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CLECAT Club

Exploring the technology that touches your life




Spring 2026 meeting dates:

February 2,16

March 2, 16, (30 no class)

April 6, 20

May 4

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Heat Pumps for Heating and Cooling

Monday, March 16, 2026
Presenter: Rick Hearn

We replaced our home's 20-year-old furnace and air conditioner with a heat pump in December 2025.

We are sharing the experience in case you are considering a similar move, but…

Consider this before buying a new heat pump

- Are your current furnace and a/c working reliably?
- Do they keep your home satisfactorily warm in winter and cool in summer?
- Are they working safely?
- Are your heating and a/c operating costs reasonable?
- ***If you answered yes to these questions, strongly consider staying with what you have.***

Also consider this before buying a new heat pump

- How long do you plan to live in your home?
- ***If your answer is only a few years, it may not justify the expense of upgrading to a heat pump***

Having said all that, here's how our migration to a heat pump went.

I recommend using EnergySage to find installers for quotes

- I used EnergySage to find a Solar installer in 2019 and was happy with their assistance
- ***EnergySage is a free online nonprofit service for matching energy system customers with installers.***
- ***Just launch your preferred browser and enter the web address https://www.energysage.com/shop/heat-pumps/***

Follow the prompts from there

- Enter your zip code and click “Shop local offers”
- Answer a few questions about your home
- Create your EnergySage account
- Browse pre-screened heat pump installers in your area
- Schedule in-home consultations and review customized quotes

What is a heat pump?

- A heat pump cools your home just like an air conditioner, but it can also heat your home by drawing heat from outside air and transferring that heat into your inside air.

How does a heat pump work?

- This video from This Old House on YouTube is a simple explanation of the subject:
- https://youtu.be/-vU9x3dFMrU

Why would you want a heat pump?

- If your air conditioner and/or furnace need to be replaced, a heat pump can replace both at a competitive cost and will operate at lower cost.
- The heat pump can heat your home several times more efficiently than a gas furnace.
- A new heat pump is also likely to be more efficient cooling your home than your current air conditioner.

What are the tradeoffs?

- Heat pumps are a little costlier to manufacture than an air conditioner, but many installers try to charge significantly more.
- Since the heat pump replaces your gas furnace with electric heating, the operating savings will be greater if your natural gas price is higher and less if your electricity price is higher.
- You may run into a significant extra cost if your ducting is old and must be replaced to meet current code.

What are more tradeoffs?

- Heat pumps can run much quieter than your furnace and air conditioner.
- If you use green electricity (e.g. solar panels on your roof) you will reduce CO2 emissions versus burning gas in your furnace.
- You may run into a significant extra cost if your ducting is old and must be replaced to meet current code.

What does a heat pump look like?

What is the purchase process like?

- I had 4 installers recommended by EnergySage come out and do quotes
- I did extensive study of specs and reviews online to choose a vendor and model.
- I went with the lowest priced quote but only after becoming comfortable that the installer seemed competent.

What is the installation process like?

- The installer quoted 3 days of installation time and was done in 2½.
- A HERS (Home Energy Rating System) test was done to evaluate the energy efficiency and ensure the system met building codes.
- The initial HERS test failed due to bad duct register installation by the original home builder 42 years ago.
- After the installer fixed that, the second HERS test passed.
- The city inspection went without a hitch.

What are the economics like?

- The cost of a 4 ton SEER 18 heat pump including replacement of all ducting was about $22k.
- It qualified for a $2k federal clean energy tax credit, but that credit is no longer available for systems installed after 2025.
- We'll see how the gas and electricity costs are affected over time.
- Any monthly utility savings will take many years to balance the system cost.

Final thoughts

- The whole process went pretty smoothly.
- On economics alone there is no way to justify doing the upgrade unless your old system is worn out and needs to be replaced.
- Should I look into adding capacity to the solar system to cover the extra electric use of no longer heating the home with gas?

Questions and Comments?