My Heat Pump Water Heater after 6 months: Less Cost and Zero Emissions

Craig Forman forman.brenner@verizon.net October, 2025

Many people assume that heat pump water heaters are much more expensive to purchase and install than a standard electric or gas water heater. I will attempt to bust that assumption in this article. Since I was faced with a failing gas water heater in Jan, 2025, I did my homework and chose a Hybrid Heat Pump model from Rheem. This article shows how I was able to purchase and get the water heater installed for less cost than a similar gas or electric water heater. I also detail the operational data I have collected over 6 full months of operation. This shows the true cost of operation in real conditions.

Caveats:

1. I have good skills in electrical wiring, so you may or may not be able to reproduce my results, depending on the skill level you have. I did the electrical work, but hired a plumber to do the plumbing work. Regardless of your skill level, you will find some tips here will that can definitely save you money on a Heat Pump water heater.
2. The Federal 25C tax credits referenced here will sunset at the end of 2025, eliminating some of the cost savings on equipment and installation. MassSave rebates will not change.

If you want to make this project cost effective, you should think about orchestrating the installation on your own rather than hiring an installer to do the whole job. Heat Pump water heaters (HPWH's) are easy to install and can be put in by any plumber with no special skills. The only caveat here is that if you are converting from gas, you will need to do some electrical work to bring 120VAC and 240VAC to the point where your water heater is located. In my case, I was able to do that part myself because I have the skills, and my breaker box is located in the basement about 25 feet from my water heater. The electrical hookup cost me a 25 feet of cable, a 30 amp circuit breaker, and a few hours of work. I did not need a panel upgrade because I had a 200A panel already, and I was able to free up a double wide slot for the new 240V, 30A breaker by combining some of the other breakers into double (tandem) breakers. You will need a 120V outlet near the water heater to plug in a condensate pump. All Heat Pump water heaters need a condensate pump to handle the moisture that is pulled from the air and collected it in a little reservoir that turns on a pump when it gets full, to move the water in the reservoir to a nearby sink or drain pipe. The condensate pump can be ordered on Amazon, and comes with everything you need. It costs around $50, like the one found here. One advantage that you have with a HPWH is that if you were previously using a dehumidifier in the basement, you may be able to eliminate it or use it far less often, which will save money and lots of noise.

I chose Rheem because I have been watching the HPWH market for the past few years as part of my volunteer work as a coach for HeatSmart Newton and for the Heatsmart Alliance. Rheem Heat Pump Hybrid water heaters are widely available, and they have been in this business for a very long time. They are now building their 6th generation of Heat Pump water heaters. They are sold under the Rheem name at Home Depot and the Ruud name at plumbing supply houses. They come in 40, 50, 65, and 80 gallon sizes. They are not perfect, but Rheem has a dedicated group of people who staff a phone line that can help you if you have problems with the equipment or with installation.

Heat Pump water heaters are much heavier than standard water heaters because they have a heat pump built into the top 1/3 of the tank. For this (and other reasons), professional installation will often be quoted much higher than a conventional gas or electric water heater. To avoid this, simple go to your favorite big box store and order the Heat Pump water heater to be delivered to your home. Delivery will cost around $79 to $99, and it is well worth it. If your installation is in the basement, ask them to bring the unit down into the basement. Then all the plumber will have to do is unbox the unit and move it into place. Most plumbers can arrange to take the old water heater with them for proper disposal at a nominal cost. I find that using a local plumber who you might use for household plumbing repairs is your best bet. They will typically work alone on this job as long as the new water heater is purchased by you and delivered to

your home. Two people are probably required if you hire an installer, because they will have to pick up the water heater and transport it to you (will take to people to lift it). This drives up the cost. If the plumber is someone you have worked with in the past, they may be able to do the install without going to your city or town to file a permit, which could save you several hundred dollars. I don't necessarily advocate this, but if you are confident that you are using a licensed plumber, you don't have much to worry about. You don't really gain much by going through the trouble and expense of getting a license to disconnect the gas line and connect a new electric water heater, as long as you are convinced that the installer is competent. My plumber charged me $1200 for installation and old tank removal, and it took him about 3.5 hours.

The big box stores typically offer an extended warranty that you can buy at a very minimal cost. At Home Depot, I was able to buy an extended warranty that added 5 years of labor warranty to the 1 year that comes with the purchase, for a total of $99, so I am covered by a labor warranty for 6 years if anything goes wrong. The equipment itself will typically come with a 10 year materials warranty, but that does not cover labor after the end of year 1.

Rheem (and others) call these "Hybrid" heat pump water heaters because they include electrical heating elements that can be activated (depending on the settings) if hot water demand spikes (like 3 showers in a row). My hot water needs are not great; we have a 2-person household, so we are talking about 2 showers most days and a couple of loads of wash and a few dishwashing cycles in a typical week. Most manufacturers are now offering Heat Pump water heaters that do not include any electrical heating elements, and these use the heat pump 100% of the time to heat the water in the tank. Most of these can operate on a 110V connection, which makes the electrical work easier. However, these are much less popular, are not yet in widespread use, and don't cost much less, even though they are simpler. Many of the Heat Pump water heaters will come with an optional shutoff mechanism that can shut off the cold water input if water is detected on the floor under the heater. This option is typically about $250 to $300 extra, and it is a nice feature. I have found that Home Depot often runs sales on the models that include this feature, and the price gets discounted to the point where it is actually less money to buy than a unit with the leakguard feature. I got the 50 gallon unit (Rheem Proterra) on sale at Home Depot which came with the leakguard feature. However, I did not use it the shutoff feature because I did not have enough headroom in my installation to install the shutoff valve, and I already have a basic leak shutoff system in place.

The rebates and tax incentives are very substantial at the time of this writing. A $750 instant rebate is available through MassSave at the point of purchase (no rebate is involved). Just go onto the MassSave website and look for rebates on Heat Pump water heaters. Figure out if you are going to order your water heater through Home Depot or Lowes, and MassSave will email you a bar code which you can scan when you check out, which will take $750 off your bill. And at this time (up until the end of 2025), you are also eligible for a federal tax incentive of 30% of the cost (including installation) paid as tax rebate at the time you file your taxes at the end of the tax year. If you need to hire an electrician to upgrade your electrical service or your panel to make this installation possible, you will be eligible for an additional 30% federal tax credit up to a maximum of $2000 for the electrical work.

My total materials and installation costs are shown in the chart below. After rebates and tax incentives, you can see that the total installed cost was over $300 less than it would have been with a conventional gas water heater.

Item	Purchased from:	Purchase Price	Tax	Total w/tax

Equipment Costs:

Water Heater Rheem Proterra 50 Gallon	Home Depot	$ 1,580.15		
Less $750 MassSave Instant Rebate		$ (750.00)	$ 51.88	$ 882.03
HD Extend Labor Warranty (add 5 Years, total 6)	Home Depot (Allstate)	$ 99.00	$ 0.00	$ 99.00
Delivery to my home	Home Depot	$ 75.00	$ 0.00	$ 75.00
Subtotal, Home Depot		**$ 1,056.03**		
Condensate Pump	Amazon	$ 47.99	$ 3.00	$ 50.99
Electrical Cable	Amazon	$ 39.05	$ 2.44	$ 41.49
Dual Circuit Breaker 30A	Amazon	$ 17.93	$ 1.12	$ 19.05
Total Equipment Costs				**$ 1,167.56**

Installation Costs:

Installation	My Plumber	$ 1,200.00	$0.00	$ 1,200.00

Expected Rebates:

25C Federal Tax Credit 30% on Equipment				$ (350.27)
25C Federal Tax 30% on Installation				$ (360.00)

Net total Installed Cost **$ 1,657.29**

Estimated Cost of a Similar Gas Hot Water Heater with 9-Year Warranty

Item	Purchased from:	Purchase Price	Tax	Total w/tax
Water Heater - Rheem Performance Plus Tall 9-Year 40,000 BTU Natural Gas Water Heater	Home Depot	$ 779.00	$48.69	$ 827.69
Installation	My Plumber	$ 1,200.00	$0.00	$ 1,200.00
Tax Credits and rebates		NONE		

Net Estimated total Installed Cost **$ 2,027.69**

Plumbers are expensive, but this is not difficult for a plumber. Operating costs are far less than a standard electric water heater, and somewhat less than a conventional gas water heater. I have tracked my costs since I started using the new water heater, and the daily kWh usage at this point (6 full months) is averaging about $.78 per day at my marginal electricity rate of around $.36 per kWh. Your cost and usage may be higher if you have a larger family.

The main concerns about heat pump water heaters are noise, cost, reliability, and cooling of space around the water heater. I found that the noise was a total non-issue. I would say that the noise, when running, is about the same as a loud dishwasher, and a little less than a heating oil burner. Cost was actually less due to the $750 instant MassSave rebate and the 30% federal tax credits, so no issue there. Reliability was a concern, but I feel comfortable with that, since I bought the extended warranty which covers labor for a total of 6 years. Actually, I did have a problem with the equipment as installed, and I had several calls with Rheem to get the problem resolved. These heaters have a WiFi connection built in so that you can monitor your performance (kWh used each day) on a smart phone. This feature was working, but the numbers were way higher than they should have been, showing a daily use or around 12 kWh. I bought an external device to measure the energy consumption, which showed I was actually using less than 3 kWh per day. After several calls with Rheem, they indicated that they had a production problem with a number of their control boards, and they agreed to send me a new one. With the instructions that they sent, I was able to change out the control board, and after I did that, the readings were in line with what I expected and with my external monitoring device. Other than that, there have been no problems. There is a filter at the top of the unit which needs to be removed and rinsed off every couple of months, takes about 5 minutes. Cooling in the area around the water heater is around 7 degrees F.

So in general I am very happy with this water heater and I would recommend it. It was cheaper than a conventional heater to purchase, install, and run, and will produce zero carbon emissions. The table below details the usage in kWh and operating costs over my first 6 months of operation which includes February, a very cold month. The number shows that less electricity is used per day as the outdoor weather warms up. Based on data from the first 6 months, I expect that over the course of the year, we should roughly see about 30% less in hot water fuel costs after moving from a gas heater to a heat pump water heater.

Month	Days Used (not including vacation)	Total kWh used in the month	kWh used avg per operating day	$ Electricity used in the month @ $.36 per kWh	Avg electricity cost per operating day @ $.36 per kWh
Feb, 2025	28	79	2.82	$28.44	$1.02
Mar, 2025	22	48	2.18	$17.28	$0.79
Apr, 2025	30	64	2.13	$23.04	$0.77
May, 2025	23	34	1.48	$12.24	$0.53
June, 2025	30	36	1.20	$12.96	$0.43
July, 2025	23	26	1.13	$9.36	$0.31

Operating Data (measured):

Total watts, compressor not running: 1.6 W

Total watts, compressor running: 360 W