Electrify Your Home

#ElectrifyIrvine

April 21, 2022

CITY OF IRVINE

Agenda

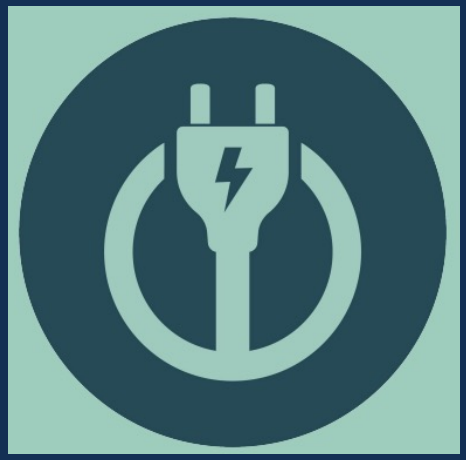
12:00-12:10 PM	**Intro & City of Irvine Climate Goals Background** Selene Lawrence, Senior Energy and Sustainability Programs Analyst City of Irvine Environmental Programs
12:10-12:25 PM	**The Health, Financial, Environmental & Safety Benefits of Electrification** Jessica Leader, Director of Strategic Outreach The Switch is On
12:25-12:40 PM	**SCE Incentives & Support** Jose Buendia, Senior Project Manager of Building Electrification Southern California Edison
12:40-1:00 PM	**Question & Answer**

City of Irvine's Climate Goals

- Dec. 2020 – Strategic Energy Plan
  - Identifies buildings as significant source of Irvine GHG emissions
  - Recommends developing a decarbonization roadmap
- July 2021 – Climate Action & Adaptation Plan Launch
  - Greenhouse Gas inventory in process
  - Stay updated on upcoming community workshops: *cityofirvine.org/climate*
- Aug. 2021 - Irvine ACHIEVES Resolution
  - Aims to achieve carbon neutrality by 2030
- Jan. 2022 – Cool Irvine Launch

City Resources & Partnerships

- Partnerships with organizations and agencies:
  - Switch is On Campaign
  - Southern California Edison
- City Programs:
  - One Irvine Program
    - Pilot program showing success in providing additional incentives to electrify
    - *cityofirvine.org/one-irvine*
  - Cool City Challenge
    - Neighborhood based campaign to encourage households to adopt climate-friendly behaviors
    - *coolirvine.com*

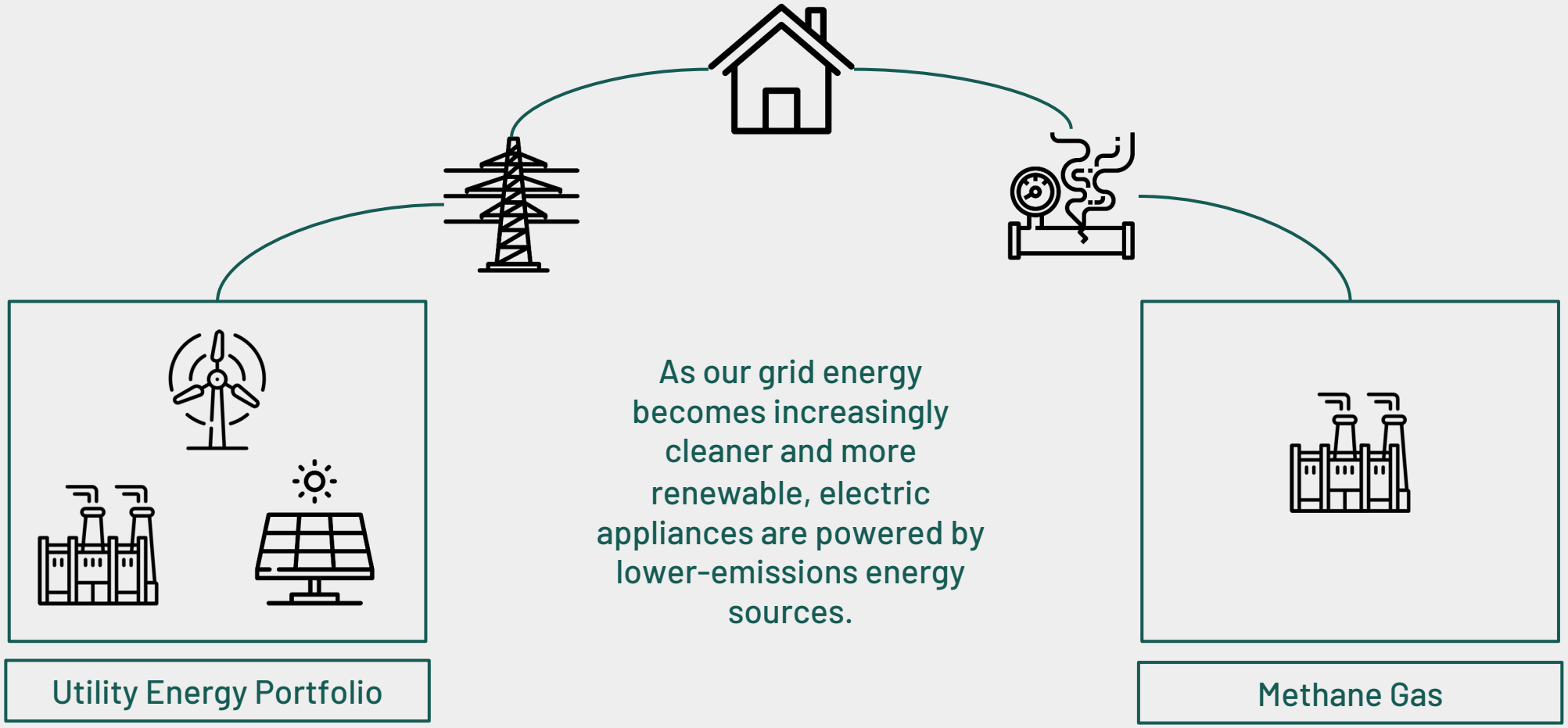


Learn More and Stay Up to Date

Visit: *cityofirvine.org/environmental-programs*


THE SWITCH IS ON

Why electrify?



As our grid energy becomes increasingly cleaner and more renewable, electric appliances are powered by lower-emissions energy sources.

Utility Energy Portfolio

Methane Gas

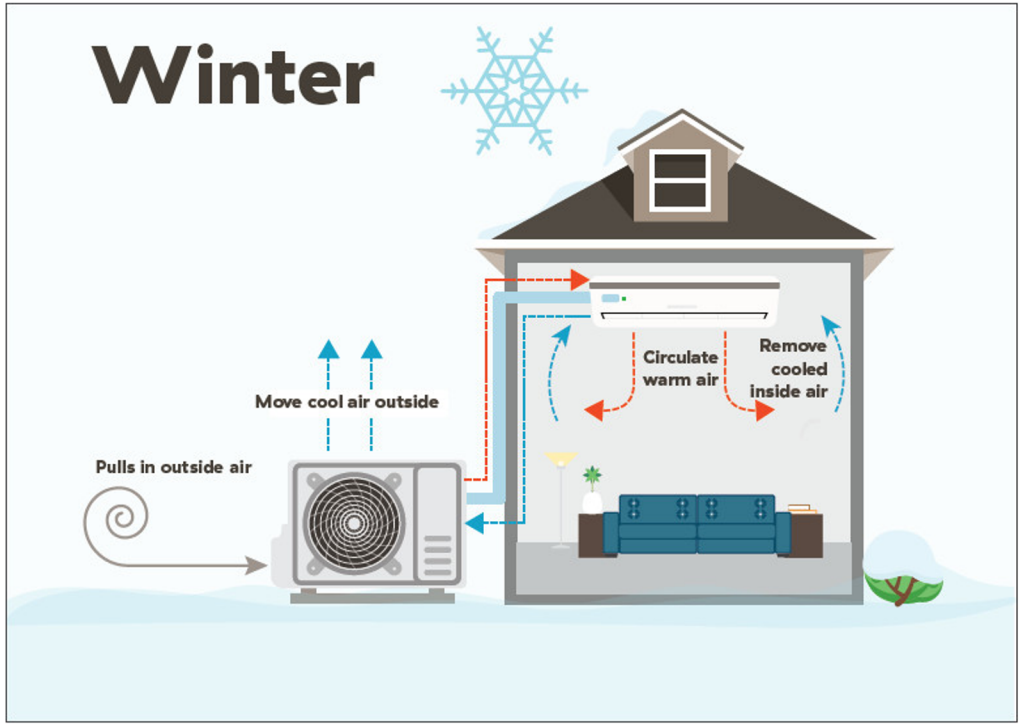
What is... decarbonization?

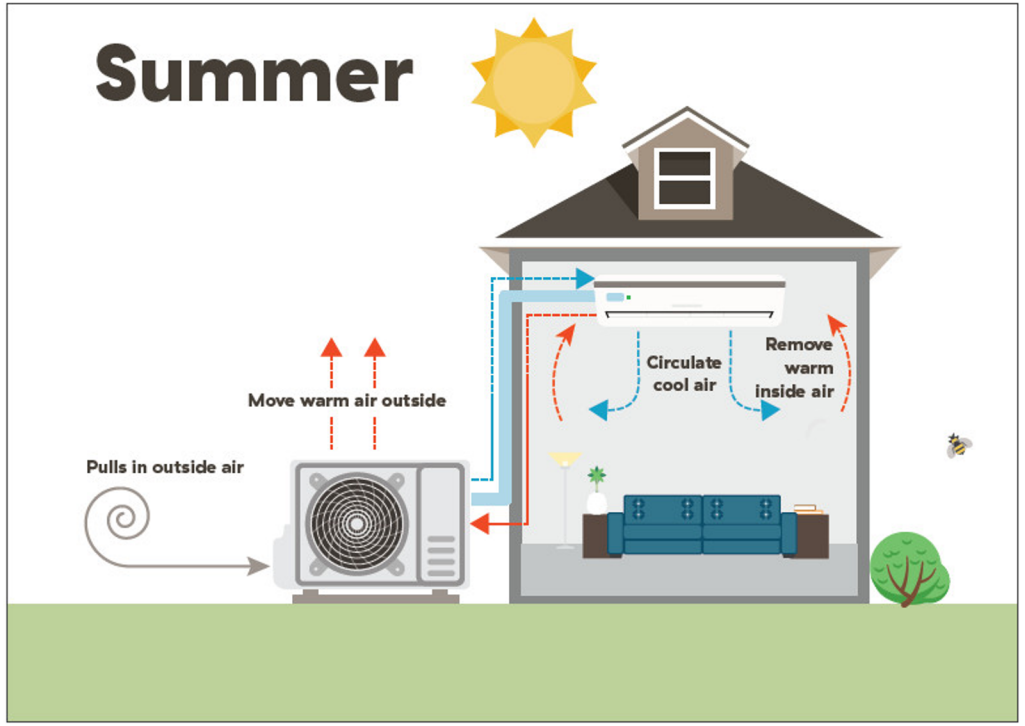
- The word “decarbonization” means to reduce, and ideally eliminate, the amount of carbon emissions from our processes and power sources.
- “Electrification” is the process of moving appliances off single-source carbon fuel (like natural gas), and connecting them to the larger electric grid.
- The two terms are often used interchangeably, as electrification is a primary action used to decarbonize.

What is... a heat pump?

A heat pump is a heating and cooling (HVAC) system that uses heat transfer technology. Like a traditional air conditioner, it cools your home, but unlike an air conditioner, it heats as well.

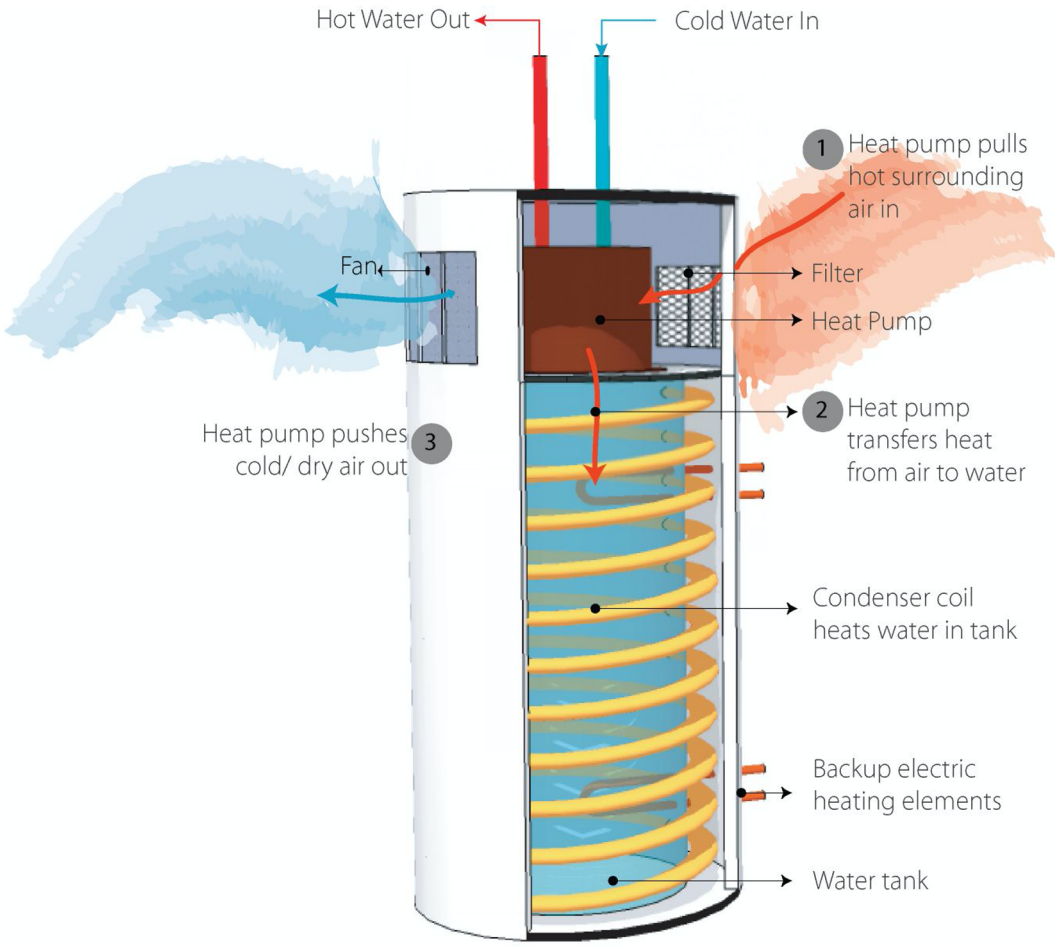
This works by using a refrigerant to pull warm air out of your home during hot days, and vent in warm air from the atmosphere during cooler months.





What is... a heat pump water heater?

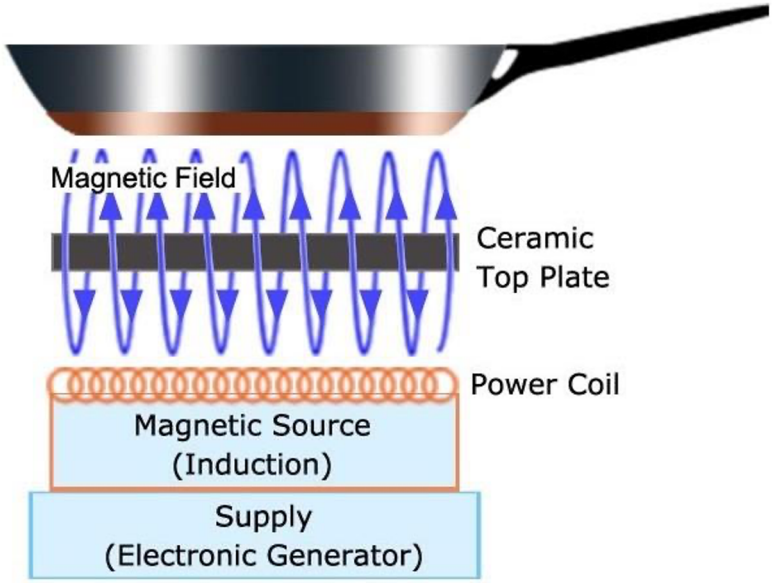
Similar to the HVAC system, a heat pump water heater uses heat transfer technology. Hot air is pulled from the surrounding atmosphere to warm the water in the tank, instead of using a gas-powered flame.



What is... an induction stove?

"Induction" is short for "electromagnetic induction," a.k.a. magnetism. Induction stoves use electricity to send currents through a metal coil that interact with any metal in their magnetic field.

This is very different than an electric coil stove, which uses electricity to heat a coil on your stovetop without any magnetism.

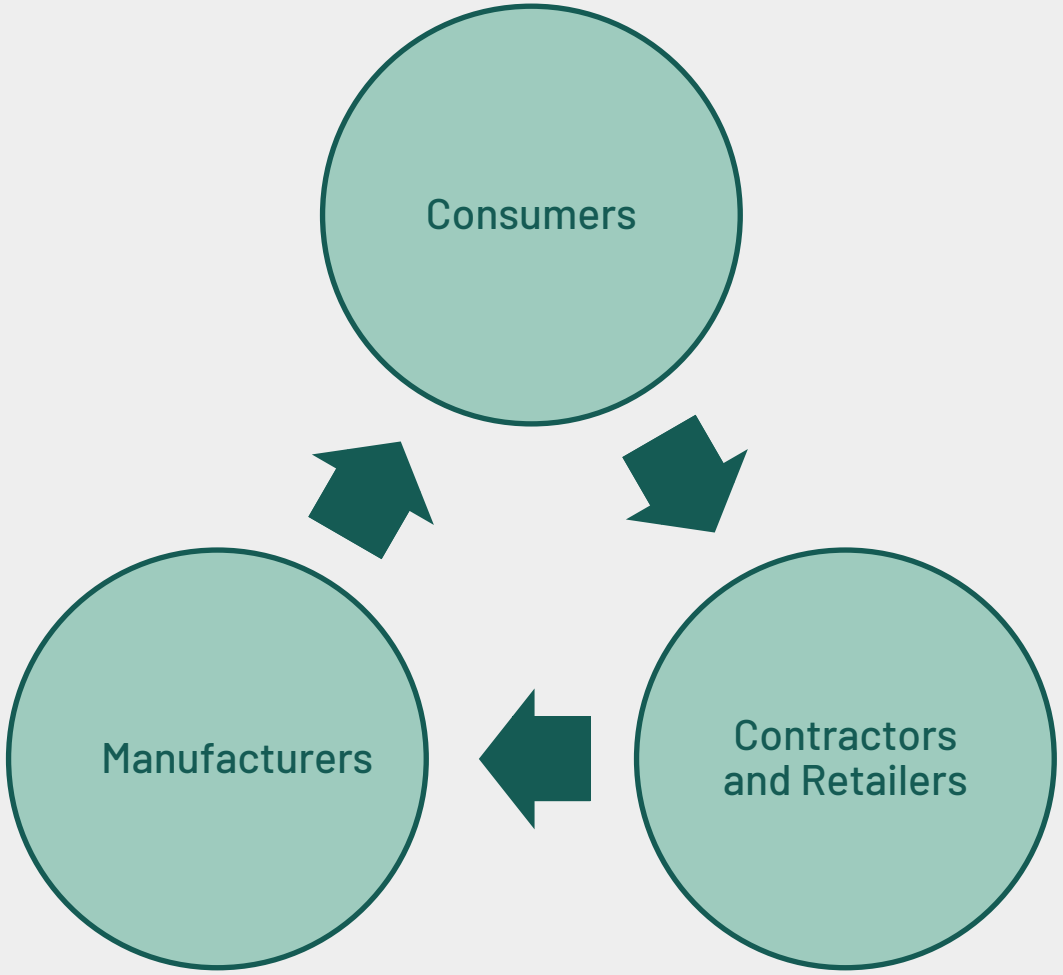


What Is The Switch Is On?

The Switch Is On is a California statewide campaign to encourage consumers to swap out their gas-powered appliances for electric appliances.

The campaign is funded through a combination of the TECH Initiative (focused on heat pumps HVAC and water heaters) and individual partners (focused on broader home electrification).

This is a multi-year program unlike anything previously implemented in California, other states, or on a national level.



Meet the Team!

Jessica Leader
Director of Strategic Outreach

Rebecca Rothman
Senior Project Manager

Erich Fleck
Campaign Coordinator

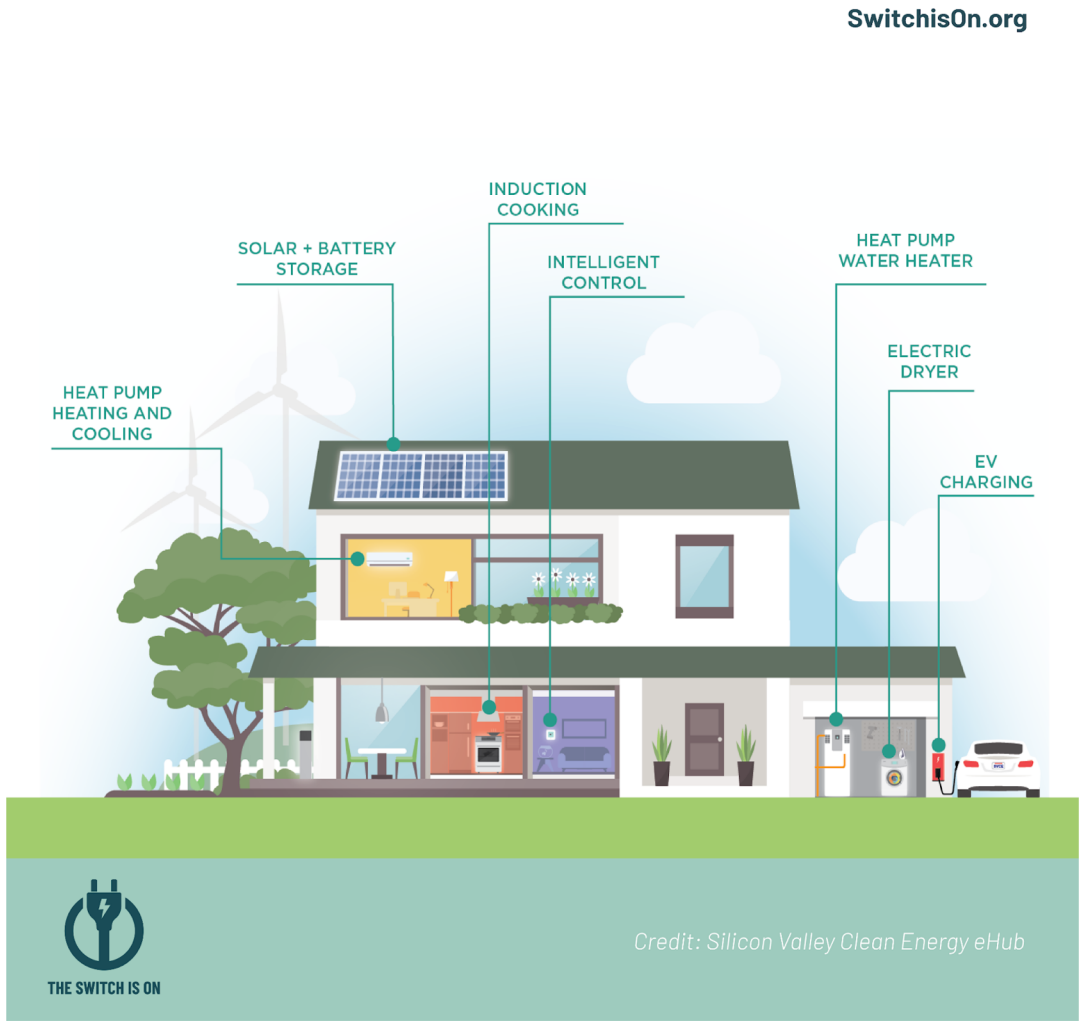
Creative Agency

Antenna: PR Agency

Funding Partners

Future All-Electric Home

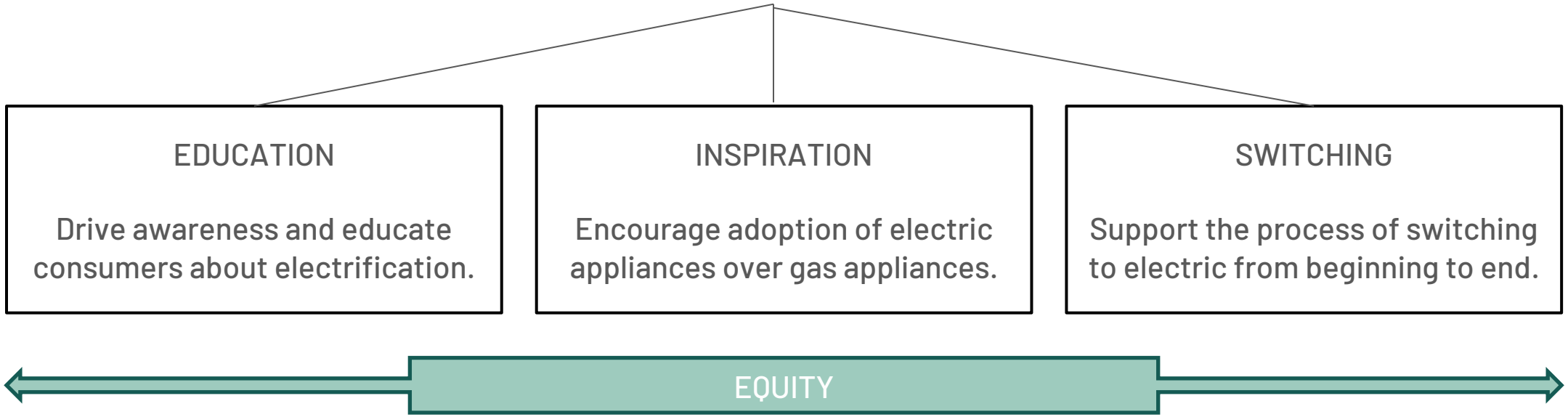
Lifestyle Values	• Induction stovetop • Electric fireplace • Electric vehicle
Home Improvement	• Heat pump • Water heater • Dryer
Future Proofing	• Home battery • Solar panel • Smart thermostat



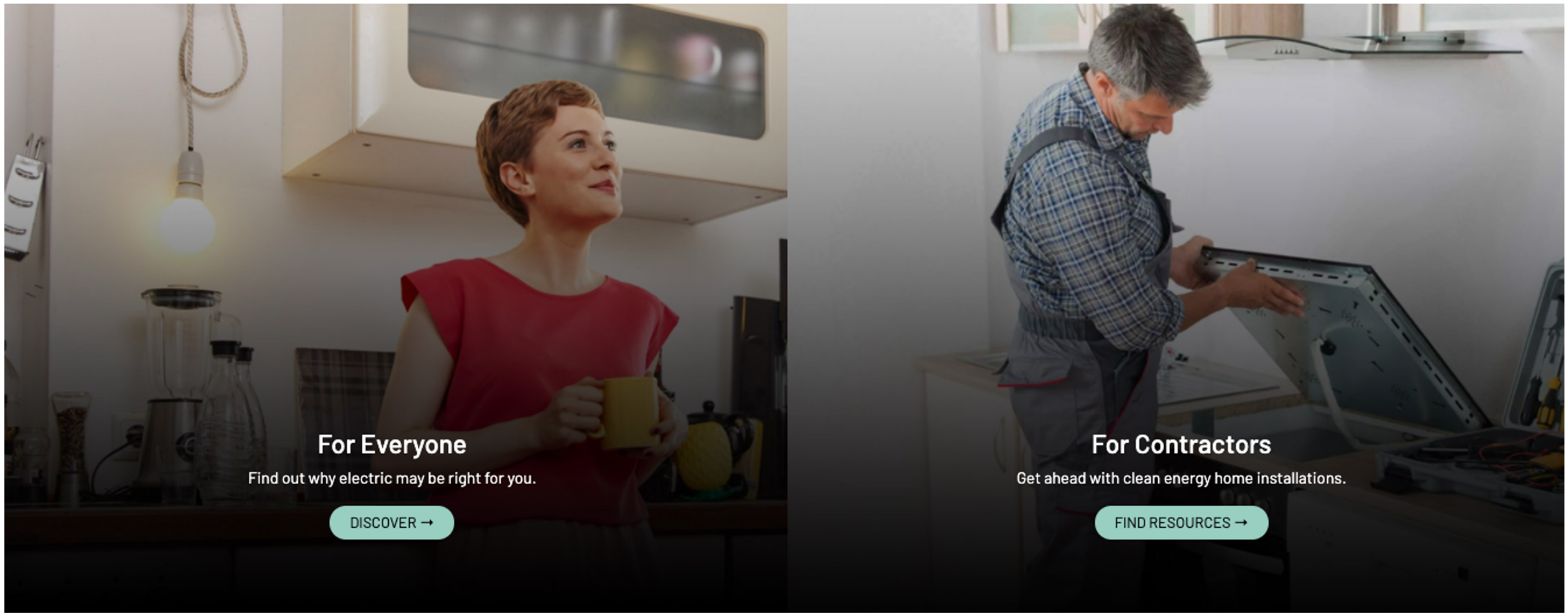
Campaign Purpose

To encourage consumers to swap out their gas-powered appliances for electric appliances.

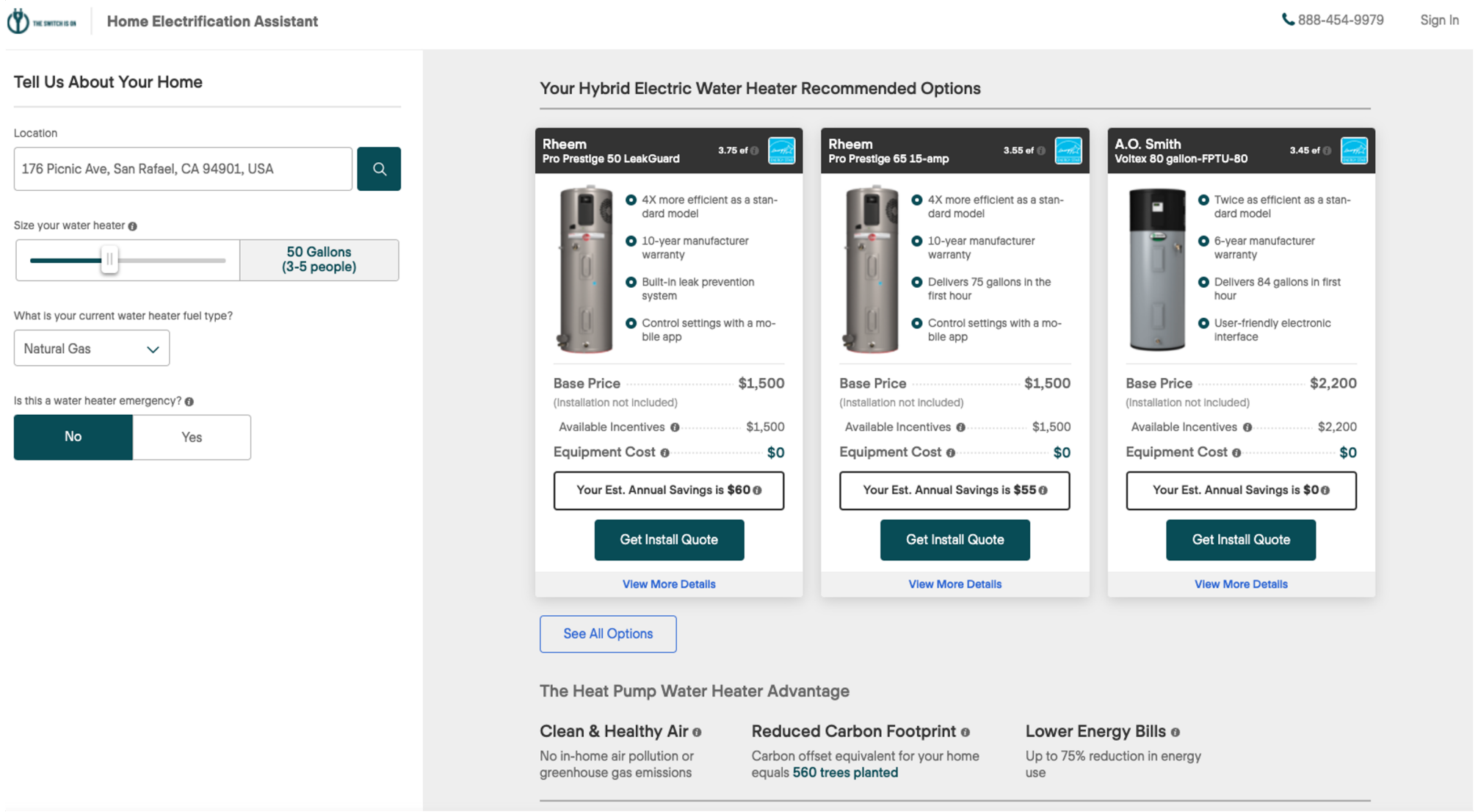
Campaign Goals



Website


THE SWITCH IS ON
Select Language
Powered by Google Translate
About
Contact
FAQs
For Everyone
Find out why electric may be right for you.
DISCOVER →
For Contractors
Get ahead with clean energy home installations.
FIND RESOURCES →

Expert Guidance



Ambassador Program

- Ambassador program engages people in the community to learn about home electrification, and connect people to Switch is On resources.
- Ambassador Categories:
  - Neighborhood
  - Organization
  - Influencer
  - Contractor
- Currently, we are building out the neighborhood ambassador program
- Will soon commence Influencer and Organization ambassador movements

- Neighborhood ambassadors:
- More than 100 interested ambassadors from across the state filled out the interest form
- More than 50 attended the first two Onboarding Sessions
- Ambassadors participate by posting and sharing on social media, writing blog posts, attending events, offering home tours, speaking with media. They engage however they are comfortable with being the eyes, ears and voice of the campaign

Local Ambassadors

Organizations

- Community organizations and associated influential figures

Neighbors

- Customers who have had positive experiences

Contractors

- Enablers in the industry who are leaders of the electrification movement




Key Takeaways

- Now is the time for home electrification
- This holistic campaign will educate, inspire, and support people as they electrify
- We are continuing to iterate and improve
- You can be a part of our movement!

Join us!

Become an ambassador:
https://forms.gle/dag8DvgqDQeoCE8G7

Subscribe and share on social media

Instagram: @switchison
Facebook: @The Switch Is On
Twitter: @switchison

Calanque d'En-vau

Questions?

Jessica@buildingdecarb.org
Rebecca@buildingdecarb.org

Electrifying Your Home

Irvine Electrification Webinars

Building Electrification Incentives & Support

Jose Buendia
Sr. Project Manager

April 21, 2022

Barriers to Building Electrification

Lack of knowledge about electrification technologies and their benefits

Higher upfront costs

Lack of programs and insufficient financial incentives

Limited knowledge among contractors

Limited time for replacement opportunities

Notable Statewide Programs Available Today!

TECH CLEAN CALIFORNIA

CALIFORNIA ENERGY-SMART HOMES MIXED-FUEL

TECH Clean California Program Overview

https://energy-solution.com/tech/

- Technology and Equipment for Clean Heating (TECH) Initiative was established by California Public Utilities in accordance with Senate Bill ("SB") 1477 (Stern, 2018).
- 4-year midstream market transformation program, $120M budget (~$72M allocated for heat pump incentives)
- Eligible customers: SF and MF residences in gas IOU service areas (e.g., PG&E, SoCalGas, Southwest Gas, and SDG&E)
- Funding allocated proportional to gas-IOU share of Cap-and-Trade allowances GHG and market transformation goals

TECH Program Goals

1. Make installing heat pumps profitable and easy for contractors by streamlining incentive applications and expanding access to trainings

2. Demonstrate scalable solutions to key market barriers via regional pilot projects

3. Inform CA's decarbonization decision-making and magnify program impacts by leveraging sales and meter data from TECH installations

Single Family Heat Pump HVAC Incentives

Heat Pump HVAC Incentives

Measure	Minimum Efficiency Requirements	Incentive / Unit (before 6/20/22)	Incentive / Unit (after 6/20/22)
Package, split, mini/multi-split	Title 24 code minimum	$3,000	$1,000
Manual J Completed	Provide calculations	$600	$300
Duct sealing/replacement and testing	5% total leakage or less	$600	$300
Field Measured Performance (based on ASHRAE 221-2020)	Heating System Performance Ratio (HSPr) and Cooling System Performance Ratio (CSPr) = 80% or better	$600	$400

Single Family Heat Pump HPWH Incentives

Heat Pump Water Heater Incentives

Measure	Measure Criteria	Territory	Incentive / Unit (before June 20th(	Incentive / Unit (After June 20th)
Gas/propane to HPWH	All HPWH sizes	PG&E Gas	$3,100	$2,100
Gas/propane to HPWH	All HPWH Sizes	SoCal Gas and SW Gas	$3,100	$3,100
Electric resistance to HPWH	All HPWH sizes	All	$1,000	$1,000
Demand Response Program enrollment	All	All	-	$50

- All HPWH installations must include thermostatic mixing valves

Multifamily Incentives

- **Heat Pump HVAC**
  - Up to $2,000 per System Serving Individual Apartments
    - Split or Rooftop (ducted or ductless)
  - Up to $1,000 per Apartment served for Systems Serving Multiple Apartments
  - Up to $1,800 per Systems Serving Common Areas
- **Heat Pump Water Heaters**
  - Up to $1,500 per unit replacing existing electric resistance WH
  - Up to $3,800 per unit replacing existing gas/propane water WH
  - Up to $2,800 for electrical panel upgrades/load center (Sizing up to 200 amps)
- **Electrical Upgrades**
  - Up to $1,400 for electrical panel upgrades
    - Apartment panel or sub panel upgrades, feeder upgrades, or service disconnect upgrades
    - Apartment unit must have received a TECH-funded HP HVAC or HPWH, and
    - Must be all-electric after the electrical upgrade

1. MF defined as properties with 5 or more units

Regional Pilots

- Two-year initiatives designed to address specific major adoption barriers and hard to reach segments of the market
- Results and best practices will inform future program development

Name	Goal
Tariffed On-bill	Demonstrate feasibility of tariffed on-bill structure to scale investments
Customer Targeting	Create scalable outreach strategies to drive demand for decarbonization among customers for which the value of clean heating is most compelling
Multifamily	Demonstrate value of electrification to MF property owners
Load Shifting	Identify best strategies to encourage customers to enroll in demand response programs upon installing heat pumps
Streamlining Permitting and Installation	Develop a single-day permit process for heat pump conversion projects and familiarize building department staff with key emerging technologies
Low Income	Make decarbonization measures standard practice in low-income programs
Quick-start Grants	Bolster high-leverage projects outside TECH scope

California Energy-Smart Homes

caenergysmarthomes.com

Mixed-Fuel Residential Program

The California Energy-Smart Homes Program is a residential new construction and alterations program that eases the adoption of advanced energy measures and the transition to all-electric homes. The program supports California's focus on building electrification to meet its climate objectives.

Eligibility

Energy-Smart Homes is available to utility customers in the SoCalGas®, San Diego Gas & Electric Company (SDG&E®), Pacific Gas and Electric Company (PG&E®), and Southern California Edison Company (SCE®) territories.

Prerequisites

Alterations to existing single family, duplex, and multifamily low-rise projects require:
Conversion of at least one gas appliance and or piece of equipment to electric including:

- Heat pump space heating
- Heat pump water heating
- Heat pump clothes dryer

Alteration Incentives

Alterations	Incentive
Heat Pump Clothes Dryer Replacing Gas Clothes Dryer	$500 per heat pump dryer
Ductless Mini-Split Heat Pump (SEER 15 or greater, HSPF 8.5 or greater)	$325 per ton
Residential Central Heat Pump Replacing Residential Split Air Conditioner and Furnace	$90 per ton
Heat Pump Water Heater Replacing Storage or Tankless Natural Gas Water Heater	$450 per Heat Pump Water Heater

Other Building Electrification Programs on the Horizon

- SGIP Heat Pump Water Heater ($84M, Approved, Expected 2023)
- SCE BE Pilot ($40.8M, Approved, Expected Q3-2022)
- SCE Smart HPWH Program ($15M, Pending Decision, Expected 2023)
- SCE BE Application ($677M, Proposed, Expected 2024)
  - BE Ready Homes
  - BE Ready Catalina
  - BE Ready Business


Q&A