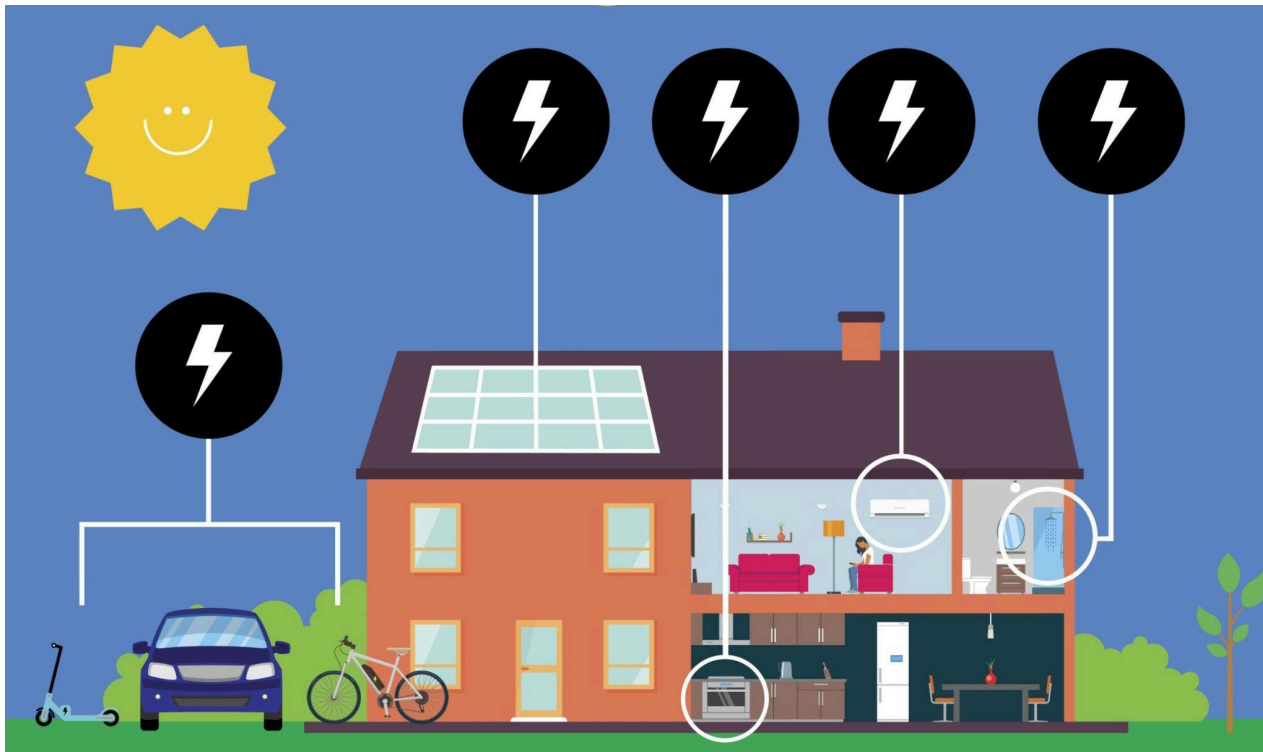


Direct Install Electrification

Organizations are incentivizing the transition from gas to electricity by helping homeowners through the process



(Photo courtesy of Patch)

The Impact

One of the best ways homeowners can reduce their carbon footprint is by replacing their gas appliances with electric ones. However, the process of transitioning to energy-efficient electrification is complex, encompassing initial planning, selecting contractors, obtaining permits, and completing the installation of electric appliances. By providing direct install electrification services — also called “turnkey electrification” — to homeowners, cities and organizations can make clean electrification easier and motivate more people to convert. These programs can spur homeowners to make energy-saving home improvements. As of June of 2023, Peninsula Clean Energy (PCE) had helped 185 lower-income households with energy-efficient and electrification projects, with 40 more ongoing projects.

Description

To encourage homeowners to change from natural gas to electricity, cities, utility companies and community organizations are offering help with the process. That help ranges from providing financial aid and lists of resources to supervising the entire installation process. Some direct install programs do most of the work required to implement green energy changes in a home. They typically assist with planning, procurement of contractors and acquiring the necessary permits that allow renovations to begin, thus easing the burden on the homeowner. Many programs provide rebates as well, which

further incentivize green renovation. In some cases, a utility or city will hire a third party to organize parts of the turnkey program and provide zero-interest financing.

Where It's Been Implemented

Sacramento Municipal Utility District (SMUD) started its Home Performance Program in 2010 with the help of a U.S. Department of Energy grant. It offers a list of vetted contractors and different packages that customers can choose, such as heat pump installations, and introduces the homeowner to contractors for assessments and further work.

Peninsula Clean Energy launched its Home Upgrade Program in 2021 for income-qualified families. It handles everything from providing funding to finding contractors.

In 2022 Menlo Park partnered with the clean electrification company BlocPower, which serves as a third party that organizes permits, contractors and financing.

Palo Alto also offers a turnkey program that schedules a contractor to get the permit and install a heat pump water heater at a predetermined discounted price.

Key Drivers

According to a 2021 study, 20% of U.S. carbon emissions stem from fossil-fueled heating, water heating and gas-fueled appliances in households. Switching from natural gas (a fossil fuel that is primarily methane) to electricity is one of the best ways to reduce a household's carbon impact. Many cities therefore promote the conversion of natural gas-based appliances to electric ones. Turnkey programs make this significantly easier by organizing huge portions of the normally complicated permitting process and assigning it to trusted contractors selected by the program. Financial aid in the form of rebates and/or free services allows lower income families to participate in the electrification charge where there would usually be financial barriers.

Key Factors for Success

Accessibility is a key factor for the success of direct install electrification because the whole point of a turnkey program is to make the process as easy as possible. Accessibility is best ensured with simple application requirements that allow more people to apply. Public knowledge of the turnkey program is also very important as change cannot be enacted otherwise. Sufficient funding is essential for the programs that provide financial aid. In July 2022, the State of California awarded a \$4.5 million grant to Menlo Park (Calif.) and BlocPower to create a "one-stop shop" to help homeowners transition to electric energy. The goal is to electrify 10,000 homes and buildings by 2030, with emphasis on lower-income households. BlocPower offers workforce training to create jobs locally and will provide the labor needed to complete the project.

Key Obstacles

Turnkey programs may seem too appealing to be realistic, which often makes people hesitant to participate. It's crucial to communicate openly with the community, building trust and clarifying the real benefits of these programs. Customers are also discouraged by the need for multiple home visits to start a project. In contrast, the opportunity to partner with one committed team that oversees the entire project from start to finish, all within the comfort of their own home, may greatly encourage homeowners to embark on the project.

References and Resources

- Tom Kabat, Carbon Free Buildings of Silicon Valley and Carbon Free Silicon Valley, tomkabat@gmail.com

- [SMUD Home Performance Program](#)
- [PCE Home Upgrade Program](#)
- [Palo Alto Water Heater Install Program](#)
- [Blocpower Menlo Park Partnership](#)
- Rebosio, Cameron. [“A \\$4.5 Million Grant Sparks Menlo Park’s Conversion to All-Electric Building.”](#) The Almanac, July 15 2022
- Benjamin Goldstein, Dimitrios Gournaridis, and Joshua P Newell. [“The carbon footprint of household energy use in the United States.”](#) PNAS, July 20, 2020

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