Electric appliances are safer than gas appliances, because they don’t have open flames, which increase the risk of fire.

Plus, going all-electric eliminates the carbon monoxide and nitrogen oxide pollution that results from burning gas (or propane) inside your home, and reduces the risk of gas leaks.

On average, we spend about 90 percent of our time indoors, where pollutant levels are often higher than those outside.

Carbon monoxide (CO) is called the “invisble killer” because it’s a colorless, odorless, poisonous gas. More than 150 people in the United States die every year from accidental, non-fire-related CO poisoning. And several studies have found that NOx exposure from gas cooking increases the risk and incidences of asthma in children.[1]

Natural gas is a fossil fuel that releases carbon dioxide (CO2) into the atmosphere when burned in a furnace, water heater, or stove. CO2 emissions are the primary cause of climate breakdown. In addition, natural gas processing and distribution results in methane emissions — and methane is an even more potent greenhouse gas.

Even though natural gas is still used to generate some of the electricity, switching to efficient electric appliances—such as ENERGY STAR heat pumps and heat pump water heaters—reduces the greenhouse gas emissions from a home or building. These emissions benefits will increase over time as our utilities continue to move towards more renewable, carbon-free power generation. An all-electric home in Colorado using an efficient heat pump and heat pump water heater will reduce its greenhouse gas emissions by about 35% over the next 15 years, compared to an equivalent home using an efficient gas furnace and gas water heater.[2]

The cost of an all-electric home is slightly less than a similar home with a separate gas furnace and air-conditioning system, because eliminating the cost of the natural gas line to the home more than offsets the slightly higher upfront cost of the electric equipment.

In addition, the annual energy cost for an all-electric home with a heat pump and heat pump water heater is slightly less than that for an equivalent home using gas for space and water heating.[3]
**COMMONLY ASKED QUESTIONS**

**ARE ELECTRIC APPLIANCES MORE EFFICIENT THAN GAS APPLIANCES?**

*SHORT ANSWER: YES*

Electric heat pumps and heat pump water heaters use less energy and are 2-4 times more energy-efficient than gas-fired equipment.[4]

Induction cooktops and electric convection ovens are more efficient than gas-fired cooktops and ovens. Also, heat pump clothes dryers are 50-75% more efficient than typical gas dryers, based on the CEF energy factor ratings for clothes dryers.

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**ARE INDUCTION COOKTOPS BETTER THAN GAS STOVES?**

*SHORT ANSWER: YES*

Induction cooktops heat up twice as fast as gas, provide more accurate temperature control and are easier to clean.

And, families with young children appreciate that you can't get burned when touching an induction cooktop.

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**DO HEAT PUMPS WORK WELL IN OUR COLD CLIMATE?**

*SHORT ANSWER: YES*

Newer cold-climate heat pumps work very well in cold weather, delivering up to 85% of their rated heating capacity at temperatures as low as 5 degrees F. We have many successful heat pumps installed in Colorado, especially in Denver/Front Range, without requiring a back-up furnace.

One example is the Basalt Vista all-electric affordable housing development.[5] In addition, there have been ten new all-electric homes constructed in Boulder in 2019 and 2020, with an average cost slightly below the cost for equivalent non-electric homes.

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[4] See footnote 2. The overall coefficient of performance (COP) for a cold-climate heat pump in Denver will be about 2.8, compared to an efficient gas furnace with an efficiency of 95%. An ENERGY STAR HPWH will achieve a “uniform energy factor” (UEF) of 3.4, compared to a UEF of 0.68 for an ENERGY STAR gas water heater.


Fact sheet adapted from materials from Sacramento Municipal Utility District