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## Moraga residence on Electrified Home Tour

By Emma Wong



This electrified Moraga home offered tour visitors a chance to see heat pump systems for cooling and heating, hot water, and washers/dryers, as well as a Tesla Solar Roof, powerwalls, and an induction range in the kitchen Photos Emma Wong

switching to electric appliances that are powered by clean energy stops these emissions.

"For 15 years, the Bringing Back the Natives Garden Tour focused on encouraging people to include native plants in their gardens. But five years ago-because of the climate crisis-we added electrification to the tour's mission," Kramer said. "Now, we're helping people learn how they can power their homes from clean electricity instead of burned gas, saving both money and the planet."

From 11 a.m. to 3 p.m., visitors filed into the Chambers/McAlpine residence. Next to a vibrant garden of edibles and native plants, the compressors for the heat pump water heater and HVAC system whirred quietly along the wall. Inside, visitors inspected the kitchen's induction stove and heat pump dryer in the laundry room.

In the backyard, QuitCarbon and Four Dimensions Landscape-companies that assisted Chambers and McAlpine with electrification and landscaping efforts-set up tables. QuitCarbon helps residents transition from gas to electric via a free whole-home evaluation, identifying utility costs and available rebates. "Homes are different and complicated. QuitCarbon helps you understand what appliances use gas in your home and what you're going to convert," QuitCarbon's Adam Klaus said. "For instance, it makes sense to get a new, heat pump water heater if your existing one is 12 years old."

Chambers' and McAlpine's journey to their all-electric home was gradual but infinitely worthwhile. It began during the 2020 pandemic, when they installed a Tesla Solar Roof. This 6.3-kilowatt structure, replacing the existing roof tiles, generates more than enough electricity to power the entire home.

To store the electricity for evening use-or in case of a power outage-Chambers and McAlpine also installed two Tesla Powerwall batteries, located in the garage.

Over two years, Eco Performance Builders installed a ducted HVAC system that warms and cools the house and a SanCO2 water heater, both of which run on electric-powered heat pumps that receive energy from the home's solar panels. Separately, the homeowners bought an LG heat pump clothes dryer. The purchase of an electric car completed the ensemble.

The whole transition, Chambers says, was relatively free of difficulty, helped by her experience at a prior online Electrified Home tour, where she learned the practicalities of electric living.

"Our house didn't have air conditioning-our whole day was arranged around managing the heat. Now that we have the heat pump, it's a real benefit not to worry about that," Chambers said. "Going electric has provided so many quality-of-life benefits that were unexpected but entirely welcome."

Homeowners often debate the cost of electric living. But Chambers argues that electric housing's long-term benefits outweigh its initial cost. During fire season, California's rampant power outages never affect her home. "We don't notice a thing: while others are turning on their generators just to keep their fridges going, we're fine because of our battery storage," Chambers said.

A glittering, solar-powered roof. Powerwall batteries. An induction stove, heat pump water heater, and clothes dryer.

Self-powered, electric living may appear too good to be true. But for Anne Chambers and Ed McAlpine, the future has arrived with their electrified Moraga home.

On Sunday, March 10, the Chambers/McAlpine house was featured in the first-ever Electrified Home Tour, organized by the Bringing Back the Natives Garden Tour. Tour coordinator Kathy Kramer showcased four homes across Alameda and Contra Costa Counties that promote eco-friendly, electric-powered appliances.

The Electrified Home Tour originated from Kramer's concern about increasing carbon emissions. According to a 2021 national report, commercial and residential sectors contributed a sixth of all U.S. greenhouse gas emissions, following transportation and industry. Burning gas-to heat our homes, water, and food, and to run our clothes dryers-is a main source of carbon emissions, emitting gasses that cause global warming. However,

Although not entirely off-the-grid due to rainstorms and a lack of daylight during winter, Chambers says her PG&E bills have been cut to just \$10 a month. Moreover, with a Tesla charger for their electric vehicle, the homeowners save a fortune on gasoline.

Federal support helps residents transition to electric housing. The Inflation Reduction Act provides a 30% tax credit rate for some electrified appliances that are in service by 2033. This cut Chambers' and McAlpine's solar roof cost down nearly ten thousand dollars, from \$42,981 to \$34,131. A full list of their electrification costs can be found here: [bit.ly/48ZbwCl](https://bit.ly/48ZbwCl). Scan the QR code for the full home fact sheet.

The Electrified Home Tour is one aspect of Bringing Back the Natives' mission to promote sustainability, with the other being its annual native plant Garden Tour, which encourages homeowners to plant native flora in their gardens to preserve local wildlife.

"Native plants have a special place in the local ecology-for instance, some pollinators only forage or lay their eggs on specific plants," Four Dimensions landscape designer Chris Garcia said. "Additionally, native plants are adapted to our local climate and don't need extra water during the summer."

With the aid of Four Dimensions, Chambers/McAlpine garden is now home to blue-eyed grasses, manzanita, oaks, and other native shrubs, trees, and edible plants.

On May 4 and 5, the free Bringing Back the Natives Garden Tour will feature 60 native plant gardens and 30 electrified homes. The Chambers-McAlpine residence will again be part of the tour on Sunday, May 5.

The climate crisis continues unabated-this February marked the world's warmest month on record. As Kramer says, each of us can combat its devastating effects by transitioning from gas to electric appliances. A 2022 study found that U.S. homes can reduce their carbon footprint by up to 72% by switching to all-electric heat pumps.

"For the future of our children and grandchildren, we can't continue burning more gas," Kramer said. "The sooner people electrify their homes and cars, the better."

In addition to its Garden Tours on May 4 and 5, Bringing Back the Natives will be hosting a virtual tour on Apr. 6 and 7. Visit [bringingbackthenatives.net](https://bringingbackthenatives.net) for more information.

Reach the reporter at: [info@lamorindaweekly.com](mailto:info@lamorindaweekly.com)

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