

TECH Clean California Initiative Overview

3C-REN & Frontier Energy

December 8, 2021



Today's Webinar Will Explain:

- The TECH Clean California Initiative
- The benefits of participating in TECH
- How to enroll in TECH
- How 3C-REN's programs layer with TECH



3C-REN: Tri-County Regional Energy Network

- Three counties working together to improve energy efficiency in the region
- Services for –
 - **Building Professionals:** industry events, training, and energy code compliance support
 - **Households:** free and discounted home upgrades
- Funded by ratepayer dollars that 3C-REN returns to the region



Introducing: Frontier Energy

- Frontier Energy is a partner for TECH Clean California serving as the primary point of contact and support for contractors.
- Frontier serves as the Contractor Support Team, and manages enrollment, ongoing assistance, training and project support.



TECH Clean California



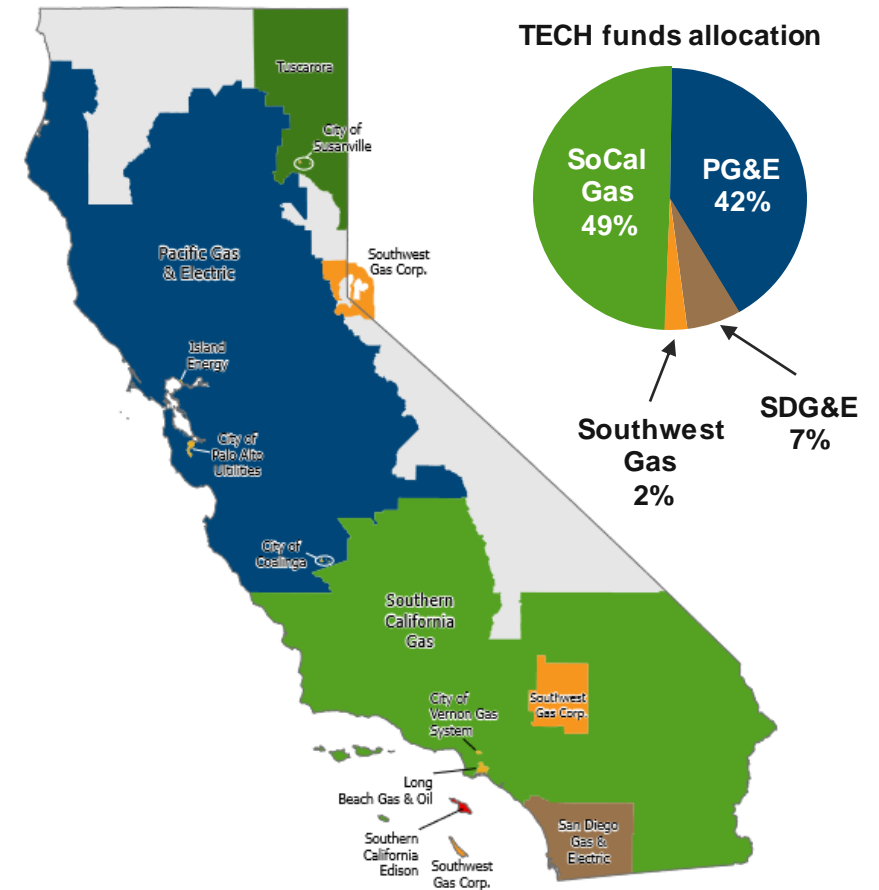
TECH Program Overview

What is TECH?

- Statewide heat pump technologies incentive program
- Offers incentives, training, and marketing support to contractors
- TECH aims to put CA on a path to carbon-free homes by 2045

Program Details

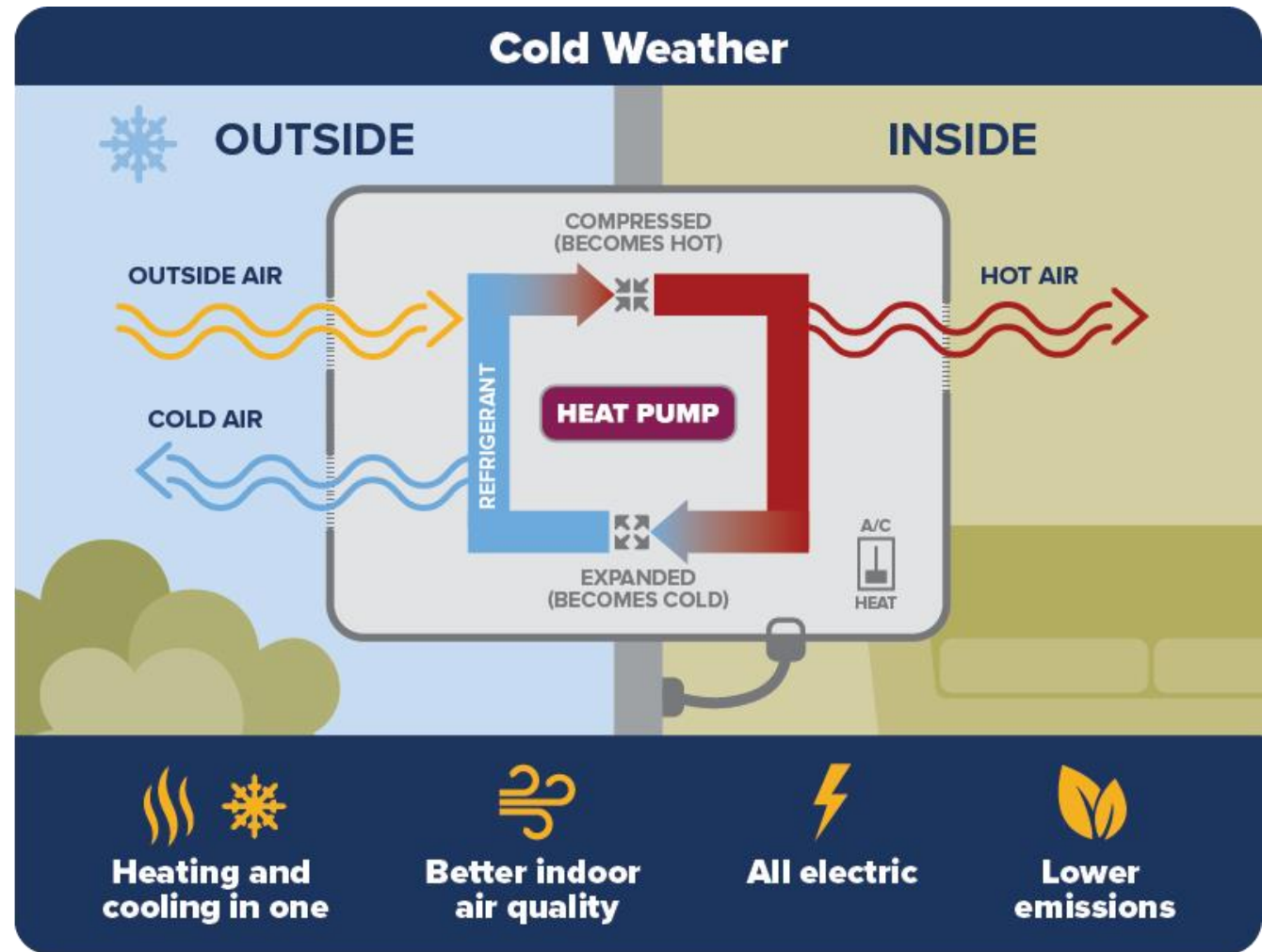
- 4-year program launching December 7th
- Funded by gas investor-owned utilities (IOUs) and Cap-and-Trade allowances
- ~\$116M budget (\$72M in incentives)
- Eligible customers: single family and multifamily residences in gas IOU territory



Map source: <https://cecgis-caenergy.opendata.arcgis.com/pages/pdf-maps>

What Are Heat Pumps?

- Heat pumps are devices that transfer thermal energy using electricity
- For example, refrigerators use heat pumps, pulling hot air from inside the fridge and moving it out to cool it
- TECH offers incentives for heat pumps used for heating and cooling, and heat pump water heaters

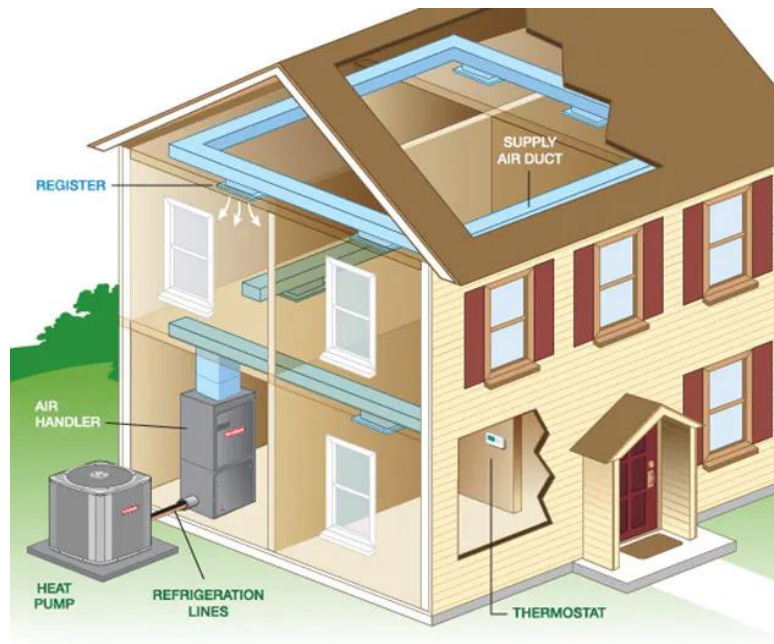


Example of a heat pump used for space heating

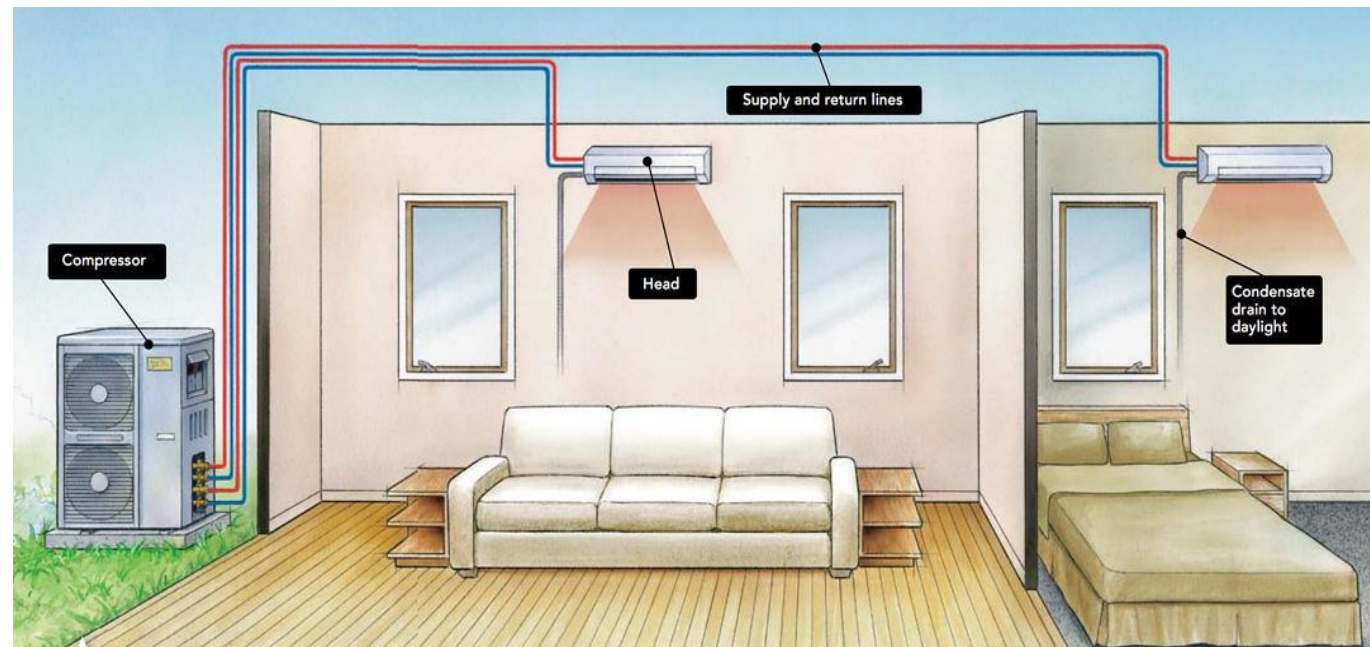
Heat Pumps for Space Heating

There are two types of heat pumps for space heating:

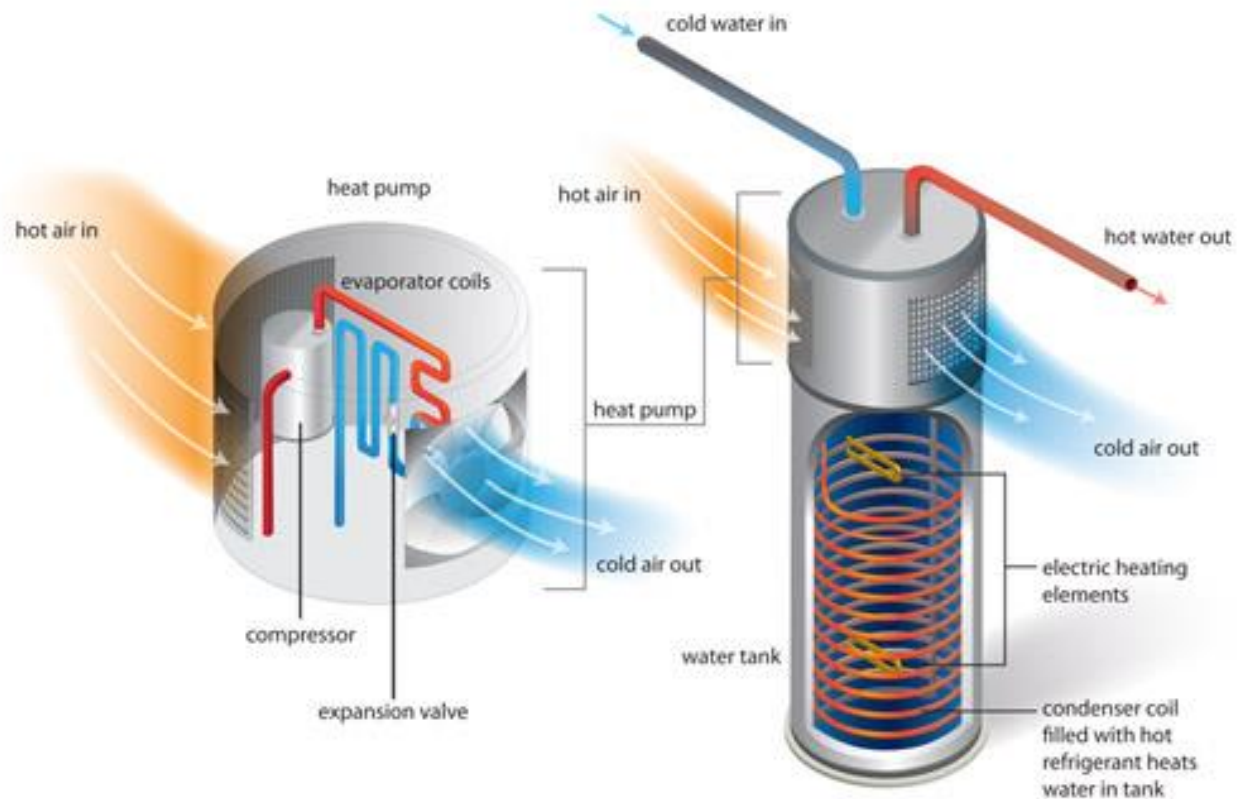
Unitary Package/Split System that are installed in much the same way that an air conditioner and furnace are installed, with the heat pump installed outside and an air handler installed in the home to circulate the air.



Ductless Mini/multi-split which do not require an air handler and are installed outside the home with indoor units installed directly in the rooms you wish to heat or cool.



Heat Pump Water Heaters



Heat Pump Water Heaters -

- Heat pump water heaters use electricity to move heat from one place to another instead of generating heat directly.
- They can be 2x-3x more energy efficient than electric resistance water heaters.
- Heat pump water heaters work like a refrigerator in reverse:
 - A refrigerator pulls heat from inside a box and sends it outside the box.
 - An *air-source heat pump* water heater pulls heat from the surrounding air and transfers it -- at a higher temperature -- to heat water in a storage tank.

Single Family HP HVAC Incentive Structure

Baseline

Equipment Type	Minimum Efficiency Requirements	Total Incentive Per Unit
Package, split, mini/multi-split	Title 20 code minimum	\$3,000

Enhanced

Equipment Type	Size Category	Tier	Seasonal/Part-Load Cooling Efficiency	HSPF	Total Incentive Per Unit
Unitary package/ split system and mini/multi-split	< 5.4 tons	Title 20 code minimum*			\$3,000
		1	16.0 SEER	9.0	\$3,900
		2	18.0 SEER	9.7	\$4,800

Quality Installation Measure	Qualifier	Total Incentive
Manual J Completed	Provide calculations	\$600
Duct sealing/replacement and testing	5% Total leakage or less	\$600
Field Measured Performance (based on ASHRAE 221-2020)	Heating System Performance Ratio (HSPr) and Cooling System Performance Ratio (CSPr) = 80% or better	\$600

Single Family HP Water Heater Incentive Structure

Baseline Heat Pump Water Heater Incentives

Replacement Scenario	Measure Criteria	Total Incentive Per Unit
Gas/propane to HPWH	All HPWH sizes	\$3,100
Electric resistance to HPWH	All HPWH sizes	\$1,000

The following incentives will be available instead of the baseline incentives in regions where a local utility has integrated with TECH Clean California.

Enhanced Heat Pump Water Heater Incentives

Replacement Scenario	Measure Criteria	Total Incentive Per Unit (TECH + Local Program Combined)
Gas/propane to HPWH	HPWH < 55 gallons	\$3,100
	HPWH > 55 gallons	\$3,800
Electric resistance to HPWH	All HPWH sizes	\$1,500
Panel upgrade/load center	Sizing up to 200 amps	\$2,800

Multifamily HP HVAC Incentive Structure

In-apartment

Previous Space Heat Source	System Type		TECH Incentive (Per Equipment)
	Description	AHRI Test Standard	
Non-heat pump systems	Split or rooftop heat pump (ducted or ductless)	210/240	\$2,000
All except PTHPs	PTHP, SPVHP, or unitary through the wall/ceiling heat pump	310/380, 390	\$500 (Single or two stage compressor) \$1,000 (Variable capacity/inverter-driven)

Central

Previous Space Heat Source	System Type	TECH Incentive (Per Apartment Served)
Non-heat pump systems	HP HVAC equipment serving multiple apartments	\$1,000

Multifamily Incentives- HVAC Serving Common Areas

Incentives for Heat Pump HVAC Systems Serving Common Areas

Previous Space Heat Source	System Type	TECH Incentive (Per Equipment)
Non-heat pump systems	Split or rooftop heat pump (ducted or ductless)	\$1,800
	PTHP, SPVHP, or unitary through the wall/ceiling heat pump	\$300 (Single or two-stage compressor) \$800 (Variable capacity/inverter-driven)

Multifamily HP Water Heating Incentive Structure

Individual

Previous Water Heater Heat Source	HPWH Tank Size	TECH Incentive (Per Equipment)
Gas or propane	< 55 gallons	\$1,400
	>= 55 gallons	\$2,100
Electric resistance	All	\$700

Central

Previous Water Heater Heat Source	HPWH Storage Volume ¹	TECH Incentive (Per Apt Served)
Non-Heat Pump Systems	< 15 gallons Per Bedroom Served	\$1,200
	>= 15 gallons Per Bedroom Served	\$1,800

Pool or Spa Heating

Previous Space Heat Source	System Type	TECH Incentive (Per Equipment)
Non-Heat Pump Systems	Heat Pump Pool Heating	\$2,500

Incentive Eligibility

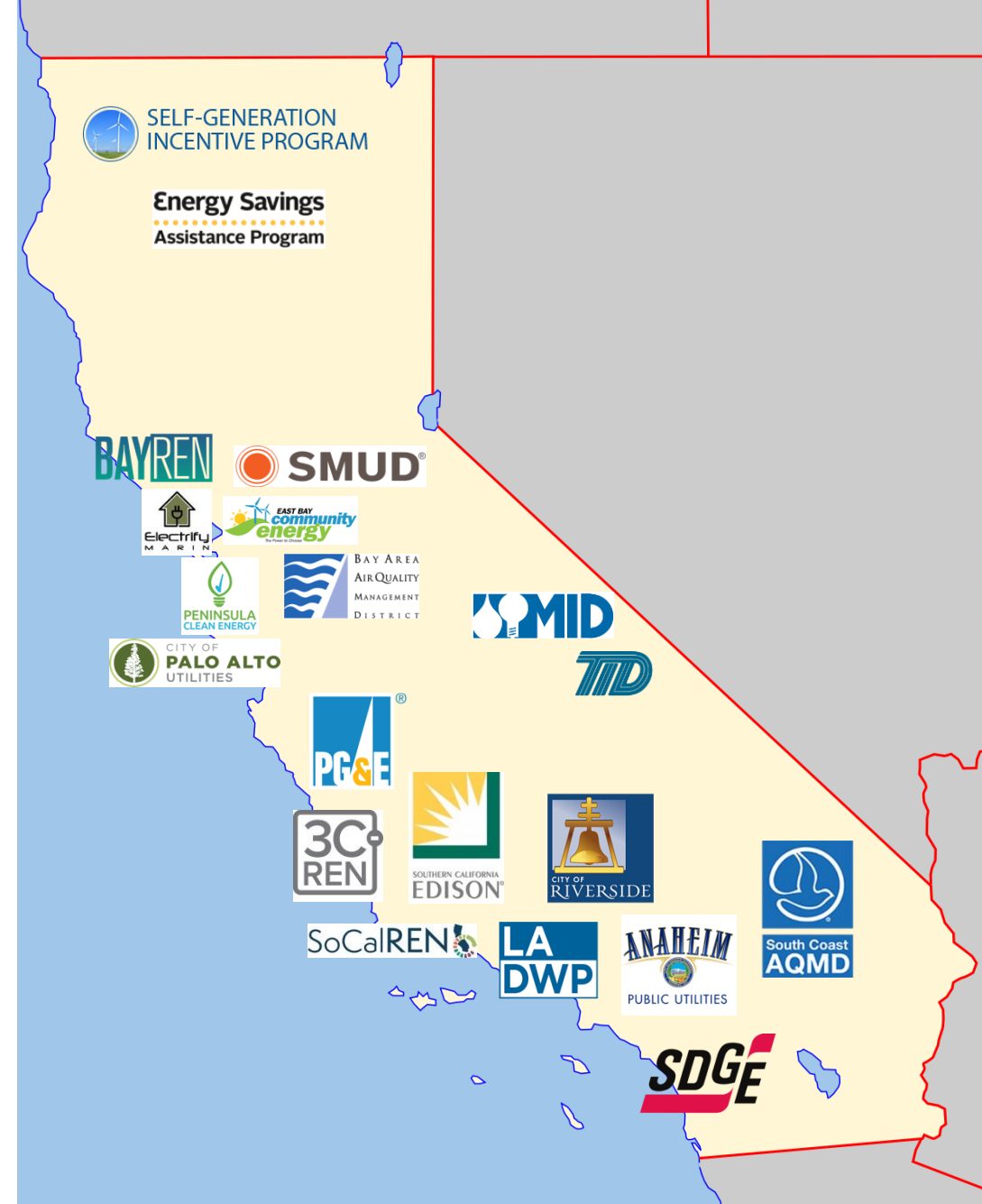
- **Customer eligibility:** Customers in gas IOU territory (PG&E, SoCalGas, SDG&E, Southwest Gas)
- **Midstream incentives** primarily for contractors
- **Streamlined applications:** Integrate application process for all major programs to simplify contractor experience



A Simplified Process for Contractors

Incentive Program Integration

- There are many heat pump incentive programs across the state
- TECH will create a single, comprehensive, statewide incentive clearinghouse
- Integration of multiple programs will create:
 - An easier, streamlined process
 - Consistent eligibility and application requirements
 - Consistent base incentives that local govts can supplement



Contractor Participation and Performance

- Contractors are **busy** and have a **profitable business model** based on gas appliances.
- TECH must provide a clear **value-add** for contractors while making participation **simple and quick**.
- TECH will **focus on electrification**, the heat pump value proposition, and how to sell heat pumps.

Incentive Enrollment and Participation:

- Up to \$6,600 in incentives
- Support through the application process for all programs customer/contractor are eligible for
- Decreased program paperwork/requirements
- Participation bonus after 15 installs

Training:

- Technical training from manufacturers and distributors with training focused on selling the value proposition to customers
- Education on integrating electrification into contractors business models
- Free in-house business and on-the-job training
- Free HPWH units for contractors who participate in technical and sales training, as well as sales staff for larger companies

Participating is Easy

1. Download the [Trade Professional Participation Agreement](#).
2. Email your signed form and Certificate of Insurance to TECH.contractor@energy-solution.com.
3. Once enrolled, you'll receive a username and password to the incentive application submission portal.

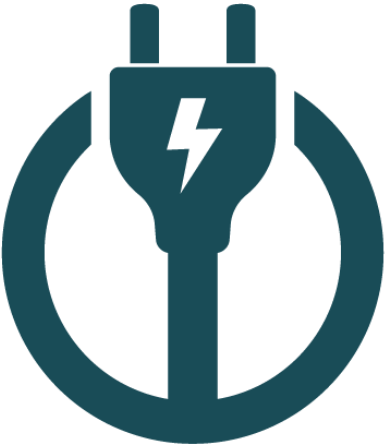
Contractor enrollment requirements include:

- Active California contractor license in good standing
- Adherence to the requirements outlined in TPPA including insurance coverage
- Brief program training completion

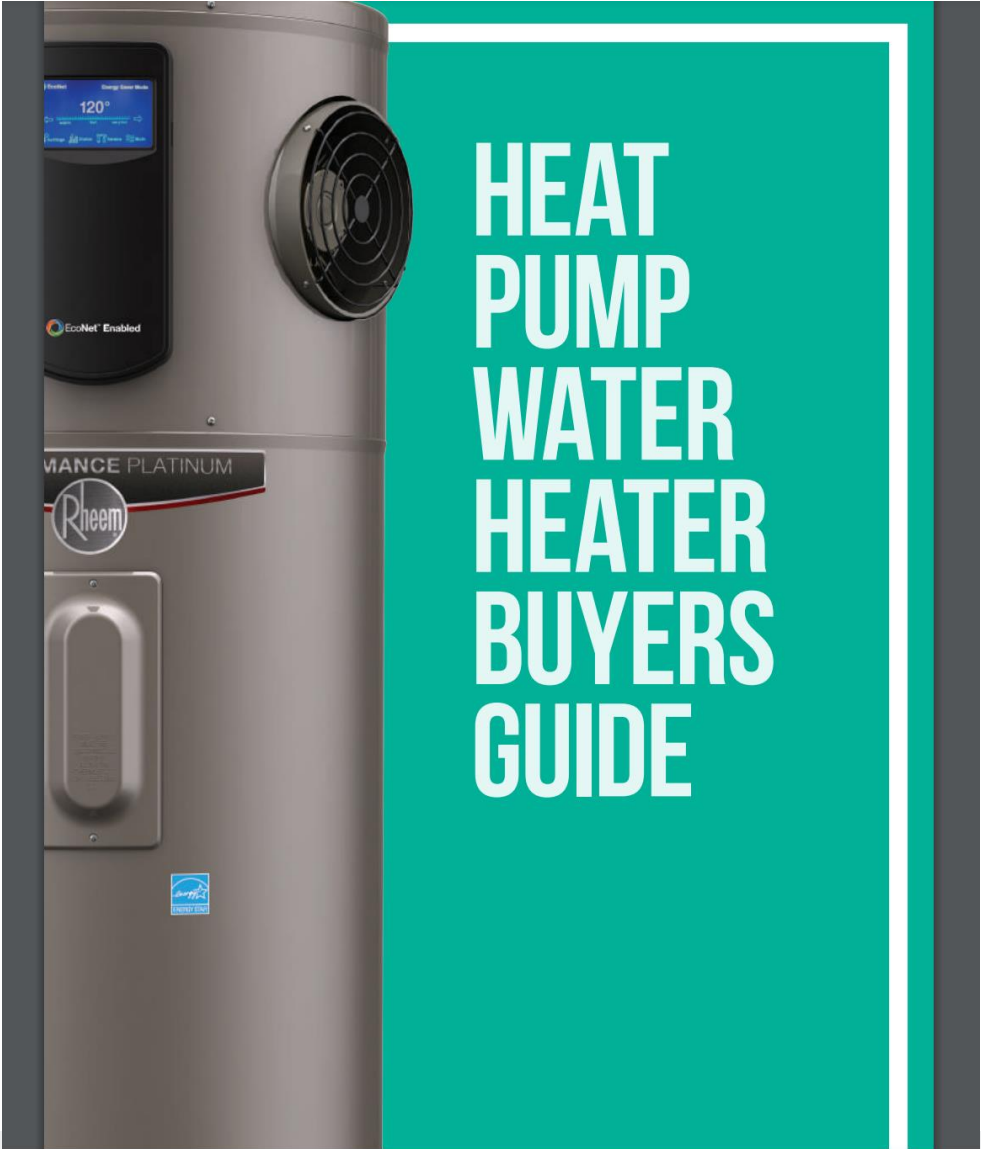
Undecided about whether to participate?

Contact TECH.contractor@energy-solution.com to learn more.

3C-REN: Working to Educate Consumers



THE SWITCH IS ON



3C-REN: Serving Single Family Properties

**Incentive payments for metered energy savings:
Launching Q1 2022**

How it works:

- 1) Contractors enroll in Recurve platform to participate
- 2) Contractors are paid incentives based on the metered savings of their eligible customers

How it relates to TECH

- 1) TECH incentives can be layered onto Single Family program incentives for heat pump projects
- 2) Incentives in this program will be highest for "hard to reach customers"- when combined with TECH incentives, 3C-REN expects the most or all heat pump costs to be offset



3C-REN: Serving Multifamily Properties



HOME ENERGY SAVINGS

- Whole-building energy efficiency rebate program
- Multifamily properties with 5 or more units located in San Luis Obispo, Santa Barbara, and Ventura Counties are eligible to participate
- Rebates of up to \$750 per apartment unit, plus rebate "adders" of up to \$1000 per unit for heat pump technology

How it works:

- 1) Multifamily property owners participate in assessments to identify energy upgrades and qualify for incentives
- 2) Owners work with contractors of their choice to implement energy upgrades identified in assessment
- 3) Owners are paid incentives directly based on whole property upgrades

How it relates to TECH

- 1) Property owners will be paid incentive "adders" for heat pumps
- 2) TECH incentives can be layered in the Multifamily program incentive structure
- 3) Property owners may look to TECH contractors to install heat pumps

3C-REN: Workforce Training on Heat Pumps & More

- 3C-REN Training Calendar
 - 3c-ren.org/events
- On-Demand Trainings
 - 24 modules with new topics added monthly including:
 - Heat Pump Water Heaters and the Energy Code
 - All Electric ZNE – Heat Pumps and Electric Appliances for Residential and Small Commercial Projects
 - 3c-ren.org/on-demand-trainings
- Energy Code Coach
 - Ask about heat pump requirements and all other Title 24, Part 6 (energy code) and Part 11 (CalGreen) questions
 - Submit online, over the phone, texting, and in-person.
 - 3c-ren.org/codequestion
 - (805) 220-9991

What is a Heat Pump Water Heater?

Electric tank-type water heater with a small motor-driven compressor-refrigerant-evaporator fan unit (i.e. heat pump) that pulls heat from the surrounding air and transfers it to the water.

- Cost effective –‘refrigeration’ system
- Energy efficient –2 to 4 times more efficient than standard electric
- Very easy to install –no flue, no gas piping, no combustion

Video credit: Rheem

HEAT PUMP WATER HEATERS AND THE ENERGY CODE

2019 Energy Code, Heat Pumps, Title 24

Heat Pump Water Heaters and the Energy Code We'll walk through the basics of heat pump water heaters (HPWH) for...

August 31, 2021 Details >

All Electric ZNE – Heat Pumps and Electric Appliances for Residential and Small Commercial Projects

Keep 4 Pillars in Mind:

1. Heat Pumps (not electric-resistance)
2. Reasonable Fenestration
3. Continuous Exterior Insulation
4. Renewable Energy

(And a few additional Design Considerations, too)

BC REN

Watch on YouTube

ALL ELECTRIC ZNE – HEAT PUMPS AND ELECTRIC APPLIANCES FOR RESIDENTIAL AND SMALL COMMERCIAL PROJECTS

Electrification, Heat Pumps

All Electric ZNE – Heat Pumps and Electric Appliances for Residential and Small Commercial Projects Construction in California is moving...

February 23, 2021 Details >



3C-REN: Stay Updated

- Receive 3C-REN's quarterly newsletter and weekly training events updates
 - 3c-ren.org/newsletter
- 3C-REN Multifamily Home Energy Savings Program
 - Find more information and complete an interest form
 - 3c-ren.org/home
- 3C-REN Single Family Home Energy Savings Program
 - Program details coming soon!
 - Contact info@3c-ren.org with questions and look out for program launch details

Sign up for energy news

* Email

First Name

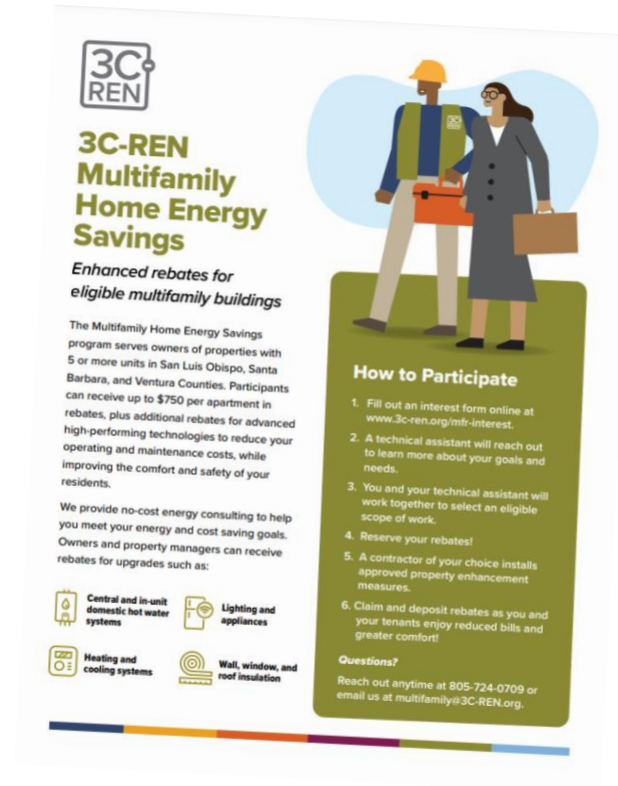
Last Name

* Email Lists

- Quarterly Newsletter
- Weekly Events Update

By submitting this form, you are consenting to receive emails from: 3C-REN, Tri-County Regional Energy Network, 800 South Victoria Ave #1940, Ventura, CA, 93009, US, <http://www.3c-ren.org>. You can revoke your consent to receive emails at any time by using the [SafeUnsubscribe®](#) link, found at the bottom of every email. [Emails are serviced by Constant Contact.](#)

Sign Up!



3C-REN
Multifamily Home Energy Savings

Enhanced rebates for eligible multifamily buildings

The Multifamily Home Energy Savings program serves owners of properties with 5 or more units in San Luis Obispo, Santa Barbara, and Ventura Counties. Participants can receive up to \$750 per apartment in rebates, plus additional rebates for advanced high-performing technologies to reduce your operating and maintenance costs, while improving the comfort and safety of your residents.

We provide no-cost energy consulting to help you meet your energy and cost saving goals. Owners and property managers can receive rebates for upgrades such as:

- Central and in-unit domestic hot water systems
- Lighting and appliances
- Heating and cooling systems
- Wall, window, and roof insulation

How to Participate

1. Fill out an interest form online at www.3c-ren.org/mfr-interest.
2. A technical assistant will reach out to learn more about your goals and needs.
3. You and your technical assistant will work together to select an eligible scope of work.
4. Reserve your rebates!
5. A contractor of your choice installs approved property enhancement measures.
6. Claim and deposit rebates as you and your tenants enjoy reduced bills and greater comfort.

Questions?
Reach out anytime at 805-724-0709 or email us at multifamily@3c-ren.org.



Thank you!

For 3C-REN info:
3c-ren.org

For 3C-REN questions:
info@3c-ren.org

For TECH:
TECH.contractor@energy-solution.com
*New website coming soon



TRI-COUNTY REGIONAL ENERGY NETWORK
SAN LUIS OBISPO • SANTA BARBARA • VENTURA