How we did it!

Gas Furnace and AC System Conversion to Heat Pump(s)

Our home was purchased with a gas furnace and AC system in place. At the time we elected to keep those systems and focus on other improvements and remodel. After big changes to the design and layout, other improvements included new windows, sealing air leaks throughout and adding insulation.

From my experience in construction and energy efficiency, I knew improvements to the shell of our home would reduce our energy consumption and improve our comfort and indoor air quality.
I also knew the time would come to upgrade the mechanical systems to have more efficiency in heating and cooling.

In the past year we decided to go further than just improved efficiency and that is, to reduce our carbon footprint as much as possible. That decision led us to begin electrifying our home further and reduce our use of natural gas (methane).

The largest use of natural gas for us was our furnace. We knew it was an older system (20+ yrs.) and ripe for replacing. We chose to install a high efficiency, Variable Speed Heat Pump.
As heat pumps heat *and* cool, we also benefited from getting a high efficieny air conditioning system.
Since we had new ducts (sealed and leak-tested) during our remodel, we decided to reuse that distribution system.

It has worked out very well for us! Because of the variable speed compressor and air handler, heat delivery is far more consistent and comfortable. The system ramps up or down in increments as needed, to meet the demand. It does so quietly and efficiently.
Our prior system was a single stage system; either on or off, sometimes resulting in a too hot or too cold period.

Another decision for us was how to condition a downstairs area that we had finished into two rooms as part of our remodel. We could have had another zone off of our new system to serve that space but elected to treat it as entirely separate.

We decided to install a Ductless Heat Pump (aka Mini-Split) for our downstairs. Because that space can be separate (we used it for an in-law during 20 months of the pandemic) and used as an office, guest room, etc., it made sense to us to have the mini-split.

Again, this solution has worked wonderfully for us and is perfect for what we wanted to achieve. The system is easy to use, super-energy efficient and quiet.

We feel good about reducing our use of methane gas and are delighted with the superior performance of both Heat Pumps!

With heat pumps being so energy efficient and Ashland's electricity generation being mostly hydropower, switching from natural gas (methane) to clean electricity, is a worthwhile endeavor all the way around.

Ductless Heat Pump – outdoor unit (compressor)

Ductless Heat Pump – indoor unit (wall mounted air distribution/ blower/diffuser)

Heat Pump – outdoor unit (compressor)

Heat Pump - indoor unit (air handler/blower) connected to existing distribution system (ducts to air registers, etc.)

Gas Range to Induction Range Conversion

Our next priority was to replace a gas range with an electric Induction range. Over the years we noticed that noxious fumes sometimes came from the range or oven. Perhaps from burners or surfaces not being kept clean or inefficiencies that are inherent in all combustion appliances. I used an indoor air monitor and would notice an increase in “bad air” (tiny particulates, CO2 too high, etc.). I also have a CO monitor that I use, and I did in fact register low levels of CO (carbon monoxide). This is quite common in gas appliances.

This past month we removed the gas range and installed an electric Induction range. We got a slide-in model to fit the exact space we had between existing cabinets.
We are so happy to not have fumes and toxic gases from fossil fuel combustion inside the house! We know we have removed a source of unhealthy indoor air and danger from our house and that alone is worth the change!

But, in addition, as we have begun to use our new Induction range, we are finding that we love the way it works! It has precise control over heating and response time to changes in settings, is near instant.

It's also super easy to clean up as your cooking (most all of the surface of the stovetop remains cool) and far safer than open flames.

Both of us enjoy cooking and wondered how we would transition to not having a gas flame to see and adjust.
Now we can both say that we are happy with the change and with just a bit of a learning curve, see Induction as far superior to gas!

A few details to note:

- In our case we needed a 240V circuit installed for our Induction range. Our 1963 built home with an older electrical panel, needed some changes and we elected to upgrade it a bit for safety and future expansion. Not all homes may need this though and some gas ranges with electric ovens may have a 240V receptacle now. Easy to check and if needed, plan on some $ for electrical work.

- General $ range for our style (Slide-In) Induction Range/ Electric Convection Oven, can be $1000 on the low end and well over $2500 for higher end, depending on size, model – like Slide-In, Stand-Alone, Cooktop only, etc.

- Ours listed at around $2000, but we did get if for closer to $1600, delivery and install included, from West Coast Appliances.
  Also, the City of Ashland through the Conversation Dept, has a $200 incentive (gas to electric conversion).

- These products are in higher demand now and can take some time to get them. It wasn't a real issue for us as we needed time for the electrical work. All total we spent about 2-3 months from research to installation.

- Lastly, Induction works by magnetism and your cookware will need to be flat-bottomed and magnetic (iron, stainless steel) but not composites or layer bottoms (like copper). You may find some of your existing works fine but be prepared for replacing anything non-Induction.

Induction Range/Convection Oven

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