

# Residential Guide to Electrification

## Electrify everything!

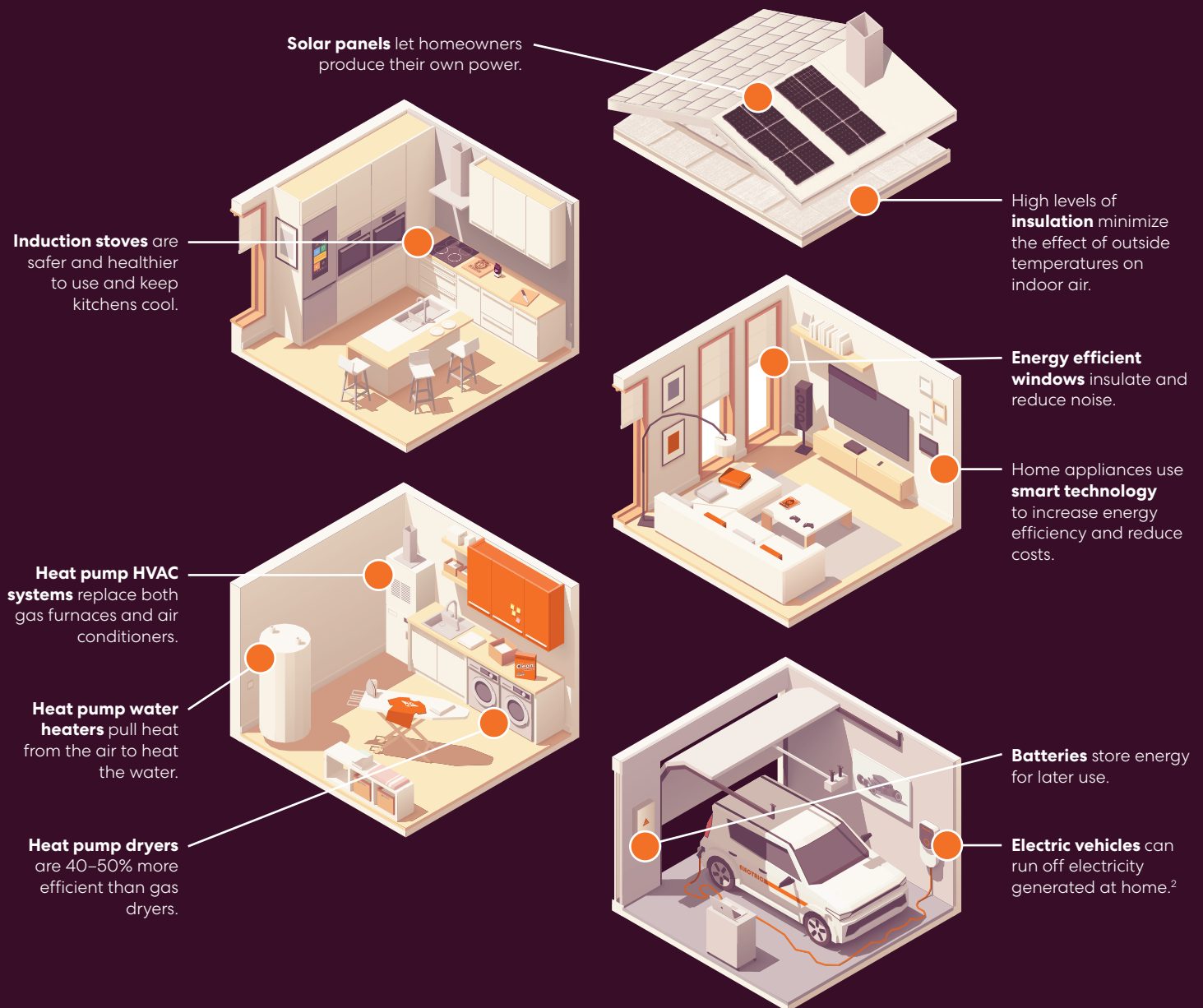
Buildings account for almost 40 percent of carbon emissions in the United States.<sup>1</sup> If we want to remove carbon from buildings, we must electrify our buildings and use renewable energy for our energy sources.

## The time is now.

“As we enter the decisive decade for the climate crisis, every effort to reduce emissions matters . . . We know that emissions must be reduced 50% by 2030 and hit net zero by 2050 at the latest for a chance of limiting global heating to 1.5 degrees.”

Jules Kortenhorst, RMI CEO

## Anatomy of an All-electric Home





## Step 1: Make your home efficient

Do the basics first. If you use less energy, equipment like HVAC and solar panels can be right-sized for your home.

Complete a whole-home energy assessment and map out your energy efficiency plan. Your plan should include adding insulation; sealing air leakage points in attics, walls, basements, or crawl spaces (air sealing); and installing energy-efficient windows.

## Step 2: Upgrade your heating, cooling, and water heater equipment

Contact a heat pump contractor who can evaluate your heating and cooling needs and recommend the best electric heat pump for your specific use. The contractor can assess your electrical needs, upgrade your electrical panel, and help you plan for installing a heat pump dryer and induction stove when you are ready.

## Step 3: Install solar panels and evaluate energy storage

Solar contractors can help you evaluate your home's potential for solar energy and storage. You can find an authorized contractor at [MichiganSaves.org](https://michigansaves.org). The solar contractors may be able to help you evaluate the costs of installing a fast-charge electric vehicle charging station too.

### TIP

Let your contractor know you will eventually upgrade to a heat pump dryer and induction stove so they can include this electric load when they upgrade your electrical panel.

## FAQs

### What resources are available to help me?

You can find authorized contractors that specialize in energy efficiency, heat pumps, solar energy and all types of energy improvements at [MichiganSaves.org/find-a-contractor](https://michigansaves.org/find-a-contractor). Michigan Saves offers affordable, long-term financing that makes it easy to invest in electrifying your home.

### Is there a premium price to pay for electrifying my home?

Energy efficiency improvements are always cost-effective. If you use propane or fuel oil to heat your home, switching to a heat pump will most likely save you money.

### What if my heating fuel source is natural gas?

While an electric heat pump is more efficient than a natural gas furnace, you will pay a premium to switch from a natural gas furnace to an electric heat pump. In addition, the price you pay for electricity will be more than the equivalent price you pay for natural gas. Once you install solar panels and begin producing your own electricity, the savings begin to add up.

### Am I really decarbonizing my home if my utility provider's source of electricity is coal?

Utilities have committed to carbon-free electricity production over time. While electricity can be produced with renewable sources, natural gas and propane will always emit carbon.

### When is the best time to electrify my home?

You should complete the first step and install energy efficiency improvements now. The investments will pay for themselves over time and you'll benefit from a more comfortable home. If you heat with propane, or if your air conditioner is old or inefficient, that's a good time to replace your equipment with high-efficiency heat pumps. Solar costs have come down over the last few years, and tax incentives are still available to offset the costs, making investments in renewable energy attractive to homeowners with good solar potential.

### I don't want to send my old equipment to a landfill. What should I do?

Ask your contractor to get in touch with [NextCycle Michigan](https://nextcycle.org). They can help find ways to keep old equipment from going to landfills.

### TIP

Costs will likely decrease as demand for electric heat pumps increases and as more communities adopt decarbonization plans.

### TIP

Whenever your equipment fails, you should consider efficient electric alternatives.

1 | Environmental and Energy Study Institute. n.d. "Buildings and Built Infrastructure." *EESI: Environmental and Energy Study Institute*. Accessed May 28, 2021. <https://www.eesi.org/topics/built-infrastructure/description>

2 | Edison International. n.d. "All-electric Homes and Buildings." *Edison International*. Accessed May 25, 2021. <https://www.edison.com/home/innovation/building-electrification.html>