



ECU

**SUSTAINABLE ENERGY
AND ENVIRONMENTAL
ENGINEERING**

Tankless hot water heaters:

With today's water heaters there is no longer a need for bulky water tanks. Tankless water heaters can save you money on energy costs, free up space in your house, and provide hot water on demand.

What are your water heating options?

When it comes to tankless water heaters you have a two options. Your first option is a gas burner operated tankless water heater which produces hot water with the use of propane. The second option is a tankless water heater which uses an electric element to heat the water.

How do tankless water heaters work?

With a tankless water heater the water is heated directly with heating elements without the use of a storage tank which allows for a constant supply of hot water. These units are generally small and can often times be wall mounted. You also have the option for multiple units depending on your hot water needs.

Replacing Water Heater With Tankless Water Heater	
Annual Savings	\$177.83
Payback Period (years)	5.32
Impl. Cost	\$962.54
Net Present Value ¹	\$2,021.73
1: Assuming a discount rate of 1.7% compounded annually and lifespan tankless water heaters for 20 years	

Tankless water heaters pros and cons

If you are currently looking for a new option for a water heater and are thinking about going to a tankless system to save space and energy here are some details to keep in mind.

Some of the benefits of this style of water heater are:

- Eliminates wasted space from a water tank.
- Can be wall mounted (some models can be mounted outside).
- Has a lifespan of 20 years.
- Provides an instantaneous and continuous flow of hot water
- Eliminates worry about water leaks from a tank.

The short comings of a tankless water heater are:

- Higher initial costs.
- Sometimes cannot supply enough water for simultaneous, multiple uses.
- In addition, natural gas tankless water heaters can potentially waste energy with continuous burning of the pilot light.



Resources

- www.Energy.gov
- www.energystar.gov
- Coastal Vacation Rental Home Technical Report

This document was made possible through a partnership between East Carolina University's College of Engineering and Technology's Center for Sustainability and Department of Engineering and the North Carolina Division of Environmental Assistance and Customer Service, with funding from the U.S. Environmental Protection Agency. Information presented is collected, maintained and provided for the convenience of the reader. While every effort is made to keep such information accurate and up-to-date, the state of North Carolina does not certify the accuracy of information that originates from third parties. Under no circumstances shall the state of North Carolina or the U.S. Environmental Protection Agency be liable for any actions taken or omissions made from reliance on any information contained herein from whatever source nor shall aforementioned parties be liable for any other consequences from any such reliance. Mention of a company should not be considered an endorsement by the State of North Carolina or the U.S. Environmental Protection Agency.