ENERGY COST COMPARISON

When comparing energy costs it is important to consider the efficiency of the water heating equipment. The water heater's efficiency is measured as an Energy Factor (EF), which is usually listed beside the EnergyGuide label. The higher the number, the more energy efficient the water heater.

The charts below compare costs to operate electric, propane and natural gas water heating using various Energy Factors.

Annual fuel cost to heat water

Assumes family of three using 64.3 gallons per day. Models annualize operating costs of the fuels to derive price. Source: U.S. Department of Energy.

EXAMPLE 1:
Standard Electric Energy Factor of .93 compared to LP and Natural Gas Energy Factor of .63

Cost per kWh/ Annual Operating Cost	$/gal LP Gas/ Annual Operating Cost	$/therm NaturalGas/ Annual Operating Cost
6.0¢ $283.29	$1.09 $282.97	$1.19 $282.98
7.0¢ $330.50	$1.27 $329.70	$1.39 $330.54
9.0¢ $424.93	$1.63 $423.16	$1.78 $423.28
11.0¢ $519.36	$1.94 $519.21	$2.12 $518.40
12.0¢ $566.57	$2.18 $556.94	$2.38 $556.96
13.0¢ $613.79	$2.36 $612.67	$2.58 $613.53

For example, if you choose to heat water with standard electric heat (.93 Energy Factor) and your cooperative's load management electric rate is 7 cents per kWh, that is comparable to paying $1.27 per gallon for propane (.63 Energy Factor) for a propane water heating system, or $1.39 per therm (.63 Energy Factor) for a natural gas water heating system

EXAMPLE 2:
Heat Pump Water Heater Energy Factor of 2.0 compared to LP and Natural Gas Energy Factor of .63

Cost per kWh/ Annual Operating Cost	$/gal LP Gas/ Annual Operating Cost	$/therm NaturalGas/ Annual Operating Cost
6.0¢ $131.73	$0.51 $132.40	$0.55 $130.79
7.0¢ $153.68	$0.59 $153.17	$0.65 $154.57
9.0¢ $197.59	$0.76 $197.30	$0.83 $197.37
11.0¢ $241.50	$0.93 $241.43	$1.02 $242.56
12.0¢ $263.46	$1.01 $262.20	$1.11 $263.96
13.0¢ $285.41	$1.10 $285.57	$1.20 $285.36

For example, if you choose to heat water with a heat pump (2.0 Energy Factor) and your cooperative's load management electric rate is 7 cents per kWh, that is comparable to paying 59 cents per gallon for propane (.63 Energy Factor) for a propane water heating system, or 65 cents per therm (.63 Energy Factor) for a natural gas water heating system

Sources: EPA United States Environmental Protection Agency, Dairyland Power Cooperative
www.energystar.gov, www.dairynet.com

This information is brought to you by your local energy cooperative.

Allamakee-Clayton Electric Cooperative
Barron Electric Cooperative
Bayfield Electric Cooperative
Chippewa Electric Cooperative
Clark Electric Cooperative
Dunn Energy Cooperative
Eau Claire Energy Cooperative
Freeborn-Mower Cooperative Services
Hawkeye REC
Heartland Power Cooperative
Jackson Electric Cooperative
Jo-Carroll Energy
Jump River Electric Cooperative
Oakdale Electric Cooperative
People's Energy Cooperative
Pierce Pepin Cooperative Services
Polk-Burnett Electric Cooperative
Price Electric Cooperative
Richland Electric Cooperative
Riverland Energy Cooperative
St. Croix Electric Cooperative
Scenic Rivers Energy Cooperative
Taylor Electric Cooperative
Tri-County Electric Cooperative
Vernon Electric Cooperative

Touchstone Energy® Cooperatives

Contact your local electric cooperative for more information about electric water heating options.

2012

Choosing Your High Efficiency Water Heater

Providing Hot Water for Less

Provide Hot Water for Less

Heating water accounts for approximately 15 percent of a home's energy use in the United States. High efficiency water heaters use 10 to 50 percent less energy than standard models, saving homeowners money on their utility bills. Actual energy savings from high efficiency water heaters depend on family size, heater location and the size and placement of water pipes.

Hot Water Usage

(based on national averages)

The typical U.S. homeowner's water consumption by place of use.

As you prepare to purchase a new water heater for your home, consider the most cost-efficient model for you based on how much hot water you use during its busiest hour. This is called your "First Hour Rating", an indicator of the size of water heater you should buy based on how much hot water your family typically needs. You will find a matching "First Hour Rating" on the yellow EnergyGuide label that appears on all water heaters. The water heater EnergyGuide reports average annual operating costs of the different types of water heaters, so you can find the annual cost along with the "First Hour Rating" to match your capacity needs.

UNDERSTANDING HIGH EFFICIENCY WATER HEATER TECHNOLOGIES

Electric water heaters deliver the safest, simplest and most convenient way to heat water. Electric water heating is safer than fuel-fired methods of heating water because there are none of the hazards or problems associated with using a combustion process to heat water.

Electric High Efficiency Tank Water Heaters.

Durable, efficient and safe, today's high efficiency electric water heaters can be installed almost anywhere in a building without need for combustion air and flues to the exterior of the building. Because of the wide variety of sizes available, they may be placed in cabinets, under counters and in utility rooms. They are generally much better insulated than fuel-fired units, so they have lower standby losses.

Electric water heaters deliver the safest, simplest and most convenient way to heat water.

Storage Tank Water Heaters

Water is kept hot and ready for use at all times in insulated storage tanks with capacities ranging from 20 to 120 gallons. One or more tanks may be used to manage your hot water needs.

Heat Pump (Hybrid Electric) Water Heaters.

Heat pumps transfer energy from the surrounding air to water in a storage tank. These water heaters are much more efficient than electric resistance water heaters and most effective in warm climates with long cooling seasons.