



Water Heating

Water heating is the third largest energy expense in your home. It typically accounts for about 13% of your utility bill. There are four ways to cut your water heating bills: use less hot water, turn down the thermostat on your water heater, insulate your water heater, or buy a new, more efficient water heater.



Three Most Common Types Of Water Heaters:

- *Storage Water Heaters* - These are the most common type of water heater used in the U.S. They typically ranging in size from 40 to 80 gallons, storage water heaters work by heating up water in an insulated tank and storing it for use.
- *Demand Water Heaters* - They are sometimes called “instantaneous” or “tankless” water heaters. Demand water heaters do not contain a storage tank. A burner heats water only when there is a demand for hot water.
- *Solar Water Heaters* - These use energy from the sun to heat water.

Water Heating Energy Savings Tips:

- Lower the thermostat on your water heater; water heaters sometimes come from the factory with high temperature settings, but a setting of 120°F provides comfortable hot water for most uses.
- Take more showers than baths. Bathing uses the most hot water in the average household.
- Insulate your electric hot-water storage tank, but be careful not to cover the thermostat. Follow the manufacturer's recommendations.
- Insulate your hot-water storage tank, but be careful not to cover the water heater's top, bottom, thermostat, or burner compartment. Follow the manufacturer's recommendations; when in doubt, get professional help.
- Insulate the first 6 feet of the hot and cold water pipes connected to the water heater.
- Install heat traps on the hot and cold pipes at the water heater to prevent heat loss. Some new water heaters have built-in heat traps.
- Drain a quart of water from your water tank every 3 months to remove sediment that impedes heat transfer and lowers the efficiency of your heater. The type of water tank you have determines the steps to take, so follow the manufacturer's advice.
- Although most water heaters last 10-15 years, it's best to start shopping for a new one if yours is more than 7 years old. Doing some research before your heater fails will enable you to select one that most appropriately meets your needs.
- Consider natural-gas on-demand or tankless water heaters. Researchers have found savings can be up to 30% compared with a standard natural-gas storage tank water heater.

Contest Home Example

In the contest winning home, the 40-gallon gas storage hot water heater was in poor condition, located in an exterior closet, and had an energy efficiency rating of 58%. Due to an improper draft diverter, it was not ventilating well.

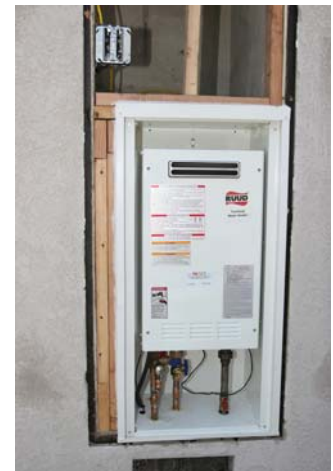
The installation team from Alstate Plumbing Heating & Air Conditioning replaced the old water heater with a high-efficiency Ruud tankless, sealed combustion hot water heater with 81% efficiency. The tankless water heater instantly heats only the water that is used, rather than keeping 40 gallons of water hot all the time.

By installing a sealed combustion unit, the installation team eliminated the potential hazard of carbon monoxide being released into the house. The unit also takes up less space.

Before



After



The homeowners were impressed that the installation team recommended this state-of-the-technology solution and configured it in a way that allows them to perhaps expand the size of their bathroom at some point in the future.

Old storage type water heaters are inherently inefficient. Even if no hot water is drawn from the tank the heater will operate periodically to maintain the water temperature. Also, when cool water enters the tank to replace used water it too needs to be heated to the desired levels. A tankless water heater often referred to as, "on-demand water heating," because it does not store heated water heats water only when needed. Once the faucet is opened, water flows into the heater where a sensor turns on the heat exchanger or heating coils. Water flows through the heating coils and is heated to the desired temperature. Once the faucet is closed, the sensor automatically shut down the heating coils, saving energy. The entire process takes about 5 seconds to heat the water initially.

Since there is no standby loss, tankless heaters can be more energy efficient than traditional storage water heaters. Other advantages to tankless water heaters are that they do not waste water since water is heated almost immediately. Also, with a tankless water heater you will not run out of hot water in the middle of a shower or other use and since they are smaller and do not hold water, their life span is 20 years, nearly twice that of a storage water heater.

How To Do Your Own Home Energy Makeover

The Anaheim energy makeover contest-winning home demonstrates how homeowners can significantly reduce their energy costs and improve home comfort and safety. You can do your own home energy makeover by participating in Anaheim Public Utilities' Home Investment Package (HIP) Program. The HIP program bundles various rebate offers into a one-stop shop designed to make homeowners sit up and take notice of the more than \$15,000 in savings they can realize through the program. These savings include a waiver of permit fees for energy-efficient improvements that can cost up to \$1,000, and up to \$14,000 in incentives. Plus, special low-cost financing is provided by the Electric & Gas Industries Association (EGIA).



For more information on Anaheim's Home Investment Package, please visit www.anaheim.net and click on Public Utilities, then Home Investment Package.

About The Contest

The Home Investment Package (HIP) Home Energy Makeover Contest was sponsored by Anaheim Public Utilities and the Electric & Gas Industries Association (EGIA) to demonstrate how homeowners can significantly reduce their energy costs and improve home comfort and safety. More than 500 Anaheim residents entered the contest, and twenty finalists were selected through an application screening process that identified those homes with the greatest potential to demonstrate energy savings. Contest sponsors donated the products and services featured.

For more than 100 years, Anaheim Public Utilities has served Anaheim water and electric customers with low rates and reliable service. Anaheim Public Utilities is Orange County's only publicly owned water and electric utility. The Electric & Gas Industries Association (EGIA) is a non-profit organization dedicated to advancing energy efficiency and renewable energy solutions through a nationwide network of contractors, distributors, manufacturers and utility companies.

To view a series of these fact sheets on other aspects of the Home Energy Makeover, go to www.egia.org/anaheim

Sponsor Information

Southern California Gas Company and Alstate Plumbing Heating & Air Conditioning Are Proud Sponsors Of The Anaheim Home Energy Makeover Contest



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