

What's the Cost of Converting a Home From Electric + Natural Gas to All-Electric?

In recent columns, I have promoted the idea of eliminating natural gas and converting one's home to all-electric, using heat pumps for heating & cooling and installing a heat pump water heater. I have also promoted induction cooktops as an alternative to gas or standard electric cooktops.

One reader asked me to provide information on the cost of making the conversion to all-electric, so I have done some research and can also speak from personal experience.

First, I asked Bill Lucas-Brown of Helio Home Inc., who installed the heat pump mini-split system at Golden Real Estate's former office on South Golden Road as well as in our storefront in downtown Golden.

I asked Bill for a rough estimate of the cost of making a typical 2,000 sq. ft. home all-electric, and he responded with the following numbers and comments.

Note that rebates and tax incentives are available from the state, feds, utilities, and local municipalities that typically range from 15 to 30 percent off total cost. The following are costs *without those rebates*. Helio Home has a rebate sheet which it can provide to you.

Air source heat pump for heating and cooling your home, \$22,000

Heat pump water heater, \$4,000

Insulation and air sealing work to improve efficiency, \$5,000

Ventilation system for indoor air quality, \$4,000

10kW solar system PV, \$30,000

Electric panel upgrade, if needed, \$4,000

Electric vehicle charger, \$1,500

That said, Helio Home's average job is around \$50,000. With rebates, figure \$35,000 to \$43,000. You can get a proposal on the company's website www.heliohome.io.

Sadly, there are few vendors who are experienced and competent in heat pumps for heating and cooling homes. Heat pump water heaters are less of a challenge, because they are sold by Lowe's and Home Depot, and you just need a plumber to install them and an electrician to pull a 240-Volt circuit to it. I bought a 50-gallon heat pump water heater in 2021 for \$1,200 and was able to do the electrical work myself because of a nearby 240V circuit that was no longer in use. The self-employed plumber I used charged just \$500, and I got a \$400 rebate from Xcel Energy, so the cost was less than the figure quoted above. The federal rebate taking effect in January under the IRA makes such a purchase almost free.

You may find it more practical to leave your gas forced air furnace in place and install a ductless mini-split system. A compressor (similar to an A/C compressor) is installed outside your home, and two coolant lines are run to wall-mounted units in different rooms of your house. This works best in a one-story home. These same wall units provide both heating and cooling, because that's how heat pumps work — they are like an air conditioner that works in two directions, moving heat out of your home in the summer and into your home in the winter. As the name suggests, they don't *create* heat, they *move* heat, and they do it more efficiently than

baseboard electric heating or heating generated by burning natural gas (or propane).

Instead of wall-mounted mini-splits, you can install a ceiling-mounted "cassette" which functions the same way. That's what Helio Home installed in our downtown storefront, and it works just as well. (Come by our office and I'll show it to you.) I have also seen a wall-mounted cassette which has a picture frame on it. When the heat pump is operating, the picture moves out a couple inches from the wall to allow the movement of air.

As for an EV charger, the biggest variable is the cost of bringing a 240V circuit to your garage, which depends on the distance between the garage and your breaker panel. I spent less than \$300 for that, again from a *self-employed* electrician.

Tesla vehicles have the charger built into the car, so you only need a 240V outlet (similar to the outlet for your clothes dryer) to plug the provided cord into. Don't buy the Tesla Wall Connector — it's totally un-

necessary for home use. Just use the charging cord with a 240V head.

Other EVs may require you to purchase a Level 2 charging station, which I did when I had a Chevy Volt. By googling "Level 2 EV chargers," I found prices as low as \$200 (Home Depot, 16 amp model), and several under \$500. So your real cost depends on what your electrician charges. Here's an idea: If you have an electric dryer outlet available close to your garage, you could adapt that circuit for your EV at minimal cost.

Another use of natural gas that you're probably using is for cooking and grilling. You'll really love induction cooking if you try it, because it is so much faster. Buy a countertop unit for under \$100 and play with it. For grilling, we love the George Foreman electric grill we purchased for \$100.

Above all, pay attention to the tax credits and rebates that take effect on Jan. 1, 2023, under the Inflation Reduction Act. They make going all-electric more realistic.

Follow-up on Last Week's Column About Sales Tax

I did a lot of research for last week's column about property taxes in unincorporated vs. incorporated areas, but I should have done more research about sales taxes.

Instead of researching sales taxes in various counties, including Jefferson, I simply said that "I don't know of" any county-wide sales taxes. Oops!

I am well aware of the 1/2 percent Jefferson County sales tax which has funded our wonderfully extensive open space parks.

A couple readers did some research for me, and I got the following list of sales taxes in other counties. I'm not including Denver and Broomfield counties because those are city sales taxes and there are no unincorporated areas (that I know of) in those two city/counties.

Reader Gary Justus wrote that all

metro counties except one have a county-wide sales tax, according to <https://colorado.ttr.services>:

- Jefferson County - 0.50%
- Adams County - 0.75%
- Douglas County - 1.00%
- Arapahoe County - 0.25%
- Boulder County - 0.985%
- Clear Creek County - 2.65%
- Elbert County - 1.00%
- Gilpin County (none)

Most counties beyond the metro area do, in fact, have sales taxes, some of them substantial, such as Pitkin County (3.6%), San Juan County (6.5%), and Jackson & Lake Counties (4% each).

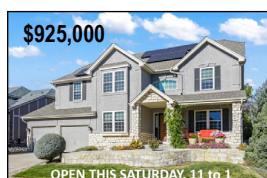
Colorado Department of Revenue Publication 1002 spells out the sales taxes which it collects for local jurisdictions. Some, like Golden, aren't listed, because they collect their own sales taxes.

REAL ESTATE TODAY



By JIM SMITH, Realtor®

Just Listed: Fabulous Green Mountain Home



You'll enjoy an Xcel Energy bill of \$45 per month, including gas, during the summer and still under \$100 per month in the winter thanks to this home's roof-mounted solar photovoltaic system. The address is 14165 W. Bates Ave., in Hutchinson's Green Mountain Village, which is south of Yale Avenue and north of Bear Creek Lake Park in Lakewood. It has 3 bedrooms, 3½ baths, plus a 14'x16' loft that could be converted into a 4th bedroom with en suite bathroom. It has 2,957 finished square feet plus an unfinished basement. This home is beautifully landscaped and updated inside, with hardwood floors on both levels, a gourmet kitchen, and a fabulous backyard with a free-standing Sunsetter retractable awning — great for entertaining! The walk-in closet in the master suite is a gem, which you'll get to see in the narrated video tour at www.JeffcoSolarHomes.com. Open house is this Saturday, Nov. 5th, 11 to 1.



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