

California Energy-Smart Homes All-Electric Residential Program Implementation Plan

September 27, 2021





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Program Description

Program Summary



The California Energy-Smart Homes All-Electric Residential program takes an innovative approach to achieving California's advanced energy efficiency policy goals through 2025. The program is available to customers in the Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas and Electric (SDG&E) territories.

The all-electric program will serve the following residential subsectors:



Single family and duplexes



Manufactured housing



Multifamily low-rise (three or fewer stories)



Additions (greater than 700 square feet), alterations, and accessory dwelling units (ADUs)

Innovation

Program Summary



Energy-Smart Homes incorporates the following innovative program design elements:

- Pre-requisite measures to help enable future engagement and further savings
- Advance electrification adoption through performance-based incentives
- Financial assistance for alteration projects

Objectives and Goals

Program Summary



Program Objectives

1

Influence ease adoption of all-electric new construction practices

2

Incorporate grid harmonization and utility communication-enabling measures

3

Shift the market further in favor of all-electric technologies

4

Educate homebuyers on the benefits of an all-electric home

5

Overcome misperceptions about fuel-substitution

Net Savings Goals

MWh

11,443

MW

-0.56

Therms

2,018,727

Eligibility

Program Summary



Project Types

New Construction



Manufactured Housing



Alterations*



**Changes design or technology or completes a replacement of the thermal (space conditioning) components plus at least 75% of the distribution system, Removes gas meters (but not natural gas piping infrastructure)*

Participation Requirements

- Receive electric service from PG&E, SCE, or SDG&E and pay the Public Purpose Program Charge
- Meet minimum program pre-requisites and energy efficiency requirements
- Not receive incentives for the same measures or scope of work from other public purpose programs
- Adhere to all applicable federal, state, and local laws and code

Customer Services

Program Delivery



Objectives

- Enroll participants in program
- Equip stakeholders to understand program value and advocate for participation
- Engage projects serving hard-to-reach and disadvantaged communities to represent 20% of program portfolio dwelling units

Tactics

- Develop comprehensive marketing and education materials
- Leverage existing relationships to educate and recruit participants

Customer Services

Program Delivery



**Target Market
Actors and
Stakeholders**

**Builders/
Developers**

**Energy
Consultants**

**Design
Teams**

Factories

Retailers

**Park
Property
Owners and
Managers**

Homeowners

Contractors

**Property
Managers/
Owners**

Residents

Hard-to-Reach and Disadvantaged Communities

Program Delivery



Energy-Smart Homes will target to achieve 20% of the program dwelling units and savings from hard-to-reach (HTR) and disadvantaged community (DAC) populations based on the following criteria:

- TCAC/HCD Opportunity Mapping
- CalEnviroScreen Pollution Burden Indicators
- Income
- Language
- Geography



New Construction Measures

Program Delivery

Single family (excluding ADUs and additions), duplex, and multifamily low-rise prerequisites:

- Communicating thermostats
- Segregated circuits
- Electric vehicle charging infrastructure pre-wiring
- Battery storage readiness
- Thermostatic mixing valves

New construction projects must achieve an **energy efficiency delta EDR of ≥ 1** .

Manufactured Housing Measures

Program Delivery



Manufactured housing projects must achieve either certification:



ENERGY STAR v.2 (tier 1) or



NEEM+ (tier 2)

Manufactured housing homebuyers will receive additional incentives for installing HP technology in lieu of electric resistance.

Manufactured housing projects will be eligible for program participation following approval of deemed savings workpaper.



Alterations Measures

Program Delivery

Alterations to existing single family, duplex, and multifamily low-rise projects require:

- Conversion of all gas appliances and equipment to electric systems including:
 - Heat pump space heating (required and incentivized)
 - Heat pump water heating (required and incentivized)
 - Induction cooktops (required, not incentivized)
 - Heat pump clothes dryers (incentivized, not required)
- Changes in design or technology, or a complete replacement of the thermal (space conditioning) components plus at least 75% of the distribution system

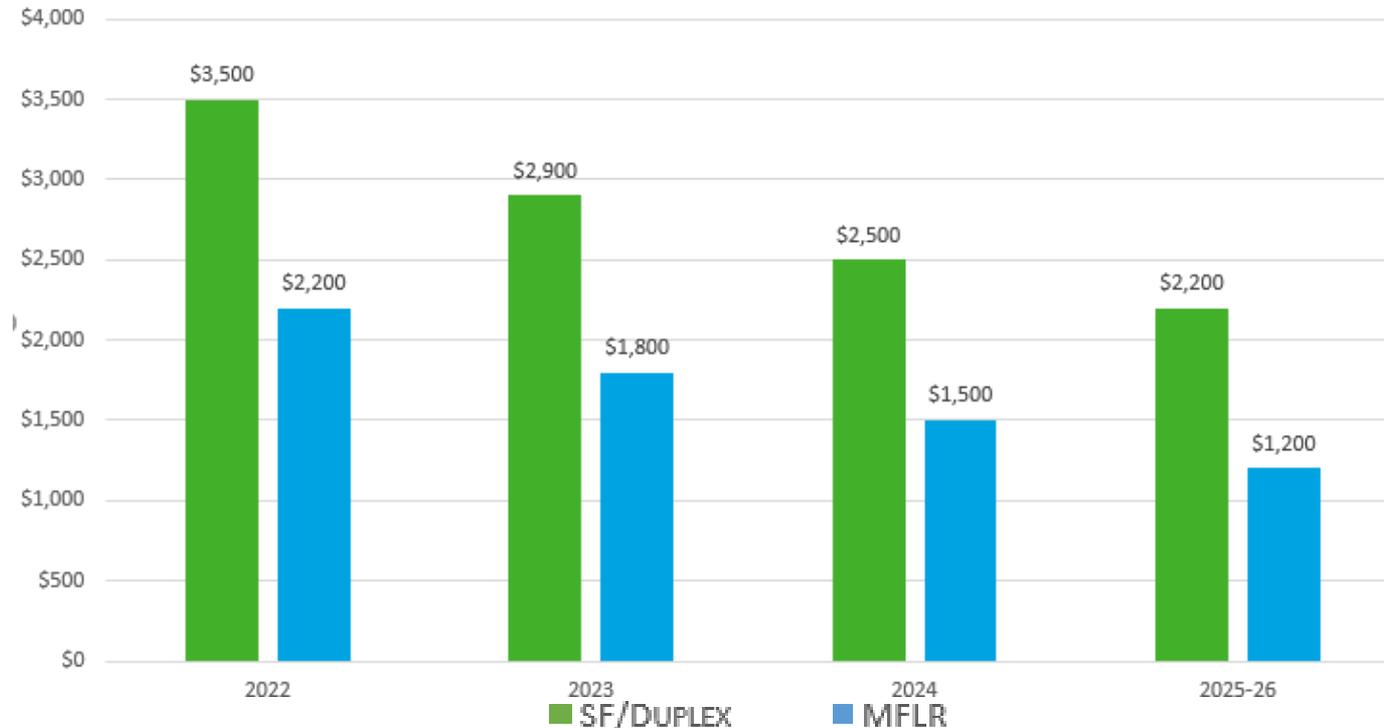
New Construction Incentives

Program Delivery



- Entry Delta Eff. EDR ≥ 1.0
- De-escalating base incentives, based on completion year
- Bonus incentives for each 0.1 delta efficiency EDR over 1.0 (\$10 for SF/Duplex and \$5 for MFLR)

NEW CONSTRUCTION INCENTIVES



Manufactured Housing Incentives

Program Delivery



Incentive Type	Certifications and Measures	Incentive
Base Incentive	ENERGY STAR	\$1000
	NEEM+	\$1,500
Bonus Incentives	HP Space Heating	\$250
	Ductless HP Space Heating	\$500
	HP Water Heating	\$500

Manufactured housing projects will be eligible for program participation following approval of deemed savings workpaper.

Alterations Incentives

Program Delivery



Measure	Workpaper	Incentive
Heat Pump Clothes Dryer Replacing Gas Clothes Dryer	SWAP014-01 (https://www.caetrm.com/measure/SWAP014/01/)	\$500 per heat pump dryer
Ductless Mini-Split Heat Pump (SEER 15 to SEER 18, HSPF 8.5 to HSPF 8.8)	SWHC044-01 (https://www.caetrm.com/measure/SWHC044/01/)	\$325 per ton for MFLR buildings
Residential Central Heat Pump Replacing Residential Split Air Conditioner and Furnace	SWHC045-01 (https://www.caetrm.com/measure/SWHC045/01/)	\$90 per ton for SF homes
Heat Pump Water Heater Replacing Storage or Tankless Natural Gas Water Heater	SWWH025-02 (https://www.caetrm.com/measure/SWWH025/02/)	\$450 per HPWH

Process Flow

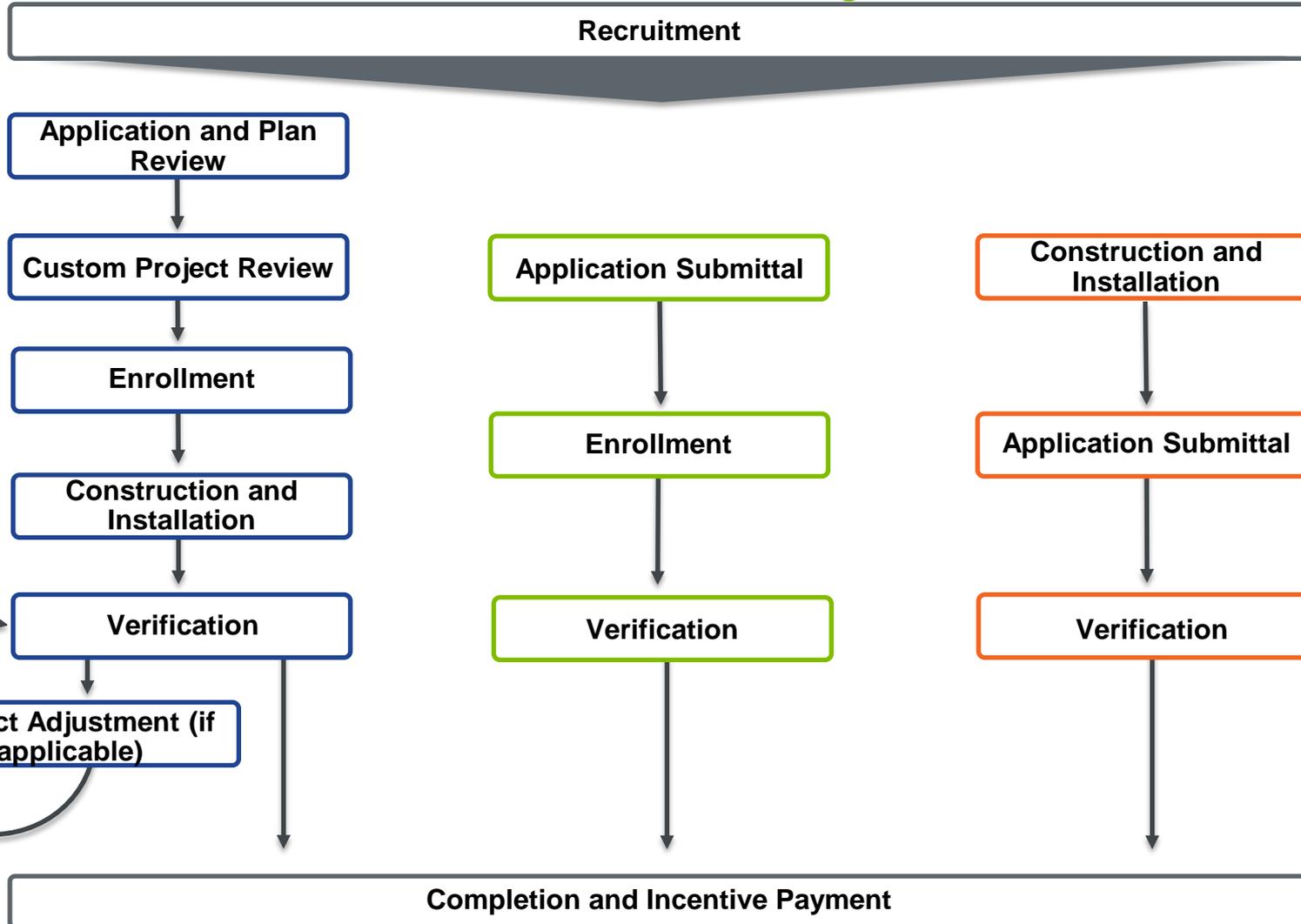
Program Delivery



New Construction

Manufactured Housing

Alterations



Quality Assurance

Program Delivery



APPLICATION AND PLAN REVIEW

Review application documents and energy models, verify project eligibility, confirm HERS registry completion



CUSTOM PROJECT REVIEW

Send projects to PG&E through approved data transfer protocols for review and approval prior to enrollment



QC PROJECT LIST

Maintain list of potential QC projects for extraordinary energy features, questionable energy modeling changes, indications that project cannot meet approved energy efficiency levels



INSTALLATION CONFIRMATION

Confirm non-HERS measure installation via written form that rater signs and submits



FIELD VERIFICATION

Complete site visits on 15% of all lots completing in a given year, complements and leverages official HERS verification process



Metrics

Program Delivery

- Project energy savings (kWh, KW, therms)
- Program cost-effectiveness
- Actual savings vs. goal
- Budget spent
- Savings to budget alignment
- Customer satisfaction by IOU territory
- Savings forecast accuracy
- Engineering quality
- Measure installation pass rate
- Project data completeness
- Customer and builder diversity

Milestones and Timelines

Phase	Key Deliverables/ Milestones	Dates/Duration
Launch Readiness	Implementation Plan Program Management Plan Program Materials	Aug. 26-Dec. 31, 2021
Program Launch	Program Available to Customers	Jan. 1, 2022
Program Ramp Up	Marketing Plan Implemented Pipeline Development	NC: Jan. 1-Jun 30, 2022 ALT:Jan. 1-Mar 31, 2022
Program Steady State	1. Energy Savings 2. Customer Satisfaction Report 3. Savings Forecast Accuracy-Monthly Forecast 4. Custom Project Reviews 5. Measure Install Pass Rate Report 6. Monthly Pipeline Report 7. Monthly Program Tracking Data Upload to EI 8. Quarterly Calculated Program TRC and PAC 9. Customer Diversity	NC: Jul 1, 2022-Dec 31, 2024 ALT:Apr 1, 2022-Dec 31, 2025
Program Ramp Down/Transition	Program Ramp-Down Plan Program No Longer Available to Customers	NC: Jan. 1, 2025-Dec 31, 2026 ALT: Jan. 1-Dec 31, 2026 Dec. 31, 2026
Measurement & Payment	Final Program Report and Invoice	Jan 1-Mar 31, 2027

Questions?

