Southern California Edison

Implementation Plan

Heat Pump Water Heater Program

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1. Program Overview

Southern California Edison's Heat Pump Water Heater (HPWH) Program is a utility-administered energy efficiency program designed to increase the adoption of heat pump water heaters by replacing existing gas water heaters across SCE's service territory. The program initially focuses on the non-residential sector to capture higher system benefits per installation, with a phased expansion to residential customers once delivery performance and costs are validated. HPWH installations are delivered by trained and qualified third-party contractors under SCE oversight, ensuring adherence to manufacturer guidelines and high installation quality. By administering the program internally and covering full/reduced costs—including equipment, installation, and necessary electrical and ventilation upgrades—the program removes key adoption barriers while delivering strong cost-effectiveness and Total System Benefits (TSB).

2. Program Attributes

Budget and Savings		Information
1	Program Name	Heat Pump Water Heater Program
2	Program ID Number	TBD
3	Program Implementer	SCE
4	Portfolio Administrator	SCE
5	Program Implementer Type (IOU Core, Third-Party Solicited, REN/CCA)	IOU Core
6	Portfolio Segment (Resource Acquisition, Equity, Market Support, or Codes and Standards)[1]	Resource Acquisition
7	Total Program Budget	$54,500,000
8	Program Budget by Year	2026 - $TBD 2027 - $TBD 2028 - $TBD 2029 - $TBD
9	Program Duration (Start Date – End Date)	07/01/26 – 12/31/29
10	Total System Benefit (TSB) (Total Program TSB and TSB by Program Year)	2026 - $TBD 2027 - $TBD 2028 - $TBD 2029 - $TBD Total - $TBD
11	CO_2 (Lifecycle, First Year, Net, Gross)	Lifecycle - TBD Tons (CO2) First Year – TBD Tons (CO2) Net – TBD Tons (CO2) Gross – TBD Tons (CO2)
12	kW (First Year, Net, Gross)	First Year – TBD Net – TBD Gross – TBD
13	KWh (Lifecycle, First Year, Net, Gross)	Lifecycle (Net) – TBD Lifecycle (Gross) – TBD First Year (Net) – TBD First Year (Gross) – TBD
14	Therms (Lifecycle, First Year, Net, Gross)	Lifecycle (Net) – TBD Lifecycle (Gross) – TBD First Year (Net) – TBD

[1] D.21-05-031 Ordering Paragraph 2.

Budget and Savings		Information
		First Year (Gross) – TBD
15	Program Cost Effectiveness: Total Resource Cost (TRC): (Total TRC and TRC by Year)	2026 – TBD 2027 – TBD 2028 – TBD 2029 – TBD Total – TBD
16	Program Cost Effectiveness: Program Administrator Cost (PAC): (Total PAC and PAC by Year)	2026 – TBD 2027 – TBD 2028 – TBD 2029 – TBD Total – TBD
17	Market Sector(s) (i.e., Residential, Commercial, Industrial, Agricultural, Public or Cross-Cutting; if multi-sector, provide estimated % of the total budget for each sector)	Commercial (TBD%) Industrial (TBD%) Residential (TBD%)[2]
18	Program Type (i.e., Non-Resource, Resource)	Resource
19	Delivery Type(s) (i.e., Upstream-Manufactured, Midstream-Distributor, Midstream-Retail, Downstream, Downstream - Direct Install,[3] Codes & Standards[4])	Downstream
20	Intervention Strategies (e.g., Strategic Energy Management [SEM], Market Access Program [MAP], Direct Install, Incentive, Finance, Audit, Technical Assistance, Advocacy, Training, Marketing and Outreach, etc.)	Incentive
21	M&V Methods (e.g., Deemed, Custom, NMEC – Population, NMEC – Site, SEM M&V, Randomized Controlled Trial [RCT], Other [if applicable, describe other M&V method])	Deemed

3. Implementer Plan Narrative

1. Program Description

Program Description

Southern California Edison's Heat Pump Water Heater (HPWH) Program is a utility-administered energy efficiency program designed to increase the installation of heat pump water heaters replacing existing gas water heaters across SCE's service territory. The program delivers high-quality, cost-effective installations through trained and qualified third-party contractors under direct SCE administration and oversight. The program initially targets the

[2] Percentage distribution are estimates and subject to change.
[3] https://cedars.sound-data.com/deer-resources/deemed-measure-packages/guidance/.
[4] Database for Energy Efficiency Resources (DEER) 2026 Delivery Types.

non-residential sector, with a phased expansion to residential customers once delivery performance and cost stability are demonstrated.

Primary Purpose
The HPWH Program is a resource acquisition program intended to deliver measurable energy savings and TSB through the installation of high-efficiency HPWH measures. The program is designed to generate significant portfolio value by prioritizing installations that yield higher system benefits, particularly in the non-residential sector.

Rationale
SCE identified a need for a utility-administered HPWH program to create a durable, scalable pathway for building electrification and supporting long-term decarbonization. By administering the program internally, SCE can ensure continuity of HPWH delivery, directly manage costs and incentives, and reduce administrative overhead associated with traditional third-party implementation models. This approach allows SCE to reinvest administrative savings into customer value while maintaining strong cost-effectiveness and mitigating the risk of future delivery disruptions.

Program Objectives
The objectives of the HPWH Program are to:

1. Increase adoption of HPWH technology by removing/reducing key customer barriers, including upfront costs, electrical upgrades, and ventilation requirements.
2. Deliver high-quality, code-compliant installations through trained and qualified contractors, supported by SCE quality assurance and inspection activities.
3. Maximize portfolio value and TSB by prioritizing non-residential installations with higher per-unit system benefits.
4. Maintain continuity and stability of HPWH delivery within SCE's energy efficiency portfolio as market offerings and third-party programs evolve

[Describe the program, its primary purpose (resource acquisition, equity, market support, or codes and standards), rationale, and objectives.]

2. Performance Tracking

Key Performance Indicators	
Metric	**Numeric Target**
Actual/forecasted HPWH units installed (Yr 1 / Yr 2 / Yr 3+)	250 / 500 / 1000+
Actual/forecasted TSB to date ($)	TBD
Actual/forecasted energy savings (kWh)	TBD

Key Performance Indicators	
Metric	**Numeric Target**
Actual/forecasted demand savings (kW)	TBD
Actual/forecasted gas savings (therms)	TBD
Actual/forecasted TRC	TBD
Total incentive budget reserved ($)	TBD
Payments to Trade Pros to date ($)	TBD

[List the contractual targets and the associated numeric values used to quantify and track program progress and success. This includes TSB for all relevant programs. The contractual targets may include the common metrics,[5] equity and market support indicators,[6] and for RENs, unique value metrics,[7] as relevant.

Examples of indicators used to track program progress:

- Forecasted TSB to date ($)
- Actual/forecasted peak demand savings (kW)
- Actual/forecasted energy savings (kWh)
- Total incentive budget reserved ($)
- Payments to aggregators to date ($)]

3. Program Delivery and Customer Services

Program Delivery

Program Strategies and Tactics

The Heat Pump Water Heater (HPWH) Program is delivered through a utility-administered model in which Southern California Edison (SCE) directly oversees program design, delivery requirements, incentives, and quality assurance. The program leverages third-party contractors as the primary delivery channel while eliminating the need for a traditional program implementer, reducing administrative overhead and lowering cost per installation. SCE actively supports the

[5] D.18-05-041, Attachment A
[6] D.23-06-055, pages 59-65, Conclusion of Law 36
[7] D.19-12-021, pages 2, 23

development of a qualified contractor pool through required training and oversight, ensuring installations meet manufacturer guidelines and program standards.

Delivery Type

- Delivery Channel: Trained and qualified third-party contractors
- Administration: Utility-administered (SCE internal administration)
- Installation Model: Contractors act as the customer's authorized agent to perform field work
- Quality Control: Installations are subject to SCE review and/or inspection prior to payment

Targeted Market and Customer Group

- Primary Target (Initial Phase): Non-residential customers within SCE's service territory
- Future Phase: Residential customers, contingent on validated delivery performance, cost stability, and market response

The initial non-residential focus is driven by higher portfolio value and system benefits per installation and by the presence of significant customer adoption barriers in this segment.

Customer Reach and Acquisition Strategy

SCE will actively market the program to develop a pool of qualified HPWH contractors, who then serve as the primary interface with customers. Customer-facing marketing channels, messaging strategies, and/or outreach mechanisms to be determined. Customer participation occurs through engagement with participating contractors who deliver program offerings under SCE oversight.

Timeline and Strategy for Customer Acquisition

The program follows a phased ramp-up strategy:

- Initial Phase: Launch focused on non-residential customers
- Ramp-Up: Gradual increase in installations
- Future Expansion: Extend offerings to residential customers

Services, Incentives, and Tools Provided to Participants

Services

- Full installation of heat pump water heaters by trained contractors
- Program-required training for participating contractors
- SCE quality assurance through review and/or inspection of installations

Incentives

- Non-Residential Customers: The program covers the full/reduced installed cost of the HPWH measure, including required electrical upgrades and ventilation modifications
- Residential Customers: Incentive structure to be determined in future phases and informed by program experience and analysis

Tools and Program Support

- SCE-provided training for contractors
- Program requirements and installation standards aligned with manufacturer guidelines
- Inspection and verification processes tied to payment eligibility

[Describe how the EE program will deliver offerings to the market, including program strategies/tactics, delivery types, and targeted market/customer group; how it will reach customers, including those in CPUC-defined underserved, hard-to-reach, and/or disadvantaged communities[8] (if applicable). Describe the timeline and strategy for customer acquisition. Describe all services, incentives and tools that are provided to participants. If applicable, describe planned coordination between this program and other EE programs administered by other PAs in the same sector or segment.]

4. Program Design and Best Practices

Market Barriers

1. **High Upfront Costs**
   Non-residential customers are often reluctant to replace functioning gas water heaters due to the full installed cost of HPWHs, including associated electrical upgrades and ventilation modifications.

2. **Operational Disruption and Perceived Risk**
   Customers perceive fuel-switching water heating technologies as risky due to concerns about installation complexity, operational impacts, and uncertainty around performance.

3. **Delivery and Continuity Gaps in Existing Programs**
   HPWH delivery within the existing energy efficiency portfolio is concentrated in a limited number of delivery pathways that may evolve or sunset, creating risk of future service gaps.

4. **Installation Quality and Consistency Risks**
   Improper installation can reduce performance, persistence, and realization of system benefits, necessitating stronger oversight and quality controls.

Program Strategies and Tactics to Reduce Market Barriers

1. **Eliminating/Reducing Upfront Cost Barriers**
   Strategy: Full/reduced cost coverage for non-residential customers
   - The program covers the full/reduced installed cost of HPWH measures, including necessary electrical upgrades and ventilation modifications.
   - This effectively provides a no- to low-cost installation for non-residential participants, directly addressing the primary financial barrier to adoption.

2. **Reducing Perceived Risk Through Utility Oversights**
   Strategy: Utility-administered program model
   - By administering the program internally, SCE maintains direct control over program

[8] D.23-06-055, Sections 7.2-7.3 and Conclusion of Law 30-33

design, incentive structure, delivery requirements, and quality assurance.
- This structure reduces customer risk by ensuring consistent standards and accountability without reliance on a traditional program implementer.

3. **Ensuring High-Quality Installations**
   Strategy: Contractor training and inspection
   - SCE requires participating contractors to complete an in-depth SCE training program to be eligible for participation.
   - Installations must adhere to manufacturer guidelines and are subject to review and/or inspection by SCE prior to payment to verify compliance and quality.
   - These tactics are intended to improve installation quality, measure persistence, and realization of forecasted system benefits.

4. **Mitigating Delivery Gaps and Market Concentration Risk**
   Strategy: Establishing a utility-administered delivery pathway
   - The program creates a stable, internally administered HPWH delivery channel to support long-term decarbonization.
   - This approach ensures continuity of HPWH delivery as existing portfolio offerings evolve or sunset, reducing long-term market disruption risk.

5. **Phased Market Entry**
   Strategy: Targeted, phased rollout
   - The program initially focuses on the non-residential sector, where higher system benefits per installation are achieved.
   - Expansion to residential customers is deferred, informed by insights gained through non-residential implementation.

Best Practices and Lessons Learned Reflected in the Program Design

Reinvesting Administrative Savings into Customer Value
By eliminating the additional administrative and overhead costs associated with a traditional program implementer, the program reallocates savings directly to customer offerings (e.g., low- to no-cost installations). This aligns with best practices for maximizing cost-effectiveness and TSB.

Prioritizing High-Value Market Segments First
The initial focus on non-residential customers reflects an application of portfolio optimization lessons—prioritizing measures and segments that deliver higher system benefits before scaling more broadly.

Emphasis on Installation Quality and Persistence
Requiring training, adherence to manufacturer guidelines, and inspection prior to payment reflects best practices aimed at reducing performance degradation and ensuring forecasted savings and benefits are realized over time.

[Describe the specific program strategies/tactics to reduce the identified market barriers for the targeted customer group and/or market actor(s) to achieve program goals and objectives. Describe how the program approach constitutes “best practices” and/or incorporates “lessons

learned." Include descriptions of key software tools that are significant to program strategy and implementation, including audit tools. Provide references where available.]

5. Innovation

Not applicable.

[(Required for all IOU EE programs designed and implemented by a third party.)[9] Describe the innovative elements that have been incorporated into the program, i.e., advancing a technology, marketing strategy, or delivery approach in a manner different from previous efforts.[10] Explain how these will improve program outcomes and if relevant, minimize lost opportunities for promoting other integrated demand side management (IDSM) energy reduction efforts. Describe how the performance of these innovative elements will be measured or assessed.]

6. Pilots

Not applicable.

[If applicable, describe any pilot elements or projects that are part of this program, including what is being tested and why and addressing the potential for successes to be identified, replicated and scaled more broadly. Describe how lessons learned in the pilot will be gathered, applied, and shared.]

7. Workforce Education and Training (WE&T)[11]

Not applicable.

[(Applicable to WE&T programs only.) Describe how the program will support workforce, education, and training to:

a. Expand/initiate partnerships with entities that do job training and placement.

b. Require placement experience for any new partners in the workforce, education, and training programs and new solicitations.

c. Require "first source" hiring from a pool of qualified candidates before looking more broadly, beginning with self-certification; and

Facilitate job connections by working with implementers and contractor partners and utilizing energy training centers.]

8. Workforce Standards[12]

To be determined.

[Identify all relevant workforce standards that the Implementer deems applicable to the program, including any specific skills certification and/or broader occupational training and experience for

[9] D.16-08-019, Section 5.2 and Conclusion of Law 26

[10] See "Innovation and Integrated Demand Side Management (IDSM) References" document at https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/rolling-portfolio-program-guidance

[11] D.18-05-041, Page 20-21 and Ordering Paragraph 7.

[12] D.18-10-008, Ordering Paragraph 1-2 and Attachment B, Section A-B, Page B-1.

the following:

a. HVAC Measures
   i. Installation, modification, or maintenance of non-residential HVAC measures with an incentive of $3,000 or more are required to be installed by workers or technicians that meet one of the following criteria:
      1. Enrolled in and/or completed an accredited HVAC apprenticeship
      2. Completed more than five years of work experience at the journey level per California Department of Industrial Relations definition, passed competency tests, and received specific credentialed training
      3. Has a C-20 HVAC contractor license issued by the California Contractor's State Licensing Board

b. Advanced Lighting Control Measures
   i. Installation of non-residential lighting control measures with an incentive of $2,000 are required to be installed by installation technicians who have completed an International Association of Lighting Management companies (NALMCO) Certified Lighting Controls Professional (CLCP) certification.]

9. Disadvantaged Worker Plan[13]

<Enter description of how the program will encourage aggregators to implement projects that can demonstrate they are using Disadvantaged Workers (DAWs) to install the project here>.

[(Applicable for programs that directly involve the installation, modification, repair, or maintenance of EE equipment.) Describe how the program will provide Disadvantaged Workers with improved access to career opportunities in the EE industry and the method that will be used for tracking this population in order to satisfy metric reporting requirements.]

10. Market Access Programs

Not applicable.

[(Applicable to market access programs only.) Describe how the market access program interacts with the rest of the PA's EE portfolio. Describe the possible impacts with downstream retrofit programs.[14]]

11. Additional Information

Not applicable.

[Describe additional information required by CPUC decision, resolution, or ruling, as applicable. Indicate decision, resolution, or ruling and page numbers.]

[13] D.18-10-008, Attachment B, Section D, page B-9.
[14] D.23-06-055, Ordering Paragraph 26

4. Supporting Documents

1. **Program Manuals and Program Rules**

[The program manual is attached to this implementation plan.]

2. Example of Program Theory and Program Logic Model

Program Theory Statement

The Heat Pump Water Heater (HPWH) Program is based on the theory that high upfront costs, perceived risk, and delivery instability are the primary barriers preventing non-residential customers from adopting HPWH technology. By removing cost barriers, ensuring installation quality through trained contractors, and administering the program directly, SCE can accelerate adoption of HPWHs, deliver reliable energy savings, and generate high TSB while maintaining portfolio continuity.

[Program Theory and Logic Models should visually represent and explain the underlying program design and theory of change, supporting the program intervention approach and strategies and demonstrating how these lead to outcomes.]

3. Example of Process Flowchart

In development.

<Insert process flowchart here – sample process flowchart provided as placeholder>

[Provide a process flow chart that describes the administrative and procedural components of the program. For example, the flow chart might describe how a customer submits an application, how the Implementer screens the application, the application approval/disapproval process, verification of purchase or installation, incentive processing and payment, and any quality control activities.]

4. Measures and Incentives

Measure	Incentive Level
Heat Pump Water Heater, Residential, Fuel Substitution	$TBD
Heat Pump Water Heater, Commercial, Fuel Substitution	$TBD
Large Heat Pump Water Heater, Commercial and Multifamily, Fuel Substitution	$TBD

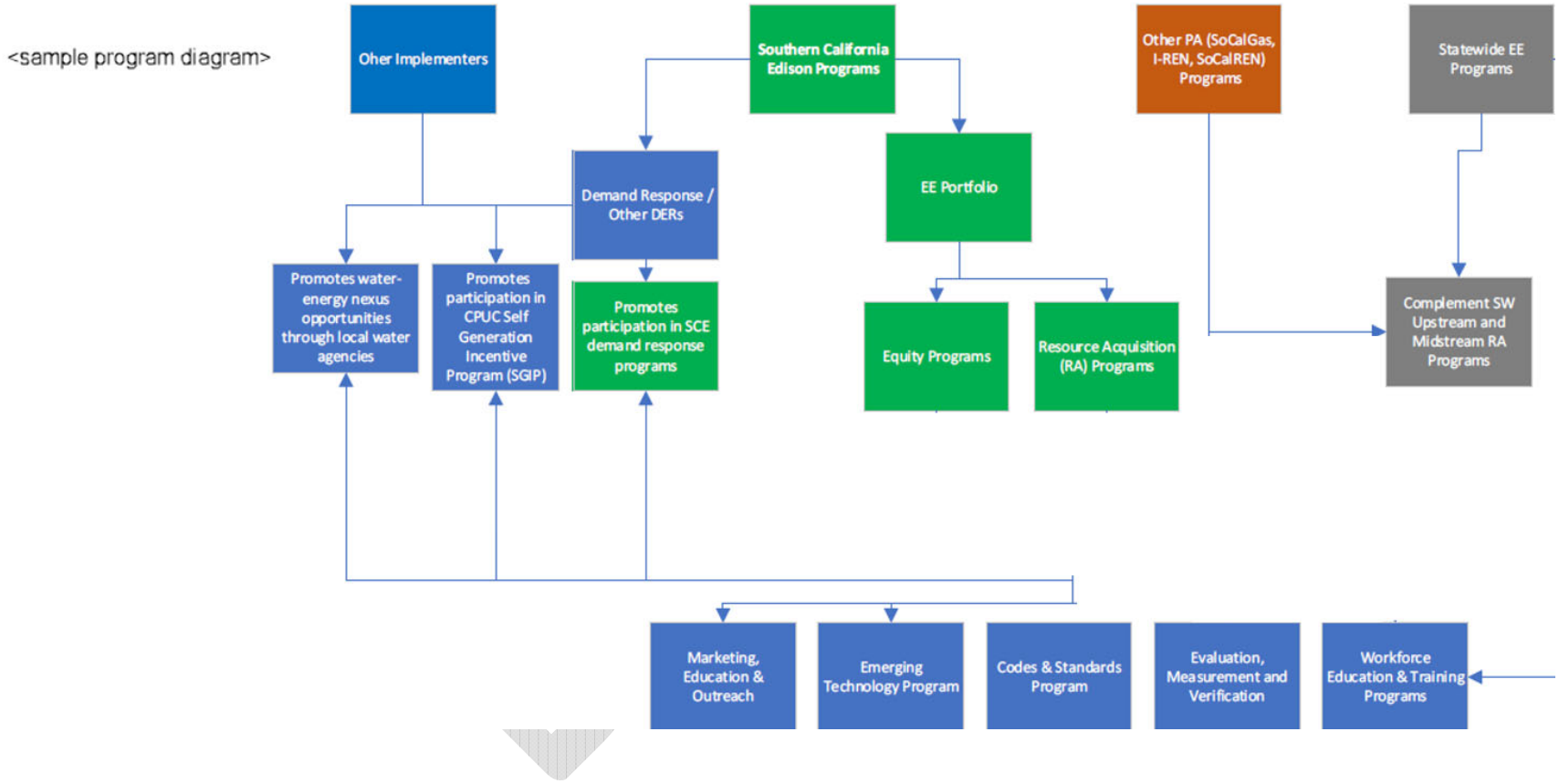
[For deemed measures, provide a summary table of measures and customer incentive levels, along with links to the associated CPUC-approved measure packages.[15] For programs utilizing custom or meter-based methods, list the measures expected to provide the majority of program savings and percent TSB achieved of each.]

[15] See California Electronic Technical Reference Manual (eTRM)

5. Example of Diagram of Program

In development.

<Insert program diagram here – sample diagram provided as placeholder>



6. Program Measurement and Verification (M&V)

In development.

<Enter program M&V information here, as applicable>.

[(Applicable and required for all programs except those solely utilizing NMEC methods, which are addressed in item 7 below.) Describe M&V efforts that the program will execute to evaluate program progress, ensure accurate and compliant assessment and reporting, and provide critical documentation to support ex-post evaluation (EM&V), including:

a. Data collection strategies embedded in the design of the program or intervention to support near-term feedback, and internal performance analysis during deployment.

b. Methods that will be used to quantify and report against the program's performance metrics.

c. Process evaluation, additional data collection and/or other planned efforts supporting future EM&V of the program by independent evaluators.

New downstream Resource Acquisition retrofit programs targeting the residential or commercial sectors that will not utilize a meter-based M&V method (i.e., NMEC, SEM M&V, Randomized Control Trial or other meter-based method) must justify why meter-based methods are not used for feasibility or cost-effectiveness reasons.[16]]

7. Normalized Meter Energy Consumption (NMEC) Program M&V Plan

The M&V plan is attached to this implementation plan.

[If NMEC is applicable, provide a detailed Program-level M&V plan, with required content as specified in the most recently updated NMEC Rulebook.]

8. Multi-DER IDSM Pilots Only[17]

Not applicable.

[Provide the specific ex ante approach, tools, and methodologies to ensure evaluability.]

9. SEM Programs Only

Not applicable.

[Provide additional supporting documents as described in the SEM Program Implementation Plan Checklist (Appendix B).]

[16] D.23-06-055, Ordering Paragraph 20
[17] D.23-06-055, pages 77-80.