

Comparing heat pump water heaters and electric resistance water heaters

Heat pump water heaters and electric resistance water heaters both use electricity as an energy source. Switching between these systems has no major implications on air quality, safety, or the path to a clean energy future. The difference comes down to efficiency and cost.

According to Energy Star, a US-Environmental Protection Agency energy efficiency program, Energy Star-certified heat pump water heaters are 3.5 times more efficient than electric resistance water heaters, and they cost 70 percent less to operate, compared to conventional, electric resistance water heaters.

Even so, some homes may be better off using an electric resistance water heater due to cold climate, low water use, space constraints, or poor ventilation.



Heat pump water heater



Electric resistance water heater

> Cold climate

While some heat pump water heaters can operate when the air temperature is below freezing, many perform best at 40° and above. In unconditioned spaces that are always very cold, consider an electric resistance water heater.

> Space constraints

A heat pump water heater requires more space than either a gas or electric resistance heater. It may not fit in your existing utility room. In small homes and condos where space is at a premium, electric resistance water heaters may offer more flexibility.

> Poor ventilation

A heat pump water heater may not work in your existing utility room if there is insufficient enough space (and air) to extract the heat it needs. We will discuss simple ways you can modify your space, but if those won't work in your home, an electric resistance water heater is a good alternative.