

## ***Propane Tankless Water Heaters Save Space and Lower Energy Bills***

Homeowners and builders alike are getting excited about tankless water heaters because they are easy to install and bring a new level of efficiency to the home.

Tankless water heaters heat on demand, provide endless hot water, and eliminate stand-by losses – the energy to maintain the temperature in storage tank water heaters. All of these efficiencies appeal to homebuyers' increasing desire for "green technology" in their homes. Tankless water heaters are also incredible space savers in the home, taking up less square footage than traditional water heaters, and they have a life expectancy of more than 20 years, while storage tank water heaters typically last only ten years.

When it comes to selecting tankless water heaters and choosing an energy source, how does the homebuyer make these decisions? And, how can a builder answer a homebuyer's questions about picking the right energy source?

In a recent survey of 755 homeowners conducted by the Propane Education & Research Council (PERC), just over one in three consumers (37 percent) said they were familiar with tankless water heaters. Yet, after being given a description of a tankless or on-demand water heater and its benefits, nearly twice as many (62 percent) said they were likely to consider purchasing one for their next water heater.

According to the survey, the key selling points for gas tankless water heaters are that they can lower household energy bills and that they use less energy to operate than conventional tank heaters. Nearly nine out of ten homeowners said these were important reasons to consider purchasing a tankless water heater.

Approximately 9 million conventional water heater units are sold annually. Of these, about half are fueled by gas (propane or natural), with the other half being powered by electricity. However, even though tankless water heaters represent a fraction of the market, they are gaining ground. A big reason for tankless market share gains is improvement in the technology, and their attractiveness is supported by the inherent ability of gas to heat water better and faster than electricity. When gas is used to fuel efficient tankless water heaters, homeowners can realize exceptional efficiency gains.



*Tankless water heaters not only lower household energy bills but also save customers precious space.*

The Department of Energy estimates that approximately 20 percent of a home's energy costs are spent heating water. A standard 50-gallon electric tank water heater replaced with a propane tankless water heater can reduce annual energy costs by more than 60 percent, or \$274 annually (based on Energy Guide values for a family of four using an estimated 2,000 gallons of hot water per month).

With today's tankless water heaters delivering performance rates that meet and exceed conventional tank water heaters, the primary barrier toward consideration is

price. Tankless water heaters can cost two to three times more than electric tank water heaters. The challenge for installers and builders is to help homeowners understand the lifecycle benefit of a tankless water heater and how it offsets start-up costs – tankless water heaters are much less expensive to own over their lifetime.

For example, assuming a tankless water heater installation costs \$3,000 compared to \$1,000 for a conventional electric water heater, a homeowner needs to first understand equipment replacement timeframes. Tankless water heaters last twice as long as a conventional water heater – an average of 20 years as compared to ten. Factoring in the necessary replacement cost for a conventional water heater means that a tankless water heater only costs \$1,000 more to install—and that's before you factor in the significant energy savings.

That remaining \$1,000 difference can be offset in as little as four years when you consider the energy savings. A 50-gallon conventional electric tank water heater has an energy cost of \$450 per year (again, from Energy Guide values based on an estimated use of 2,000 gallons of hot water per month by a family of four) compared to \$176 per year for a propane tankless water heater. This represents an average annual savings of \$274 per year, which means a customer would break even within four years.

In the PERC homeowner survey, 82 percent of homeowners said the long-term benefits and cost savings were either definitely (36 percent) or probably (46 percent) worth the

upfront costs of installing a tankless water heater.

Finally, homeowners and builders must consider the space savings benefit tankless water heaters provide. Tankless water heaters free-up usable floor space in a home. A standard 50-gallon tank water heater takes up nine-square-feet of valuable floor space. A home that has a value of \$200 per square foot would gain \$1,800 in usable space by installing a tankless water heater instead of a tank-type water heater.

Propane can also be easily retrofitted into homes that don't have access to natural gas. Adding a propane tank and gas piping to the home is typically a very cost-effective and efficient alternative to electricity for home and water heating, fireplaces, cooking, and many outdoor uses. Gas systems can use either the usual black steel threaded piping common to many homes or the newer corrugated flexible piping systems that make pipe installations much faster and reduce installation costs. Propane operates at a higher pressure than natural gas and can use smaller diameter gas piping to provide proper pressure and volume. Using smaller diameter piping reduces costs by lowering labor costs (smaller piping is easier to run) and lowering material costs (smaller diameter piping costs less).

Want to learn more? A white paper by the Propane Education & Research Council helps building industry professionals understand why gas – both propane and natural – is the way to go. The white paper is available at

[www.usepropane.com/buildwithpropane](http://www.usepropane.com/buildwithpropane).

*PERC's homeowner survey was conducted using Opinion Research Corporation's CARAVAN Omnibus Survey. Telephone interviews were completed from the period August 23-26, 2007, with 755 homeowners in the continental United States. The sample is based on a methodology designed to produce a representative sample of the U.S. adult population.*