



Willie's World

A Publication of Arkansas Valley Electric Cooperative

Articles:

- Tank-less Water Heating
- Co-op Connections Card Savings
- Youth Tour



**SPRING
BREAK!**

March 2010 Issue

DO TANK-LESS WATER HEATERS LIVE UP TO THE HYPE?

An unlimited supply of hot water definitely sounds like a sweet deal to many homeowners. So does reduced water heating costs, instantaneous hot water on demand, and more space in the utility closet. These are all promises made by companies selling tank-less water heaters. But does the technology really deliver?

Unlike traditional electric resistance or gas-fired water heaters, tank-less models do not store hot water—they heat water only as it's consumed. One or a series of heating elements are activated when a hot water faucet or valve is opened. The unit heats water until the faucet or valve is closed.

'Unlimited' Hot Water

An unlimited supply of hot water sounds great, but generally doesn't make for responsible water use, particularly in areas of the country suffering from drought or chronic water shortages. Moreover, even the largest whole-house unit may not supply enough hot water for simultaneous, multiple uses.

For example, such a unit may be able to supply only two showers simultaneously or perhaps one shower, a dishwasher, and a sink. If users demand too much water, temperatures will drop. As a result, a tank-less system probably won't meet the needs of a large family.

In addition, water temperature depends on the volume coming out of a faucet. If you turn the faucet to a trickle, water runs cold. If you open the faucet further, you will trigger hot water—the hottest possible. If you open the faucet to maximum, the temperature will drop back a bit. If you open more than one faucet, temperatures will drop even more.

Hidden Costs

Generally, tank-less water heaters do not require a lot of space (a large unit can fit in an area no larger than 24 inches square, and extend from the wall about 8 to 10 inches).

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MONTHLY SAFETY TIP



Willie Wirehand wants you to remember...

"Never leave space heaters unattended. Turn off space heaters and unplug them before leaving the room or going to bed."

But they do require an upgrade in electrical service—something most home improvement stores often don't mention and a chief reason electric co-ops generally don't recommend the appliances.

This means consumers who want to replace an existing conventional water heater with a tank-less unit or add one as part of a home-remodeling project will incur additional costs.

For example, a traditional tank water heater with 4,500-watt elements operates on #10 gauge wire and a 30-amp circuit breaker. One whole-house tank-less model boasts four 7,000-watt elements for a total electrical load of 28,000 watts. This requires wire and a circuit breaker that will handle at least 120 amps.

If a tank-less water heater is installed in an existing home without upgrading the electrical service, low voltage or sudden voltage drops are likely. This will cause dimming lights, blinking lights, and other problems.

The extra load also necessitates a larger and more expensive meter loop and main breaker panel for the house. In some cases, consumers also must pay for new wiring between the distribution transformer and electric meter. Check with a licensed electrician or your local electric co-op to determine if you must improve your electric service connections to support a tank-less water heater.

While gas-fired tank-less water heaters generally do not need basic service upgrades, the same considerations must be made when determining how many hot water faucets will be turned on at any given time and how far away the tank-less heater remains from sinks and showers.

Other Options

Consumers looking for an efficient water heater should consider a heavily insulated electric resistance unit. These appliances are often the most cost-effective option over the long term. And because of their hot water storage capabilities, many electric co-ops employ electric resistance water heaters as a key component of load management programs that shave power costs during times of peak demand—a proven way to help keep electric bills affordable.

To reduce home water heating costs, the Oak Ridge National Laboratory suggests simple and inexpensive measures such as tank insulation, temperature setback, timers, heat traps, and low-flow showerheads. All of these are more practical and provide a greater return on investment than putting in a tank-less water heater.

NRECA's Cooperative Research Network monitors, evaluates, and applies technologies that help electric cooperatives control costs, increase productivity, and enhance service to their consumers.

**Happy
St. Patrick's
Day
From Your
Arkansas Valley
Electric Cooperative**

WE
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Energy Efficiency

Tip of the Month

A significant amount of the average home energy bill pays for heating water. Take five-minute showers instead of baths and make sure your water heater is set to no higher than 120° F.

Source: U.S. Department of Energy

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For more information, contact [Member Services](#) at 800-468-2176.

ATTENTION HIGH SCHOOL JUNIORS!!

Win an All-Expense-Paid trip to Washington, D.C. this summer!

Two local high school juniors will win a free trip to our nation's capital June 9-17, 2010. The trip is sponsored by Arkansas Valley Electric Cooperative and the Electric Cooperatives of Arkansas. To be eligible, your parents or legal guardians must be members of Arkansas Valley Electric Cooperative.

To enter, simply submit an essay (250 words or less) on "Describe how electric cooperatives operate based on the seven cooperative principles. Tell which of the seven cooperative principles you think is the most important and why".

Entries must be received by 5:00 p.m. on Tuesday, April 6, 2010. Please attach a cover sheet including your name, your parent/guardians' names, and your address and phone number.

Mail entries to:
Attn: Youth Tour
Arkansas Valley Electric Cooperative
P.O. Box 47
Ozark, AR 72949

Or bring by our office at 1811 West Commercial

For more information contact:
[Terri Hodge](#), [Tony Wilson](#), or [Kevin Baskin](#).
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We Welcome Your [Comments and suggestions](#).