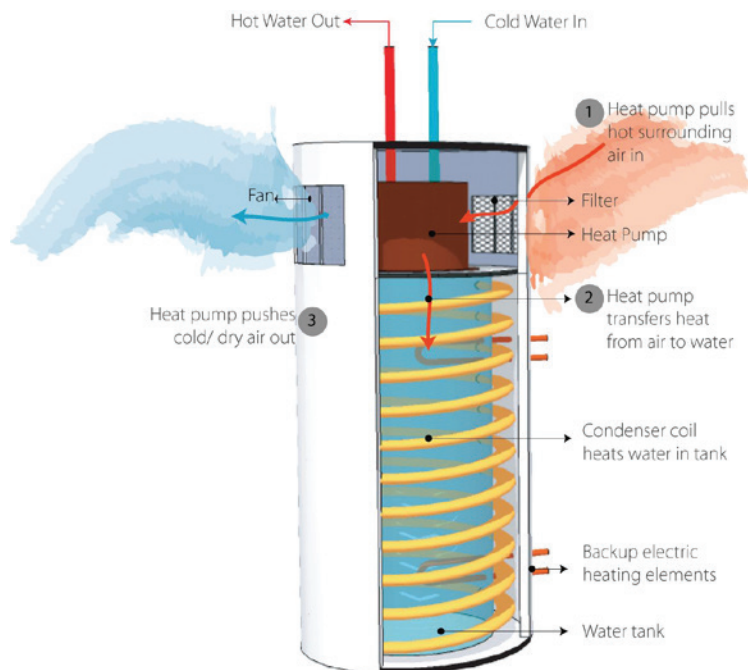


# Heat Pump Water Heater (HPWH) USER GUIDE



## What is a HPWH?

An air-source heat pump water heater is a highly efficient way to produce hot water in your home. The unit looks like a standard water heater with the addition of a heat pump assembly on top of the tank. It works by taking small amounts of heat from the surrounding air, passing that heat into the water in the tank, and exhausting cold air. This allows the water heater to operate at more than 300% efficiency, meaning that for every unit of energy put into the system, more than three units of heat are returned.



## Benefits of a HPWH

Heat pump water heaters offer significant savings over traditional electric, natural gas, and propane water heaters. While a natural gas water heater typically operates in the 58-80% efficiency range, a HPWH can operate at more than 300% efficiency. With the rising cost of propane and natural gas, an HPWH can reduce utility bills by 30% or more.

HPWHs are all-electric, meaning there are no byproducts of combustion like carbon monoxide and other dangerous gases. Without the risks of gas leaks or fires, they are safer as well.

HPWHs also lower the environmental impact of your home. With more electricity coming from low-carbon renewable sources, they offer a great way to get hot water sustainably.

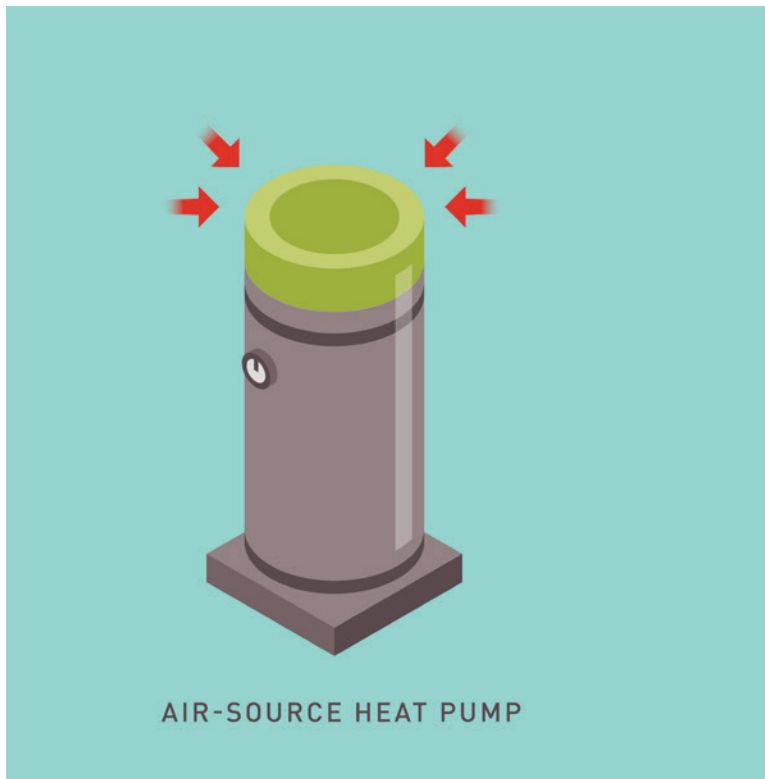
## How this differs from your old water heater

There should be no difference in hot water at your faucets and showerheads. You'll have hot water when you need it. You may notice the compressor in the unit operating from time-to-time, but this should be no louder than your refrigerator. A HPWH is less costly to run than a comparable natural gas or propane unit. While you may notice your electric bill increase slightly, this increase should be less than the savings you see on your natural gas or propane bill. If you're switching from an electric resistance water heater, your bill will go down.

# LPEA

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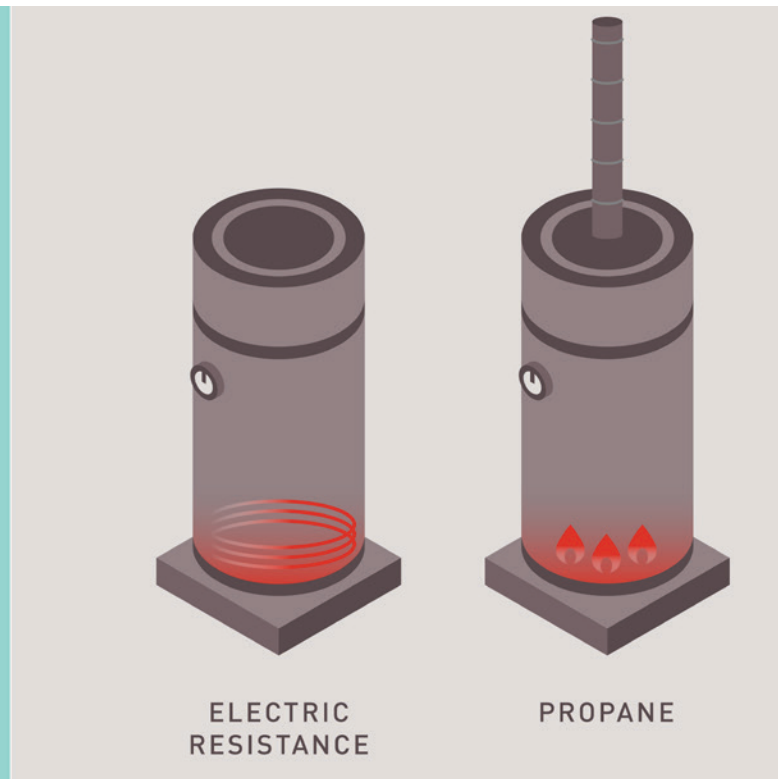
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## Operating modes and scheduling

Depending on the model installed, you can schedule your water heater to shift water heating to LPEA's Off-Peak periods, which reduces your water heating costs and will reduce expensive peak power costs for all LPEA members. Hot water will be available through these peaks as the water is pre-heated beforehand. Should you experience a lack of hot water or any other issue, please contact your installation contractor or manufacturer for support.

In its standard operating mode, the HPWH will primarily rely on the heat pump, while allowing for the electric elements to operate in higher demand situations when you need more hot water. Using a smart control app, if available, you can temporarily set the unit to high demand mode before events where you will need more hot water, such as having guests over, or other high-water use scenarios.



## Things to know

The heat pump water heater will pull in warm room air and exhaust cold air. These units can be installed with venting to exhaust cold air to the outside. Keep in mind that most units have a minimum temperature requirement for incoming air. While the heat pump is operating you may notice air being drawn across your home toward the unit.

The unit is also equipped with backup electric heating elements that will operate should the onboard control determine that the heat pump can't keep up with periods of higher hot water demand. Once the unit is set up and scheduled, you should not need to adjust it.

In addition to maintenance typical of water heaters, such as periodic draining of the tank, this unit also has a reusable air filter mounted on top that should be cleaned as needed; more info in the maintenance section of this booklet.



# Maintenance

## CARE AND CLEANING OF THE WATER HEATER

See your use and care manual for full instructions on draining the water heater. Properly maintained, your water heater will provide years of dependable trouble-free service.

It is suggested that a routine preventive maintenance program be established and followed by the user.

Most electrical appliances, even when new, make some sound when in operation. If the hissing or singing sound level increases excessively contact a qualified installer or plumbing contractor to inspect.

**1.** At least once a year, lift and release the lever handle on the temperature pressure relief valve, located on the side of the water heater, to make certain the valve operates freely. Allow several gallons to flush through the discharge line to an open drain.

**CAUTION:** Shut off power to the water heater before draining water.

**DANGER:** Before manually operating the relief valve, make certain no one will be exposed to the hot water released by the valve. The water drained from the tank may be hot enough to burn, and should be directed to a suitable drain to prevent injury or damage.

**2.** It is recommended to clean the filter on top of the heat pump when “clean filter reminder” alert appears. Clean by washing with mild detergent and water. Dry and replace. Remove the filter by lifting up, then replace by lowering back into the filter slot on top of the unit.

**3.** At least once a year pour a cup of bleach in the access opening of the condensate drain to kill any algae, mold, or mildew that has formed in the pipe. Ensure the condensate can flow freely; unclog if needed.

**4.** A water heater’s tank can act as a settling basin for solids suspended in the water. It is therefore not uncommon for hard water deposits to accumulate in the bottom of the tank. It is suggested that a few quarts of water be drained from the water heater’s tank every month to clean the tank of these deposits.

To drain the water heater, turn off the cold water supply. Open a hot water faucet or lift the handle on the relief valve to admit air to the tank. Attach a garden hose to the drain valve on the water heater and direct the stream of water to a drain. Open the valve.

## VACATION AND EXTENDED SHUT-DOWN

If the water heater is to remain idle for an extended period of time, the power and water to the appliance should be turned off to conserve energy.

The water heater and piping should be drained if they might be subjected to freezing temperatures. After a long shut-down period, the water heater’s operation and controls should be checked by qualified service personnel. Make certain the water heater is completely filled again before operating.



These troubleshooting steps can help to fix common issues:

PROBLEM	POSSIBLE CAUSES	WHAT TO DO
Rumbling noise	Water conditions in your home caused a build up of scale or mineral deposits in the water heater.	Allow a few quarts of water to run from drain valve to remove sediment settlements.
Banging noise	Rapid closing of faucets or solenoid valves in automatic water using appliances.	Strategically located risers in the water pipe system or water hammer arresting devices can be used.
Relief valve producing popping noise or draining	Pressure build up caused by thermal expansion in a closed system.	This is an unacceptable condition and must be corrected. Contact the water supplier or plumbing contractor on how to correct this. <b>DO NOT plug the relief valve outlet.</b>
Not enough or no hot water	Water usage may have exceeded the capacity of the water heater.  A fuse is blown or a circuit breaker tripped.  Electric supply may be off.  The thermostat may be set too low.  Leaking or open hot water faucets.  Electric service to your home may be interrupted.  Improper wiring.  Manual reset limit (ECO).  Cold water inlet temperature may be colder during the winter months.  Not enough air exchange for Efficient Heat Pump Operation.	Wait for the water heater to recover after an abnormal demand.  Replace fuse or reset circuit breaker.  Confirm electric supply to water heater and see installation section of your manual.  See the temperature regulation of the water heater section of this manual.  Make sure all faucets are closed.  Contact your local electric utility.  See the Installing the water heater section of your manual.  See the temperature regulation of the water heater.  This is normal. The colder inlet water takes longer to heat.  If air temperature drops more than 15°F (8°C) during heat pump operation, more air circulation around heater is needed.
Water is too hot	The thermostat is set too high.	See the temperature regulation of the water heater section of the manual.

**CAUTION: For your safety DO NOT attempt to repair electrical wiring, thermostats, heating elements, or other safety devices. Refer repairs to qualified service personnel.**