



# Heat Pump Water Heaters

## REQUIREMENTS

Unitary & split-system heat pump water heaters must be:

- Listed on BPA's Heat Pump Water Heater [Qualified Products List](#).
- Installed according to manufacturer's specifications.
- A maximum of one heat pump water heater measure may be claimed per home. Accessory dwelling units with separate plumbing systems qualify, even if they are on the same electrical meter.
- Available for existing multifamily housing, existing Single-family homes and manufactured homes.

Split-system heat pump water heaters must also meet the following qualifications:

- All water or refrigerant lines connecting the tank and outdoor units shall be insulated with minimum R-4.
- If domestic hot water pipes outdoors are freeze-protected with heat cable, the cable shall be installed per manufacturer's instructions, underneath the insulation and shall be thermostatically controlled to prevent the tape from operating above 38 degrees Fahrenheit.
- No resistance heating is allowed, except heat tape for freeze protection.
- System plumbed with a thermal mixing valve and equipped with internal check valves on the hot and cold water lines connecting to it.

## Specification Checklist

[Download Checklist](#)

- Follow manufacturer specifications regarding water heater clearance and seismic strapping.
- Position the unit so the control panel is facing outward and easily accessible to the homeowner. Make sure all data connection ports are accessible.
- Aim the exhaust air away from the center of the room so it does not inadvertently blow on anyone walking past. Direct exhaust away from any thermostats.
- Ensure the intake air path is clear of obstruction, and the filter can be removed for cleaning and maintenance.
- Ensure that the positioning allows for easy access to inspect the water heater and controls, change the air filter and drain the tank.
- Provide condensate drainage as required by local code. Ensure the water heater is level so condensate properly collects into, and drains from, the condensate collection pan if used.
- Provide minimum R-10 foam pad under the heat pump water heater to minimize unnecessary heat loss through the bottom of water heater.
- Insulate the hot water piping to at least the minimum requirements in accordance with your local codes.
- If installing on a floor susceptible to water damage, install a drain pan to guard against any problems from future leaks.
- Wiring is grounded and proper wire gauge is used. Note: Most heat pump water heaters still have full-size resistance elements, so wiring requirements are identical to standard electric-resistance water heaters.
- Mode of operation is set, at a minimum, to hybrid, and preferably heat-pump only.
- Jobsite is left clean and orderly. All scrap material, tools and equipment have been removed.

**Connect with the local serving utility to confirm pre- and post-condition requirements.**





## MINIMUM REQUIRED PAPERWORK

Contact the serving [utility](#) for specifics on required documentation.

## QUALIFIED PRODUCT LIST AND GUIDES

- Heat Pump Water Heaters [Qualified Product List](#).
- [Better Built NW Heat Pump Water Heater Technical Guide](#).

## PAIRS WELL WITH:

- Ductless or Air-Source Heat Pump.
- Whole-House Air Sealing.
- Attic, Floor and Wall Insulation.
- Water Pipe Insulation.
- Appliance Measures.

## Installation Examples



**Meets minimum efficiency and found on QPL.**

*Courtesy of Northwest Energy Efficiency Alliance*



**Does not meet minimum efficiency.**

*Courtesy of Santa Fe Community College*



**Insulate water pipes to prevent heat loss.**

*Courtesy of NW Ductless Heat Pump Project*



**Uninsulated hot water pipe from water heater.**

*Courtesy of ENERGY STAR, U.S. Environmental Protection Agency*



**When insulation is not enough, use heat tape to prevent freezing.**



**Frozen pipe develops leak.**



**Drain pans can help prevent messes and water damage.**



**No drain pan or leak detection.**