank depends on several factors:

- The warmer the temperature of the water in the tank, the more money you can save by adding an insulating blanket.
- The cooler the temperature of the area the tank is located in, the more money you can save by adding an insulating blanket.
- The greater the difference in efficiency between the Energy Factor of the water heater and the AFUE of the space heating appliance, the more money you can save by adding an insulating blanket. (This assumes the Energy Factor is the greater of the two.)
- The Energy Factor of water heaters ranges from 45 percent -90 percent for older models and from 65 percent – 90 percent for newer models.

### Background on water heater blankets

Water heater blankets are sold in home improvement stores for \$15 to \$30 and are meant to reduce the standby losses, or jacket losses, from your storage water heater. Since the water in the storage tank is a higher temperature than the air in your house, it continually loses heat to the surrounding air. Covering the water heater with a dedicated blanket reduces the heat loss from the water, just like adding a blanket to your bed at night helps keep your body heat under the covers.

However, adding an insulating blanket to a water tank does not save energy in every situation. In some cases, jacket losses from a water tank serve to provide heat to a conditioned room at a greater efficiency than the space heating appliance can.

### Other ways to lower your water heating bill

Installing (or not) a blanket is one of many ways to save money. Other options include insulating your water pipes (pipe wrapping is sold at hardware stores for about \$1 for 6 feet), lowering the temperature of water in your storage tank, repairing leaky faucets, installing low-flow showerheads, or upgrading to more efficient appliances (or a tankless system).

The more you do, the more money you can save. Also, remember to get your water heating system checked yearly by a heating contractor. They will flush the system to get rid of sediment, inspect for rust, check for leaks at pressure valves and make sure controls are working properly. This yearly maintenance will prevent breakdowns and keep the system working efficiently.

Ask a Builder articles promote home awareness for the Cold Climate Housing Research Center. If you have a question, contact CCHRC at [info@cchrc.org](mailto:info@cchrc.org) or 907-457-3454.