
Load Management Standards Compliance Plan

SVCE Executive Committee Meeting
February 2024



Agenda & Purpose of Presentation

Purpose: discuss Load Management Standards Plan (Plan) content for the Executive Committee to consider approval and a recommendation that the Board of Directors adopt the Plan as a consent item at the March Board of Directors meeting.

1. Load Management Standards (LMS) Requirements
2. Context for Discussion and Relationship to Other Activities
3. Overview of Compliance Plan sections
4. SVCE's Efforts to-date
5. Estimating Potential Dynamic Rate Impacts – 4 Perspectives
6. Conclusion and Next Steps



Load Management Standards (LMS) Compliance Plan Requirements

- The LMS require load serving entities to file a plan to the California Energy Commission (CEC) for approval (Compliance Plan)
- The plan must:
 - A. Describe how SVCE plans to meet the 4 load management standards goals:**
 1. Encouraging electricity use during off-peak hours
 2. Encouraging control of daily and seasonal peak loads to improve system efficiency and reliability
 3. Lessening or delaying need for capacity
 4. Reducing fossil fuel consumption and GHG emissions
 - B. Evaluate cost effectiveness, equity, technological feasibility, benefits to the grid, and benefits to customers of marginal cost-based rates for each customer class or programs that enable automated response to marginal cost signals for each customer class**

Context for Discussion

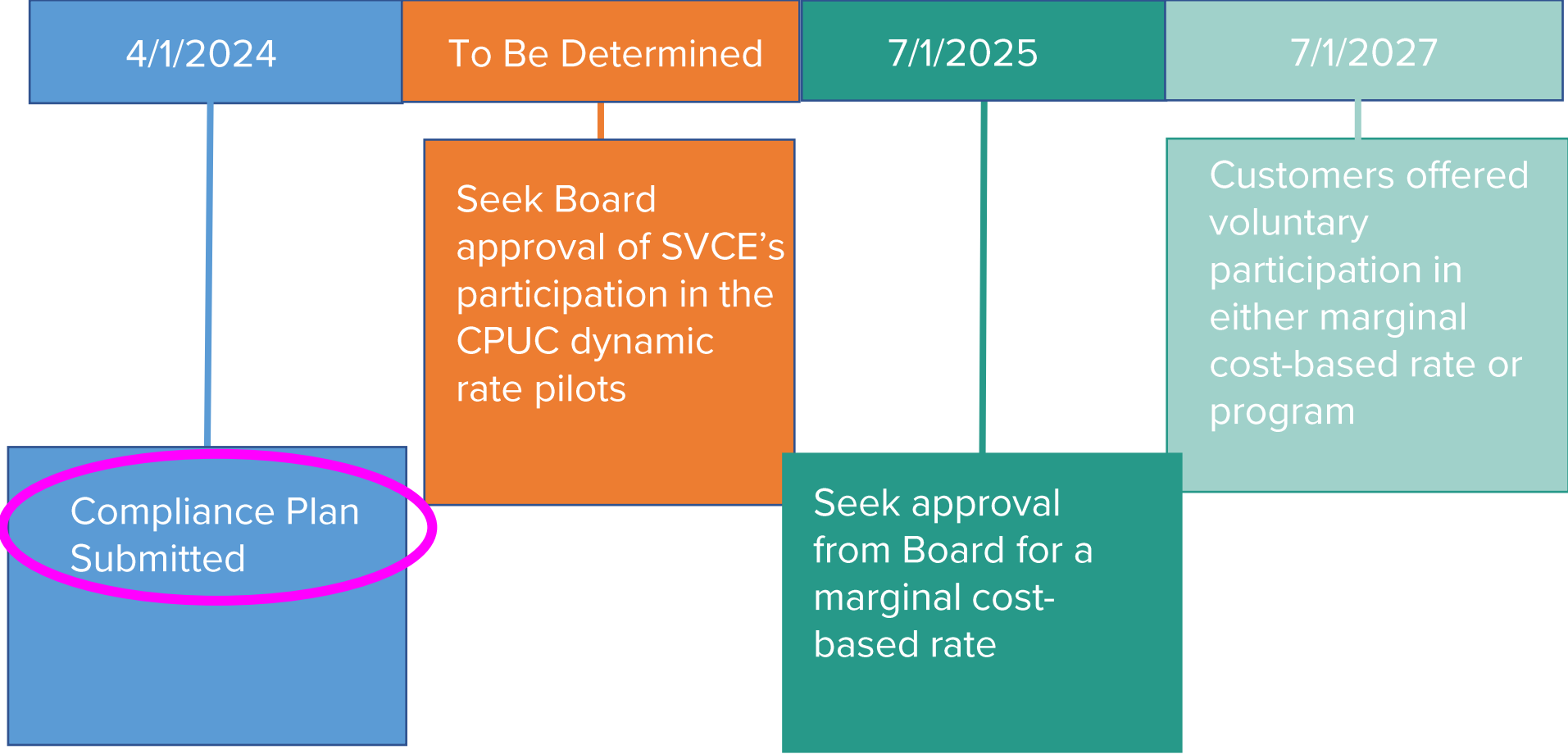
- SVCE is required by the California Code of Regulations Title 20 § 1623.1 to **submit a compliance plan to its rate approving body for adoption**
- The Plan explores marginal cost-based rates and programs that enable customers to meet the Load Management Standards goals but does not commit SVCE to any future course of action, due to the many unknowns surrounding dynamic pricing

Submission of a LMS Plan to SVCE's Board of Directors for adoption is a compliance obligation.



Compliance Plan's Relationship to Other Activities

The Compliance Plan adoption is one part of several future Board actions tied to the Load Management Standards and demand flexibility efforts.





Overview of Compliance Plan Content

SVCE and other load serving entities in learning mode.

1. SVCE's efforts to better match supply and demand to date (existing programs)

2. Estimating potential dynamic rate impacts with the limited information available

3. Status of administrative components that will enable customers to easily access their dynamic rate

4. Resources needed to be able to implement dynamic rates

Many factors affecting SVCE's evaluation of dynamic pricing are in flux.

- CPUC dynamic pricing pilot implementation parameters are changing.
- Tools to support customer dynamic rate enrollment are still in development.
- SVCE's ability to directly influence dynamic rate pricing platforms during and beyond pilots is not known.



Current Efforts to Better Match Supply and Demand

SVCE runs several programs (including rates) to encourage customers to change their demand.

**SVCE's
Lights On
Silicon Valley
Program**



SVCE's Electric Homes Rate (E-ELEC)



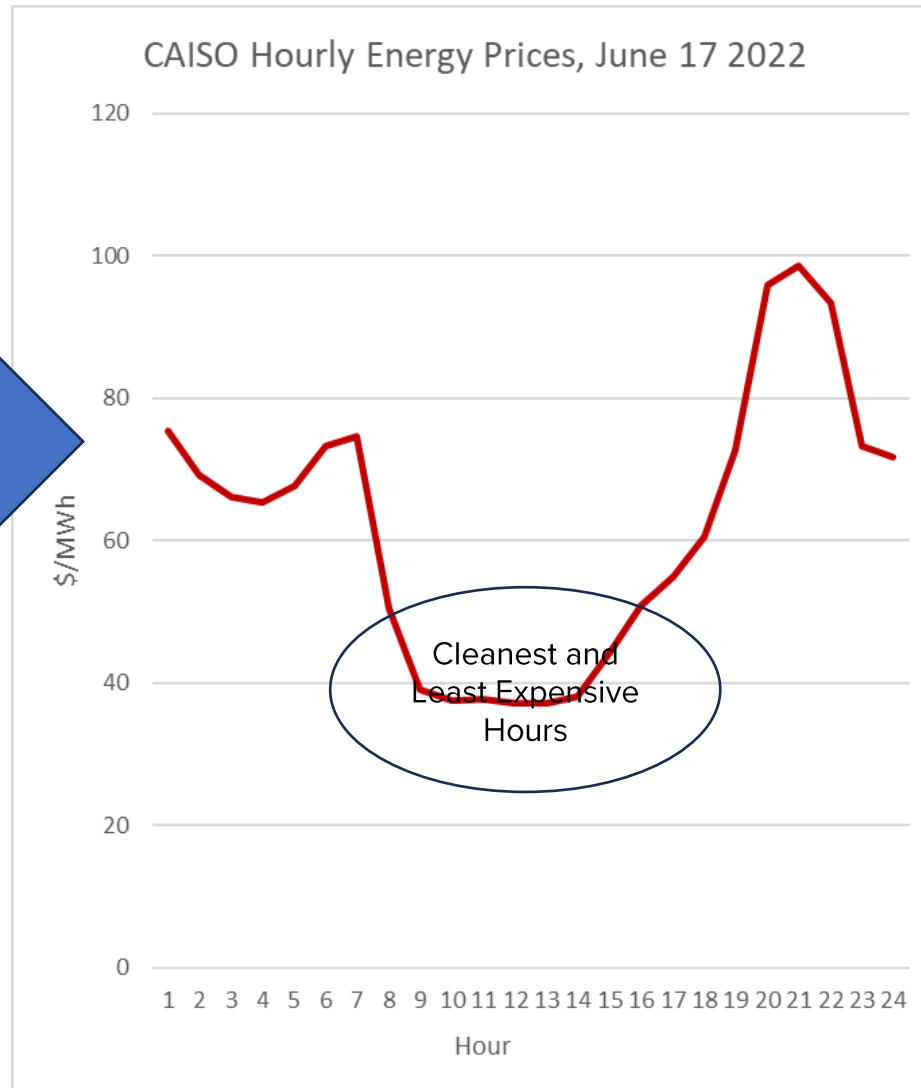
SVCE's GridShift Program





Estimating Potential Dynamic Rate Impacts – Hypothetical Customer Response Scenarios Analyzed

How will
customers
change
load in
response to
hourly price
signals?



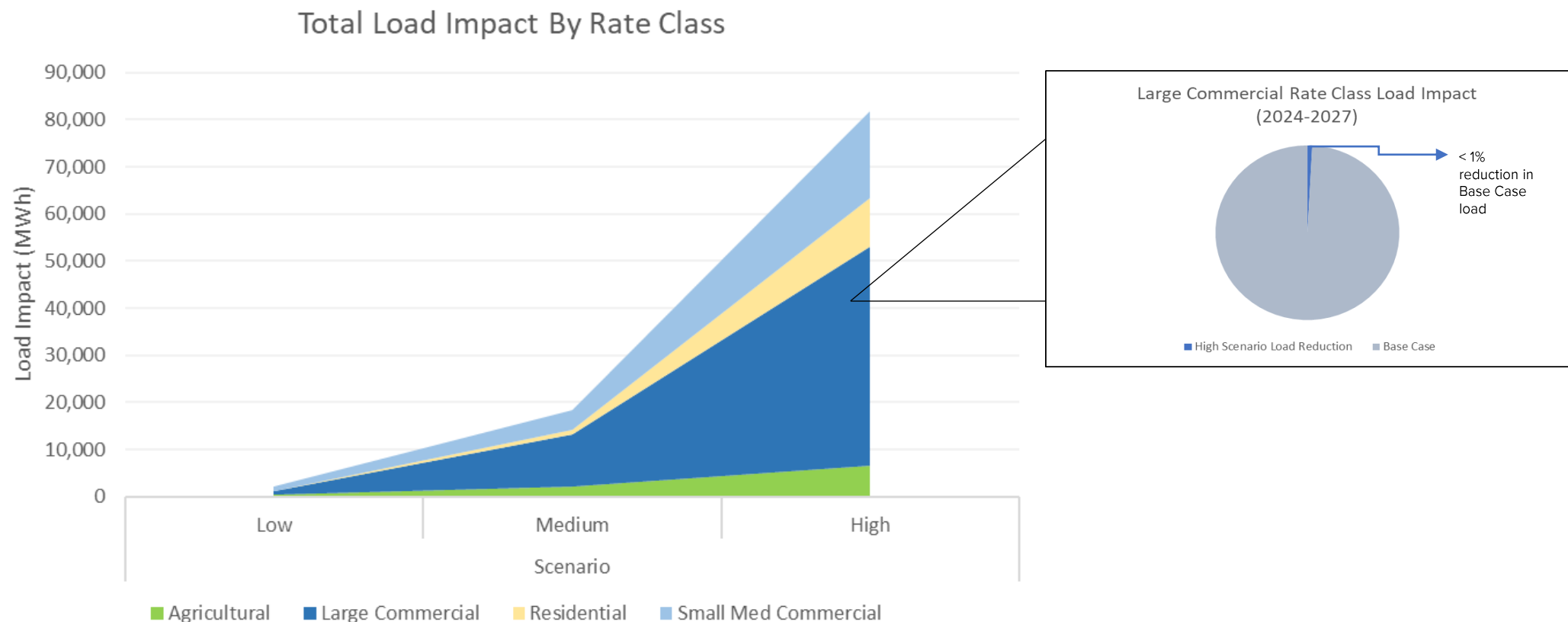
Scenarios analyzed based on customer class participation and incrementally addressable load assumptions:

Scenario	Description
Low	- Based on assessment of SVCE customer class behavior and end uses - Best estimate of realistic load change potential - Conservative customer participation
Medium	Less conservative assessment of participation and load change potential
High	- Based on very robust customer participation and generous load change potential assumptions - Extreme bookend of potential; unlikely to be realized



Estimating Potential Dynamic Rate Impacts – Load Impact Results

Potential impact on load across all customer classes and scenarios expected to be low over the next several years. At most, SVCE expects around 2% of all customers to enroll in dynamic rates.





Estimating Potential Dynamic Rate Impacts – Equity



SVCE has many programs that strive to provide underserved communities with electrification opportunities and tools to change their demand.

- Underserved communities face barriers to benefiting from dynamic rates pilots:
 - Inability to change their energy use to off-peak times due to demanding work schedules
 - Lack of access to smart appliances and automation technology
 - Financial constraints
 - Older homes/rented homes
 - Language barriers



Estimating Potential Dynamic Rate Impacts – Technological Feasibility

Systems and related process issues must be resolved for SVCE to be able to successfully implement hourly rates and or programs that access hourly rates.

1. SVCE must continue to be able to differentiate its pricing and programs from PG&E's offerings
2. CPUC dynamic rate pilots and supporting systems/processes are under development, don't always consider CCA priorities, and appear to require manual/labor-intensive effort
3. Interfacing with California's hourly rate database server (MIDAS) has been challenging





Estimating Potential Dynamic Rate Impacts – Customer Benefits

1. Qualitatively speaking, customer benefits will depend on:
 1. Customer acceptance of the new complex rate structure
 2. Customer access to automation technology
2. The actual rate structures for the CPUC's dynamic rate pilots are still being sorted out
3. SVCE cannot evaluate the customer benefits of dynamic rates without first seeing how customers respond to dynamic rate signals



Concluding Thoughts

By recommending adoption of the SVCE LMS Plan, the Executive Committee will support SVCE's compliance with the Load Management Standards.

1. SVCE is already contributing to meeting the LMS goals through its current program and rate offerings
2. SVCE will continue to encourage the use of energy at off-peak hours to improve the electrical system's efficiency, reliability, and greenhouse gas footprint
3. SVCE will evaluate the outcomes of the CPUC's various dynamic rate pilots





Next Steps and Note About Pilots

- **March 2024** - BOD finalizes adoption of 1st Compliance Plan
- **April 1, 2024** - Plan Submitted to the CEC

SVCE has been working and continues to work with PG&E on dynamic rate pilot implementation details.

Once the pilot structures have been finalized, SVCE staff will share pilot specifics with the Board.

Appendix





Consequences of Noncompliance

CEC Review, Consequences of Noncompliance, and Annual Filings

- CEC will be looking for “good faith efforts” to comply with the regulations
- After reviewing the plan, the CEC may request additional information or recommend changes
- If a load serving entity is noncompliant, then the CEC’s Executive Director may file a complaint with the CEC or seek injunctive relief
 - No citation program in place
- After the 1st submission of the Compliance plan, annual reports demonstrating SVCE’s implementation of the approved plan will need to be submitted



What are the Load Management Standards?

Regulations adopted by the California Energy Commission (CEC) to promote electricity demand flexibility.

Demand flexibility

=

Load flexibility

=

Demand management

=

Demand-side management

The objectives of the Load Management Standards are to:

- Encourage the use of electrical energy during off-peak hours
- Control daily and seasonal peak loads
- Improve equity, efficiency, and reliability
- Lessen/delay need for new electrical capacity
- Reduce fossil fuel consumption
- Reduce greenhouse gas emissions

Demand flexibility can contribute to all three of SVCE's service goals:

- ✓ **Affordable**
- ✓ **Clean**
- ✓ **Reliable**



What are the CPUC Dynamic Rate Pilots?

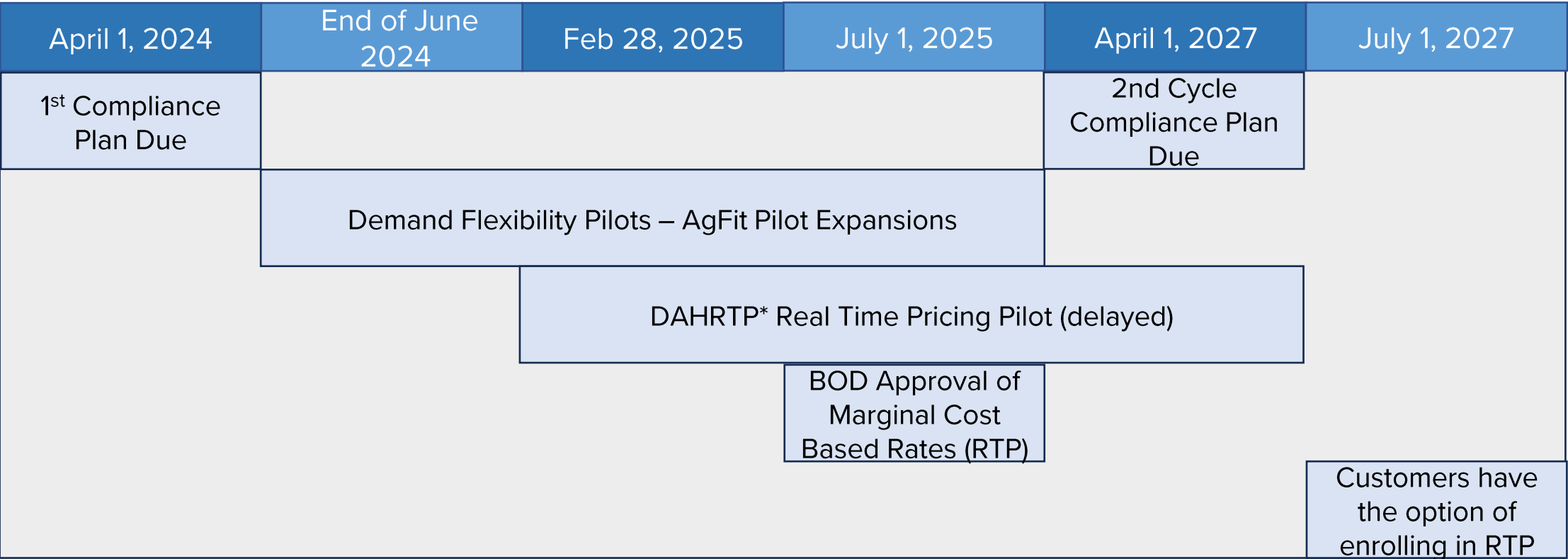
We anticipate very few customers enrolling in these optional hourly rate pilots.

Pilot Category	PG&E Pilot Name	Eligible Customer Classes	Pilot Description	Start Date
Demand Flexibility	PG&E AgPilot	AG-1A, AG-1B, AG-B, AG-C	Pilot incentivizes shifting of agricultural pumping loads	End of June 2024
Demand Flexibility	PG&E Expanded Pilot 2	E-ELEC, B-6, B-10, B-19, B-20, EV2-A, BEV	Pilot incentivizes commercial and industrial customers to shift loads as well as EV owners and electrified residential (E-ELEC)	End of June 2024
DAHRTP	DAHRTP GRC	B-6, B-19, B-20, E-ELEC	Pilot incentivizes commercial and industrial customers to shift loads as well as electrified residential (E-ELEC)	By 2/28/25



Load Management Standards (LMS) Compliance Cycles and Relationship to RTP Pilot Activities

A LMS Compliance Plan must be submitted to the CEC every 3 years.

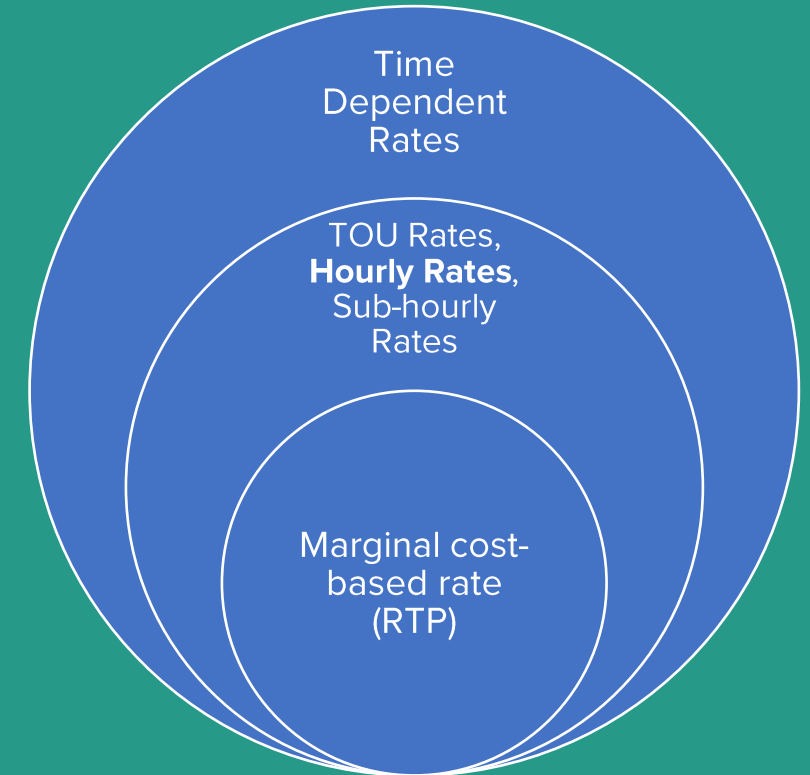


*DAHRTP = Day Ahead Hourly Real Time Pricing



Promoting Demand Flexibility Through Real Time Pricing (RTP)

- **Time-dependent rate** = a rate that can vary depending on the time of day to encourage off-peak electricity use and reductions in peak electricity use
- **Time-of-use (TOU) rate** = a rate with predefined prices that vary according to the time of day, the season and/or the day type (weekday, weekend)
- **Marginal cost-based rate (RTP)** = a rate that accounts for the marginal energy cost, the marginal capacity cost (generation, transmission, and distribution), and any other appropriate time and location dependent marginal costs, including the locational marginal cost of associated greenhouse emissions, on a time interval of no more than one hour





Estimating Potential Dynamic Rate Impacts – Grid Benefits

The electrical grid is built to have enough capacity to meet the peak load on the system.



1. If customer demand can be moved to times when grid conditions are more favorable, or if they can eliminate their demand during a certain period, then this improves reliability on the grid
2. SVCE, customers, and other market participants would benefit from regulations that expand the value associated with daily load flexibility



Status of Administrative Components

SVCE is on track with meeting the two demand flexibility enabling administrative component requirements.

1. Market Informed Demand Automation Server (MIDAS)
 1. Provides access to load serving entities time-varying rates, greenhouse gas emission signals, and CAISO Flex Alerts
 2. SVCE's TOU rates are uploaded to MIDAS and are updated with every rate change
2. Ratepayer Identification Number (RIN) Statewide Tool
 1. Allows for authorized access to rates by third parties to enable device automation responsiveness to pricing signals
 2. SVCE is participating in meeting with other stakeholders to develop the tool

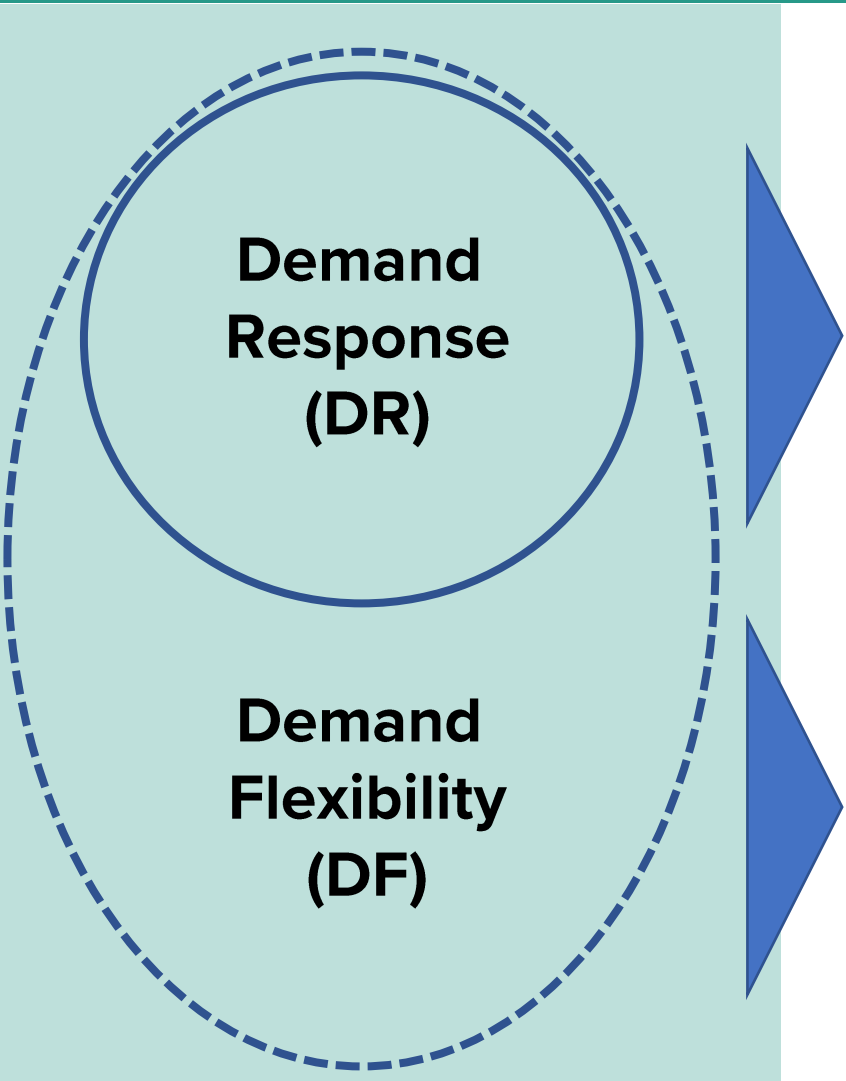


Resources Needed to Implement Dynamic Rates

1. SVCE evaluated the following types of resources that would be needed to support dynamic rates for the 2024-2027 period
 - Labor/staffing
 - Marketing/outreach
 - IT and system needs
 - Customer support
2. SVCE is preparing to support the implementation of dynamic rates



More on Demand Flexibility



**Demand
Response
(DR)**

**Demand
Flexibility
(DF)**

- Demand reduction during a small number of peak hours
- Grid-integrated / RA capacity value
- Well-established customer offerings and business models
- How aggregators make money
- Daily load shifting to lower-cost / cleaner hours
- Potential load modification and energy value for LSEs
- Nascent customer offerings and business models
- CalFUSE vision - RTP and connected devices

Policy Presentation

February 23, 2024



Policy Maintenance

To ensure compliance, good business practices and transparency, policies are approved by the board and shared publicly on our website.

Regular maintenance on these policies is required to ensure continued compliance, adherence and updates as needed.

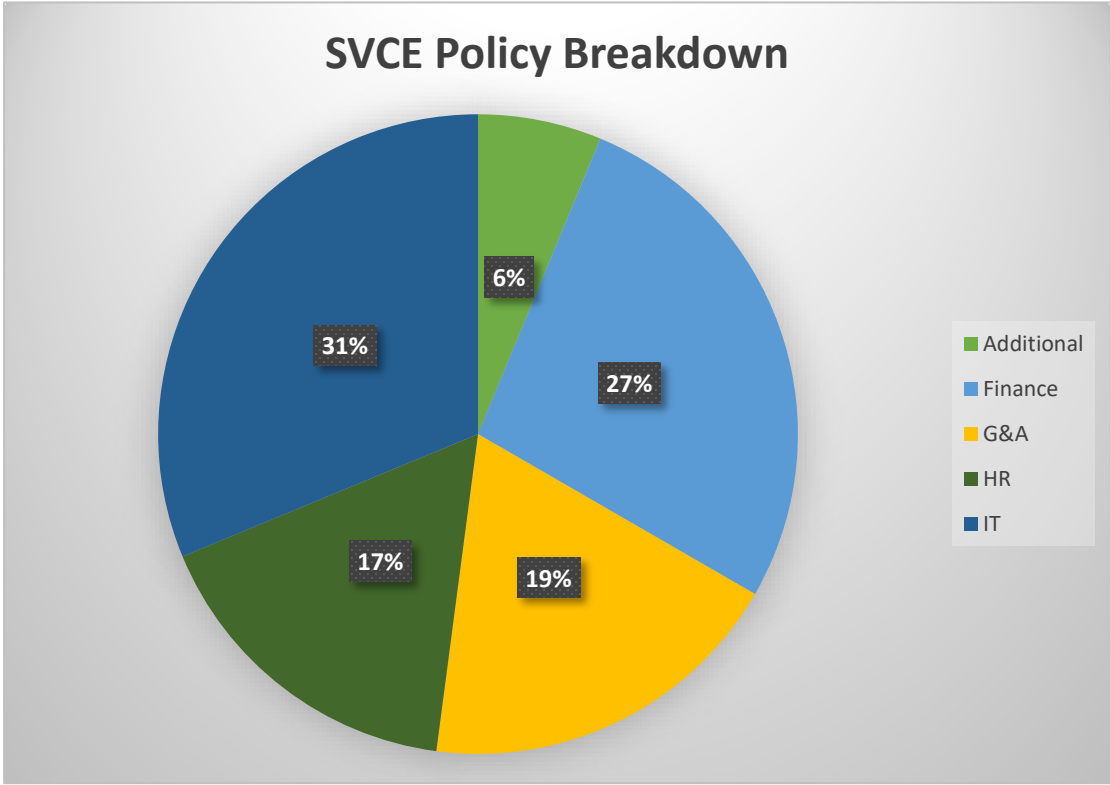
Setting an annual cadence for review & revision, as well as prioritizing time and space for this requirement is a priority



Current Policy Metrics

SVCE’s Public Facing, Board Adopted Policies – Current State

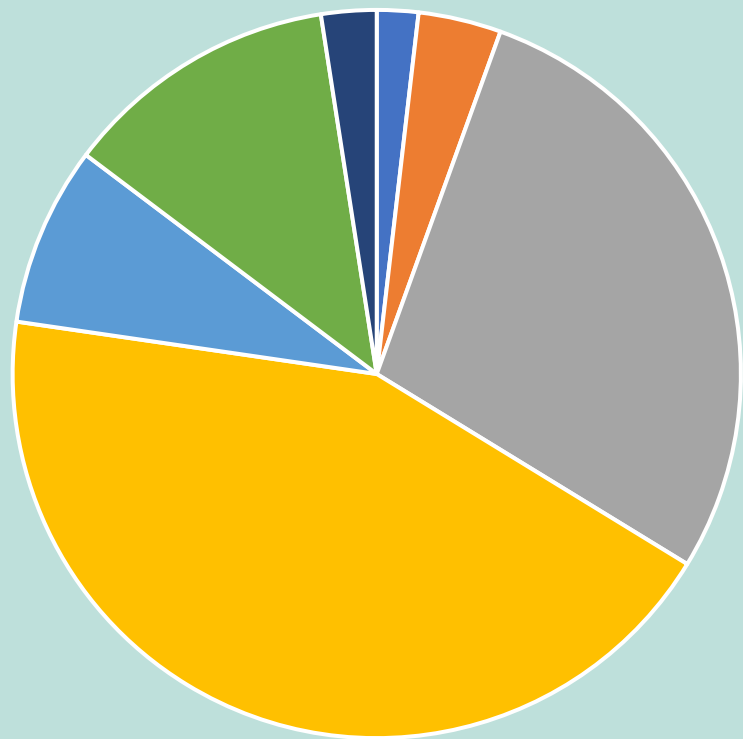
Row Labels	Count of Policies
Additional	3
Finance	13
G&A	9
HR	8
IT	15
Grand Total	48



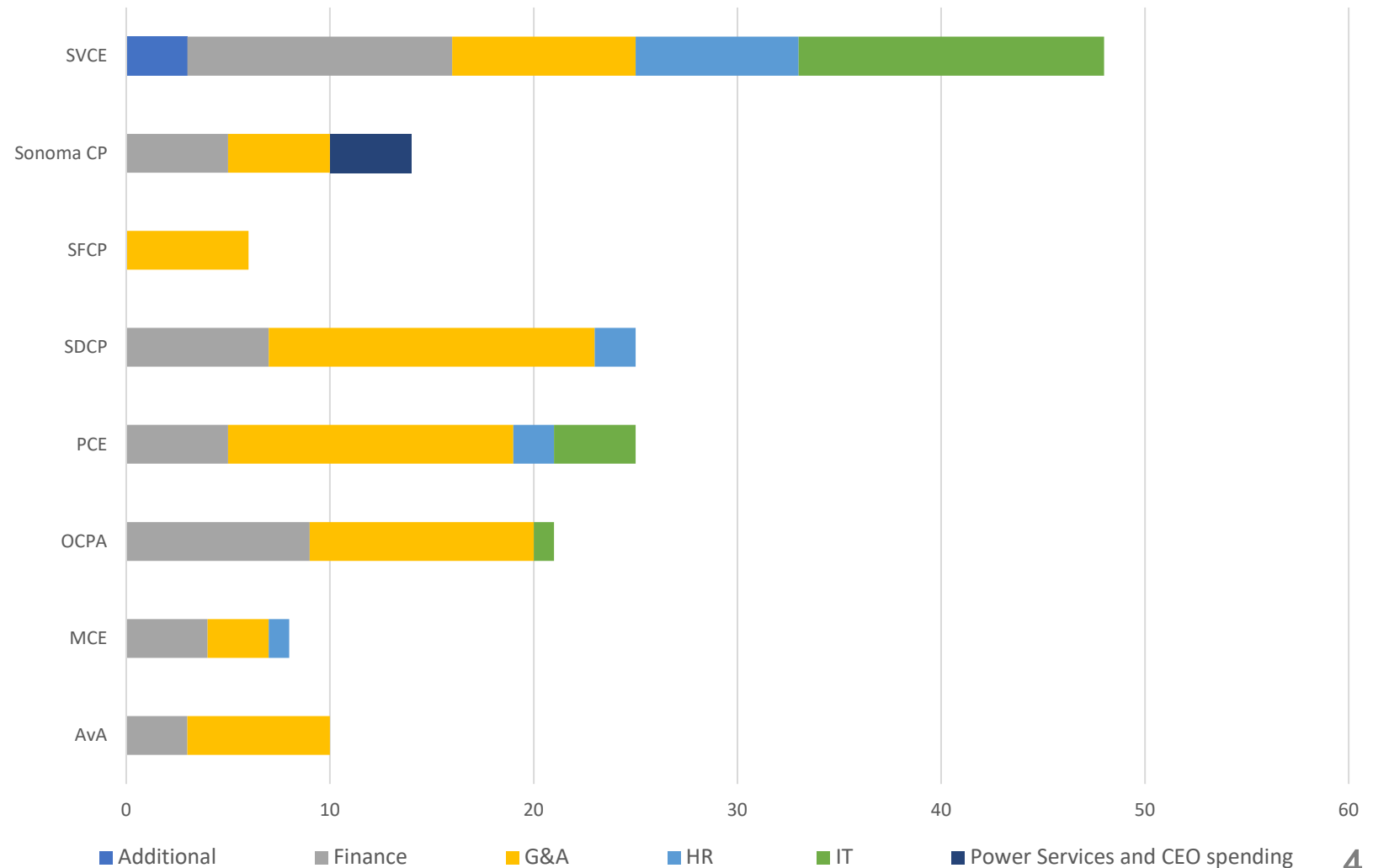


CCA Comprehensive Policy Metrics

Policy Categories



■ Additional
■ Finance
■ HR
■ Power Services and CEO spending
■ Customer Service
■ G&A
■ IT



■ Additional ■ Finance ■ G&A ■ HR ■ IT ■ Power Services and CEO spending

How Many Policies *Should* We Have?

The Right Ones

Policy - a general written document that establishes a standard by which the institution manages its affairs

- **mandates, specifies, or prohibits conduct** in order to enhance the institution's mission, ensure coordinated compliance with applicable laws and regulations, promote operational efficiency, and/or reduce institutional risk
- *Ex: Energy Risk Management, Procurement Policy, Investment, Financial Reserves, Customer Confidentiality*

Policies, Standards and Procedures

Approval	Document	Characteristics
Board	Policy	• Transparency: Public • Purpose: Mandates or prohibits guiding agency standards • Detail: Low • Significant importance (risk, fiscal, customer impact) • Few details on execution
Executive Staff	Standard	• Transparency: workforce • Purpose: Outlines an operational rule, mandate, or expectation • Detail: Medium • May change often under operational authority to keep up with needs
Executive Staff	Procedure	• Transparency: workforce • Purpose: details the means, tools, and process to meet the standard or policy • Detail: Very high • Changes very frequently

Additional	Customer Confidentiality Policy
	Non-Standard Pricing Agreement Policy
	SVCE Risk Management Policy
Finance	Accounting Policy
	Budget Adoption, Control, and Reporting Policy
	Capital Projects Policy
	Capitalization Policy
	Chart of Accounts Policy
	Customer Generation Rates
	Debt Limitations
	Delinquent Accounts & Collections Policy
	Files & Records Management Policy
	Financial Reserves Policy
	Investments Policy
	Purchasing Card Policy
G&A	Purchasing Policy
	California Public Records Act Policy
	CEO Absence Policy
	Chair and Vice Chair Vacancy Policy
	Charging Station
	Code of Ethics
	Hybrid Meetings Policy
	Ticket and Pass Distribution Policy Pursuant to FPPC Regulation 18944.1
	Travel and Meeting Expense Reimbursements for Employee Policy
	Vehicle Use Policy
HR	Cash In Lieu Of Health Benefits
	Fitness Reimbursement Benefit
	Paid Time Off (PTO) Cash-Out Option Policy
	Recruitment Policy
	Smartphone Stipend Policy
	Tuition Assistance Policy
	Unpaid Personal Leave Policy
	Volunteer Time Off Policy
IT	Access Control Policy
	Clean Desk Policy
	Data Breach Policy
	Disaster Recovery Policy
	E-mail Use Policy
	Information Systems Use Policy
	Internet Usage Policy
	IT Asset Management Policy
	IT Satisfaction Policy
	IT Security Plan Policy
	Malware Defense Policy
	Password Protection Policy
	Security Audit Policy
	Threat-Risk Assessment Policy
	Workstation Security for HIPPA Policy

SVCE has 2 to 3
times more
public facing
policies than
other CCAs

Policies, Standards and Procedures

Examples – Future State - HR

Board

Personnel
Authority

Exec Staff

Benefits
Standard

Recruitment
Standard

Exec Staff

Cash in Lieu
Procedure

Fitness
Reimbursement
Procedure

Recruitment
Incentive
Procedure

Policies, Standards and Procedures

Examples – Future State - IT

Board

Information
Technology
Policy

Exec Staff

IT Security
Plan
Standard

Informations
Systems Use
Standard

Exec Staff

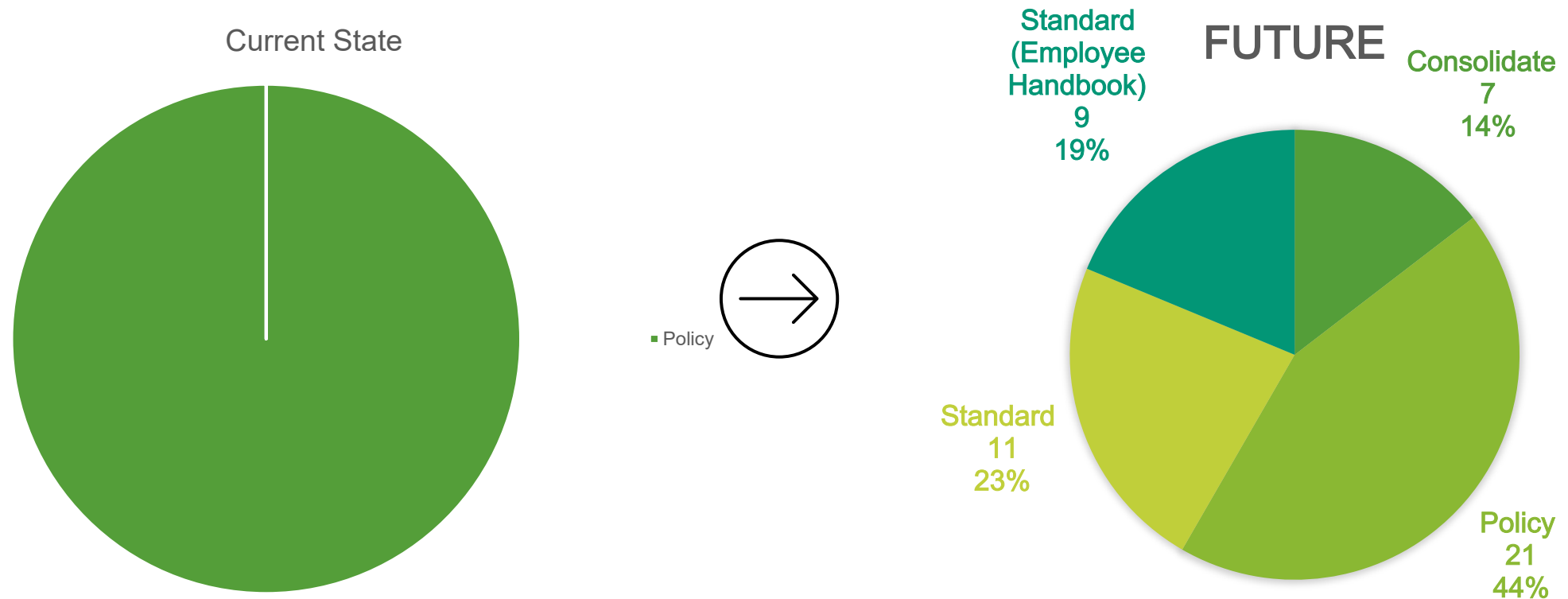
Password
Protection
Procedure

Clean Desk
Procedure

Email Use
Procedure

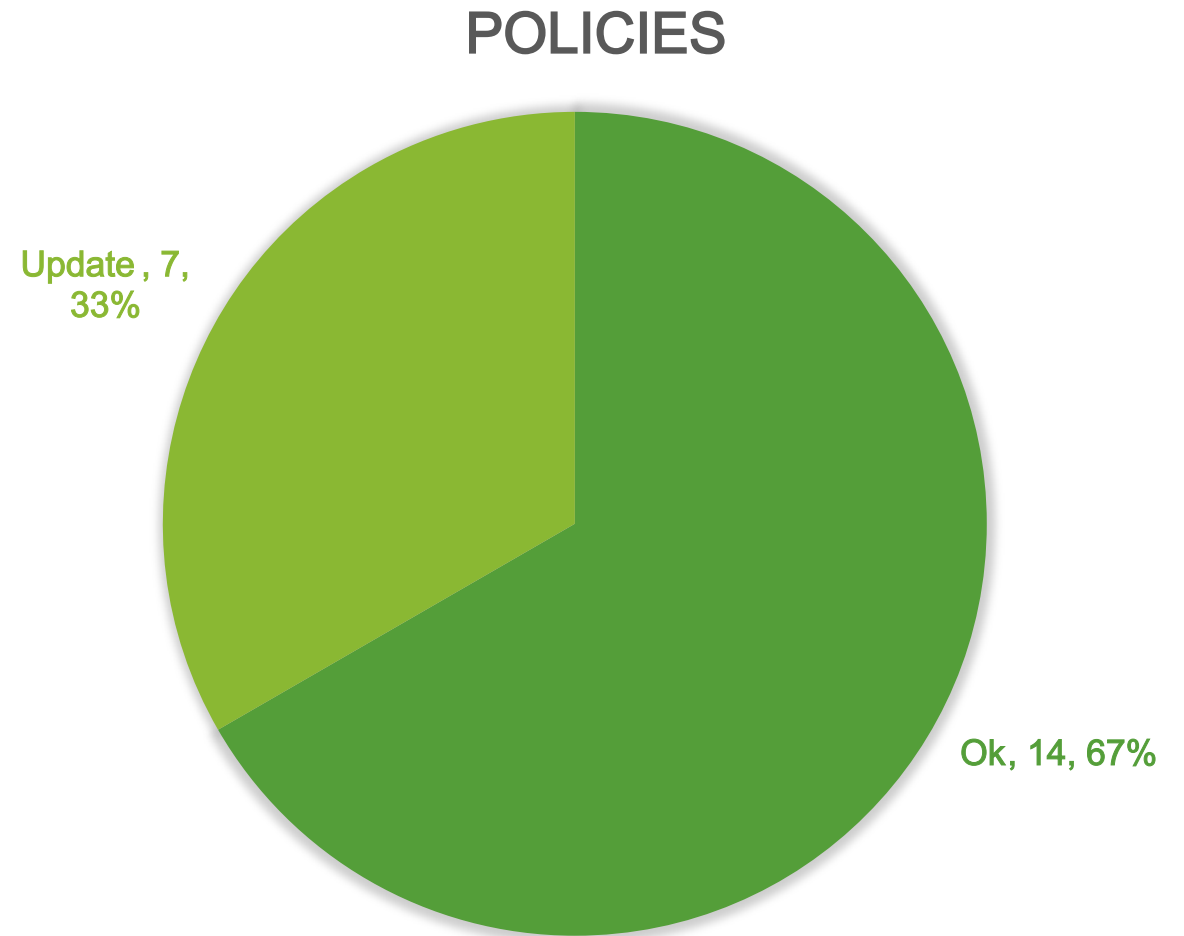
Next Steps Part I

- ✓ Review, revise, realign, reassign
- 👁 48 policies become ~21 policies + standards + procedures



Next Steps Part II

- ✓ Revised policies will be brought for board adoption
- 👁️ List of retired, realigned policies will be reviewed
- 🕒 Return annually for policy updates and review



Questions?
Feedback?



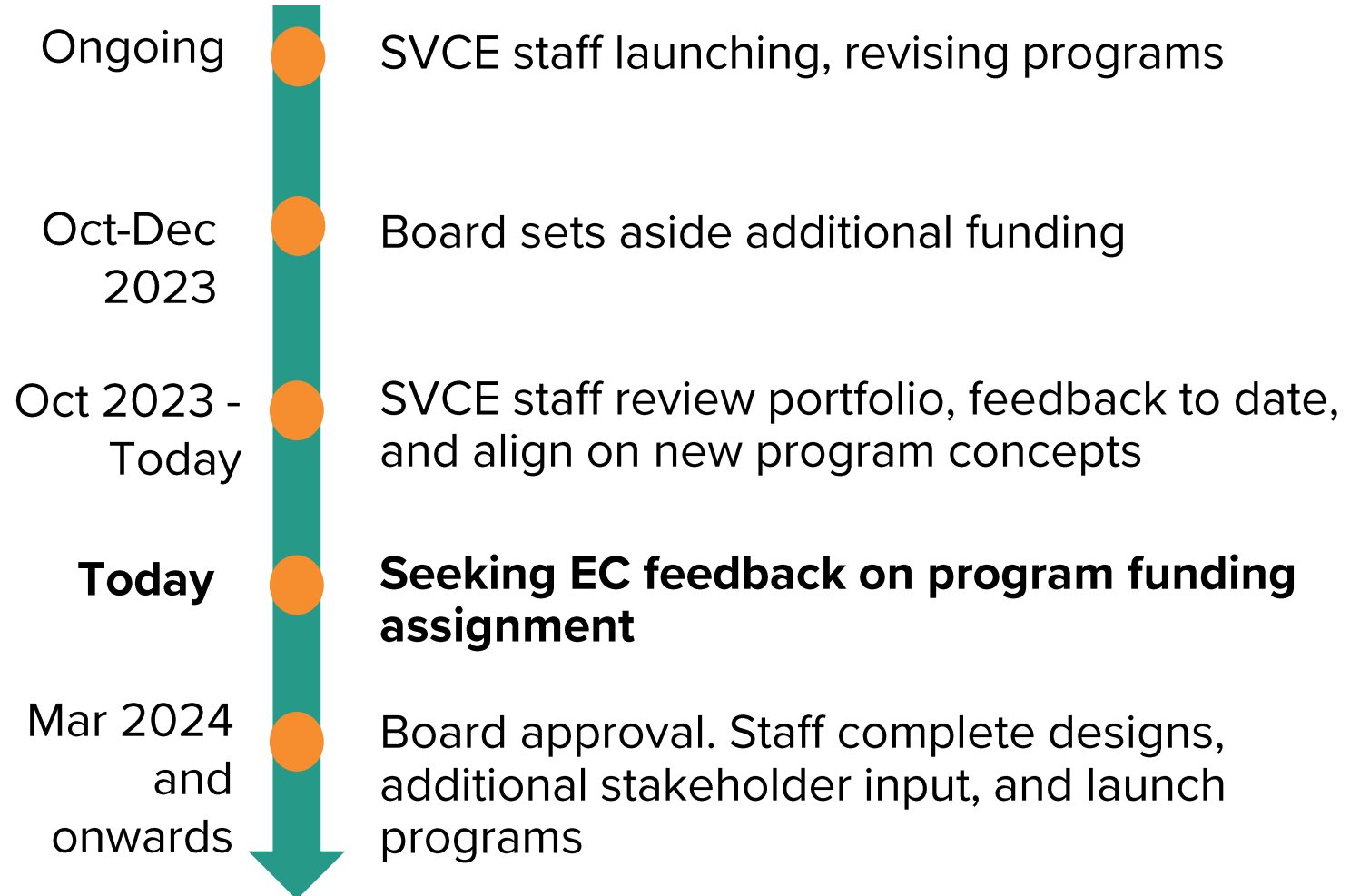
Assigning New Program Funding

Executive Committee
February 23rd, 2024

Today's objective – seeking EC feedback

on ~\$34M recently added to Programs Fund:

- FY24 annual (~\$9M)
- December 2023 adjustment (\$20M)
- Existing, unassigned program funds (~\$5M)





Recap: transforming the market, at scale

Programs help build the support ecosystem to help policy succeed



Incentives and lower up-front costs



Awareness and acceptance



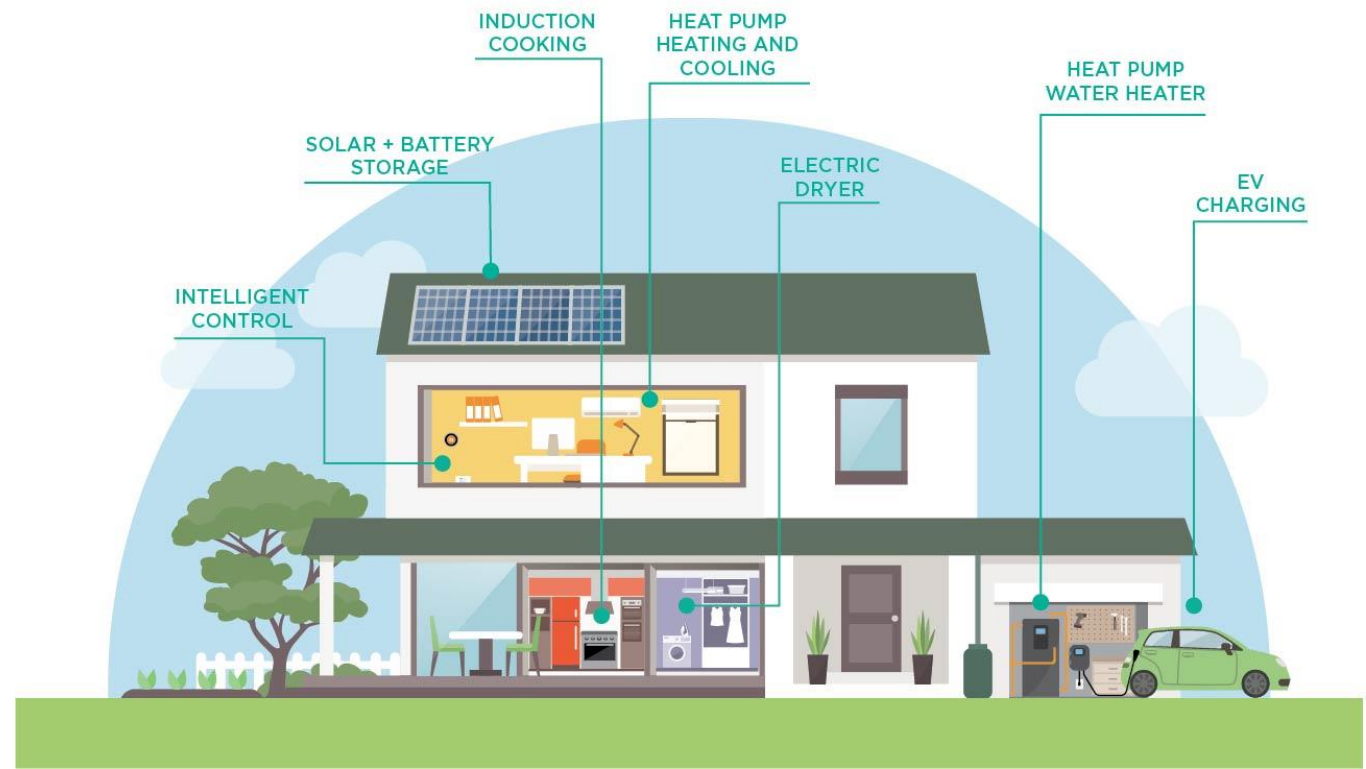
Quality and available equipment



Efficient processes



Available workforce



Recap: existing SVCE efforts

By end of FY23, have 20+ active programs with ~20% of funds spent and another ~65% “live” or contracted

Have identified some gaps and new tactics to add

Case study – FutureFit Homes incentives

- Rapidly increased uptake
- Gathering cost data and supporting projects
- BUT seeing limited pool of participant types



New areas:

- Mechanism for those who are very busy – “turnkey”
- Reach renters and low-income in single family homes
- How can aggregating projects lower costs?



Process recap: staff review

Team reviewed current portfolio, feedback/needs, stakeholder/customer interests

Analysis of existing programs: budget, objectives, direct impact, state of market today, and size of market

Analysis of portfolio: gaps and needs given SVCE priorities, review of program data and customer input

Evaluated dozens of new ideas and selected proposed list

Developed “program briefs” to guide discussion of what to allocate and compile initial details

KEY GOALS							CORE VALUES			
AFFORDABILITY	AWARENESS	QUALITY & CUSTOMER EXPERIENCE	EASE OF IMPLEMENTATION	WORKFORCE AVAILABILITY	SUPPLY CHAIN	ELECTRICITY RELIABILITY	EQUITY (working to reach all customers)	ONLY SVCE CAN/WILL PLAY THIS ROLE?	CRITICAL "UNLOCKING" ELEMENT	SCALING / ENABLING SCALE
X				X	X					
X				X			X			X
						X		X		
	XXX	X	X							
	XXX									X
	X									
	XX									
XXX						X		XXX		XX
			X		XXX			XX		XXX
								X		XXX
			XX							



Program summary

Planned allocations out of the **\$33.55M**

Category	Allocation
Expanded single family home electrification (renters, lower costs)	+\$16M
Customer awareness (experiential and marketing)	+\$11.5M
E-mobility incentives	+\$2M
Workforce	+\$1.3M
C&I projects	+\$2M
Other	+\$0.75M

} \$33.55M



Program summary

Planned allocations out of the **\$33.55M**

Category	Allocation	Program
Expanded single family home electrification (renters, lower costs)	+\$16M	Single Family Turnkey*
		Neighborhood Electrification
		Portable Heat Pumps
Customer awareness (experiential and marketing)	+\$11.5M	eHub
		Community Demonstration Grants*
		Programs Marketing Fund
E-mobility incentives	+\$2M	E-Bikes
		Targeted EV Rebates and Education
Workforce	+\$1.3M	Workforce Development Partnerships
C&I projects	+\$2M	C&I Technical Support and Incentives
Other	+\$0.75M	Virtual Power Plant
		EM&V

\$33.55M

*Note ~70% going
towards Turnkey
and Demo Grants



Expanded single family customer participation in home electrification (+\$16M)

Objectives

- Easy participation pathways
- Reach single family low-income
- Reach renters
- Aggregate projects to lower costs

Impacts

700 homes electrified (300 low income)
1,000 emergency water heaters
Neighborhood-level: 20+ homes electrified, learn how this can scale
100 portable heat pumps installed

Programs expected to run 2024-2027

Program Element	Planned Allocation
No-cost install for low-income	+\$14M
Emergency water heater replacement	
“Turnkey” install, with co-payment	
Neighborhood-scale electrification	+\$1.5M
Portable heat pumps	+\$0.5M



Customer awareness (experiential and marketing) +\$11.5M

Objectives

- Increase use of eHub services
- Increase enrollment in programs
- Assist member agencies on efforts to decarbonize their communities

Impacts

Grants for all agencies, plus competitive grants for decarb projects or programs that promote customer awareness/action

1.5M email opens and 350K unique web visits

Drive uptake in programs through increased marketing

Program Element	Planned Allocation
eHub	+\$1M
Community Engagement Grants -Community-specific projects or programs -Focus on engaging customers -Open to member agencies and other local organizations	+\$10M
Programs Marketing Fund	+\$0.5M



E-mobility incentives +\$2M

Objectives

- Increase EV adoption (particularly multifamily and low-to-moderate-income customers)
- Build community awareness of EV incentives and benefits

Impacts

450 EVs to targeted customers
10 events to build EV awareness
450 E-bikes

Programs expected to run 2024-2026

Program Element	Planned Allocation
E-Bikes	+\$0.5M
Targeted EV Rebates and Education	+\$1.5M



Workforce +\$1.3M

Objectives

- Prepare workforce in SVCE territory to electrify buildings at scale
- Supercharge existing regional electrification workforce efforts
- Invest in local workforce initiatives

Impacts

Engage with diverse set of contractors, connect to customers and programs

Support workforce development organizations

Training/education/analysis

Details TBD

Program expected to run 2024-2025

Program Element	Planned Allocation
Workforce Development Partnerships	+\$1.3M



C&I projects +\$2M

Objectives

- Support innovative electrification of large commercial and industrial (C&I)
- Pilot approaches in nascent market
- Provide additional value to non-res customers

Impacts

Upgrade C&I equipment to electric at several customer sites (depends on project size)

Drive electric, therm, cost, and GHG savings for customers

Program expected to run 2024-2026

Program Element	Planned Allocation
C&I Technical Support and Incentives	+\$2M



Other +\$0.75M

Objectives

- Advance SVCE's load flexibility capabilities to prepare for increasing load due to electrification and real-time pricing rates
- Third-party evaluation of program impacts

Impacts

Prepare to scale up load flexibility efforts and automate customer response to real-time pricing rates

Details TBD – solicitation upcoming

Programs expected to run 2024-2027

Program Element	Planned Allocation
Virtual Power Plant	+\$0.5M
EM&V	+\$0.25M



Recap: program summary

Planned allocations out of the **\$33.55M**

Category	Allocation	Program
Expanded single family customer participation in home electrification (renters, lower costs)	+\$16M	Single Family Turnkey
		Neighborhood Electrification
		Portable Heat Pumps
Customer awareness (experiential and marketing)	+\$11.5M	eHub
		Community Demonstration Grants
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E-mobility incentives	+\$2M	E-Bikes
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Workforce	+\$1.3M	Workforce Development Partnerships
C&I projects	+\$2M	C&I Technical Support and Incentives
Other	+\$0.75M	Virtual Power Plant
		EM&V

} \$33.55M



Plan for additional stakeholder input

Staff will refine concepts through additional input

Building on input already received and observed needs

Case study – Multifamily Direct Install program

- Preliminary design completed based on known needs
- Experienced vendor selected

Gathering more input

- Holding a focus group with affordable housing managers
- Working to do the same with tenants rights groups
- Feedback loops built into program; plan to pivot

Today's objective – seeking EC feedback

Asking for input on staff's intended program funding assignment

Future contracts for this work will still come to Board for approval if >\$100k

- Next step is March Board approval (part of mid-year budget discussion)
- Staff will complete designs of programs and launch
- Continue to provide periodic updates on program statuses and final design decisions

Discussion

Appendix



DETAIL: Expanded single family customer participation in home electrification (+\$16M)

Program Element	Details	Planned Allocation
No-cost install for low-income	Offer no-cost complete home electrification to income-qualified customers. Complement upcoming multifamily no-cost offer.	+\$14M
Emergency water heater replacement	Quick-response installer to help in emergency failures. Provide a temporary heat pump if wiring upgrade work is needed for a permanent electric solution.	
“Turnkey” install, with co-payment	Provide a simple pathway for residents who want to electrify but don’t have time or knowledge. They still pay for the project themselves, after the SVCE rebates.	
Neighborhood-scale electrification	Combining projects in an area may lead to lower total costs. Testing whether entire neighborhoods are willing to electrify at once is essential to future “gas system pruning” and scaling cost-effectively.	+\$1.5M
Portable heat pumps	For renters and properties that aren’t good fits for more permanent heat pump solutions, these window unit heat pumps can provide electrification benefit.	+\$0.5M



DETAIL: Customer awareness (experiential and marketing) +\$11.5M

Program Element	Details	Planned Allocation
eHub	Components of the SVCE website that help customers on their electrification journey. Presently includes Solar/Battery Assistant, Appliance Assistant, and EV Assistant. Solicitation is ongoing to determine vendors for the second version.	+\$1M
Community Engagement Grants	Provide member agencies with grants to enhance their efforts to decarbonize their communities, demonstrate building electrification, and/or increase community resilience. Focus on building customer awareness through local programs or demonstrations. Will open competitive portion of grants to other community organizations.	+\$10M
Programs Marketing Fund	Separate funding to focus on marketing efforts to increase program enrollments. Covers email, social media, tabling, events, and other marketing channels.	+\$0.5M



DETAIL: E-mobility incentives +\$2M

Program Element	Details	Planned Allocation
E-Bikes	Point of sale and post-purchase e-bike incentive that is income qualified.	+\$0.5M
Targeted EV Rebates and Education	The EV Education programming may consist of: Community Ride & Drive events where they are not already happening, and/or incentivizing short-term EV rentals for customers to test drive EVs and see how they integrate into their lifestyle. The EV Incentives would provide incentives for new and used EVs for income qualified customers.	+\$1.5M



DETAIL: Workforce +\$1.3M

Program Element	Details	Planned Allocation
Workforce Development Partnerships	Prepare workforce in SVCE territory to electrify buildings at scale. Identify opportunities to supercharge regional electrification workforce efforts. Invest in local workforce initiatives.	+\$1.3M



DETAIL: C&I projects +\$2M

Program Element	Details	Planned Allocation
C&I Technical Support and Incentives	Support energy and sustainability goals of C&I customers while strengthening customer relationships with SVCE. Facilitate the completion of energy efficiency and carbon emissions reduction projects, particularly upgrading to electric equipment.	+\$2M

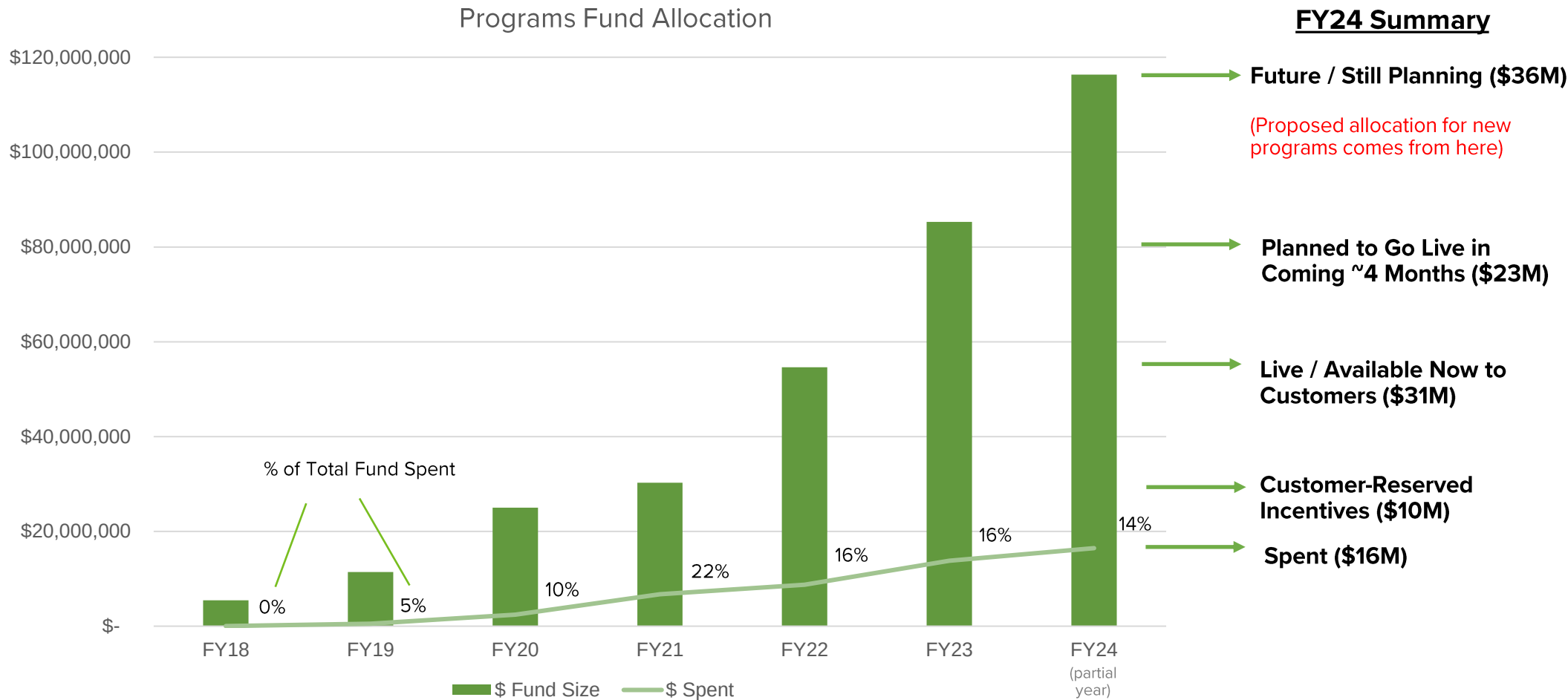


DETAIL: Other +\$0.75M

Program Element	Details	Planned Allocation
Virtual Power Plant	Recruit, enroll, and encourage participation from customers in a demand flexibility service by providing bill savings or incentives for customers to earn, and minimal to no disruption in customer convenience and comfort.	+\$0.5M
EM&V	Post-closing or mid-program evaluation and measurement of a program's impact, successes, and challenges. Third-party validation of programs.	+\$0.25M



Fund Allocation



A photograph of several wind turbines on rolling green hills under a blue sky with light clouds. The turbines are white with three blades each. The hills are covered in green grass, and a dirt road winds through the landscape. In the background, a city is visible in the valley.

Single Family Installation Program – Additional Details



Existing programs may help early adopters, but deeper assistance is needed to reach more single-family homes

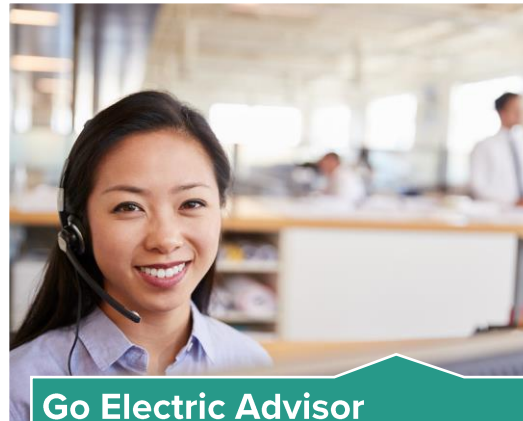
Our programs address different customer needs and barriers



eHub

Active

Online resource center for customers to learn about electrification.



Go Electric Advisor

Active

One-on-one assistance for residential customers via phone or web to learn how to electrify their homes.



FutureFit Homes

Active

Incentives for single-family and small multifamily properties to install heat pump water heaters, heating/cooling systems, and prewire for future circuits.



Single Family Installation

Coming Q3 2024

Electrification installation services provided at no-cost to low-income customers and cost-share for market-rate customers. Includes emergency water heater replacement.

Program Types

- Technical assistance
- Incentive
- Direct install



Single Family Installation Program

Target Market

Existing single-family properties (≤ 4 units)

3-year Budget*

\$14M

Goals*

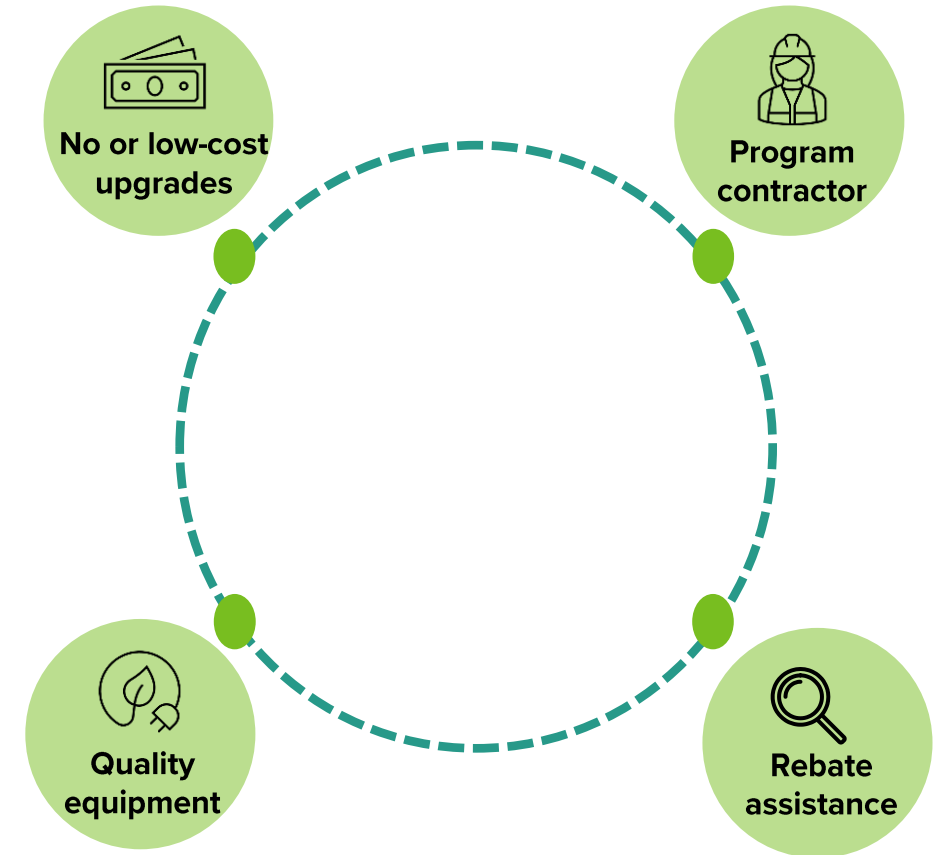
- Fully electrify 600 households, including 250 low-income households
- Upgrade 700 emergency failed water heaters

Program Elements

- No-cost installation for low-income customers
- Turnkey installation with cost-share contribution for market-rate customers
- Emergency water heater loaner and upgrade

Collaboration*

Will align with similar upcoming Peninsula Clean Energy program to achieve administrative cost-savings



2023 Customer Survey Findings

Executive Committee, Feb. 23, 2024
Adam Selvin, Michaela Pippin

Purpose

- Information item on annual residential customer survey to better understand our customers, which informs marketing and messaging.
- Key takeaways show steady and expected levels of SVCE awareness, and growth in electrification interest and programs.
- Survey findings will be shared via consent at March board meeting.



Background

SVCE runs an annual customer survey to measure SVCE and electrification awareness

Goal: Measure SVCE customer awareness and interest in electrification

- 2023 survey conducted Aug. – Sept. 2023
- Past surveys
 - September – October 2020
 - March – April 2022

**2021 skipped due to vendor contracting delay*



Methodology – 2023 Survey

- Administered online, outreach conducted via email and mail
 - Provided in English, Traditional Chinese, Spanish and Vietnamese
 - Offered \$10 incentive
- 653 survey respondents

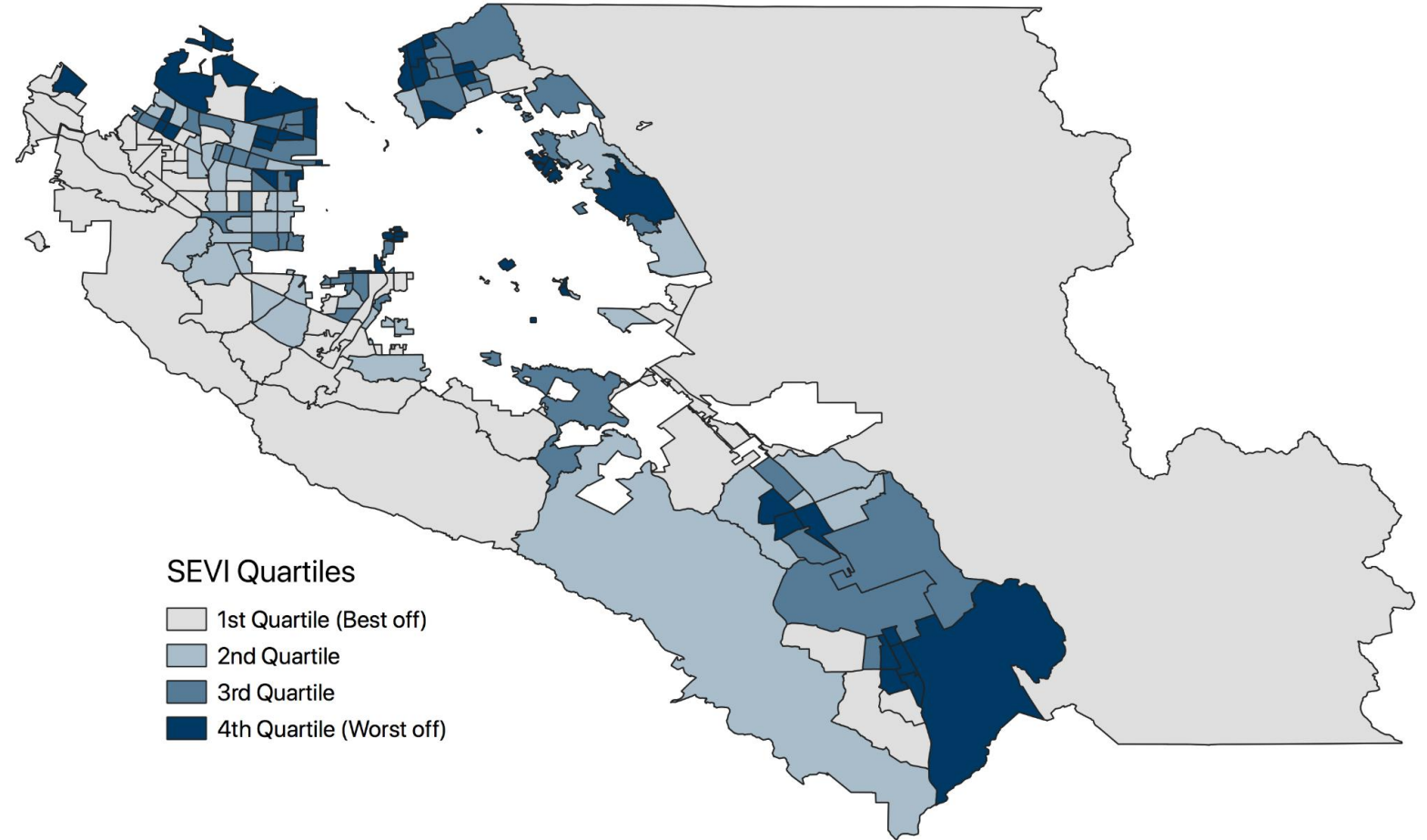
Sample Design

- Stratified sample by SEVI quartile.
- Targeted 150 survey completions for each quartile.
- Weighted responses using SEVI quartile design weights with a post-stratification adjustment based on demographic characteristics.
- Results account for sample bias



Socio-Economic Vulnerability Index

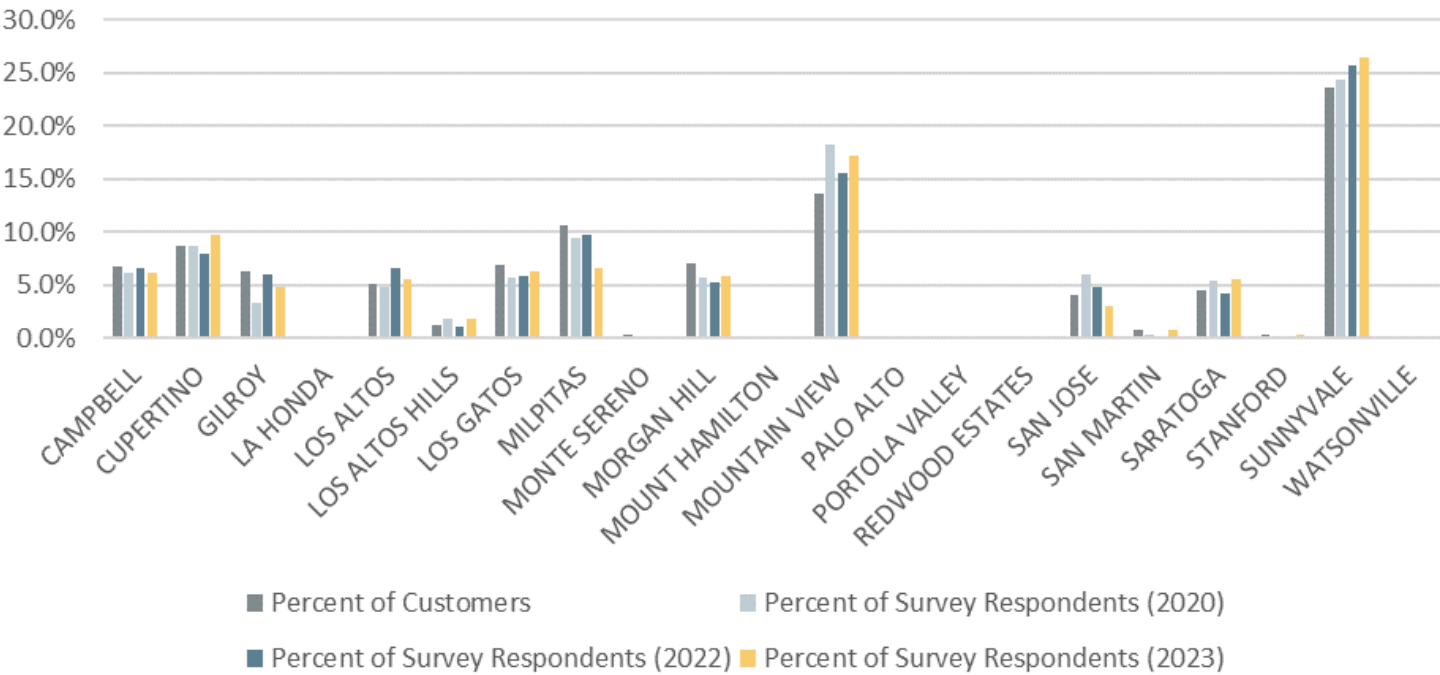
Residential Customer
Engagement and Needs
by SEVI Census Tract
Quartile





Survey Completions

SEVI Quartile	Number of Responses
SEVI 1	167
SEVI 2	169
SEVI 3	163
SEVI 4	154
Total	653

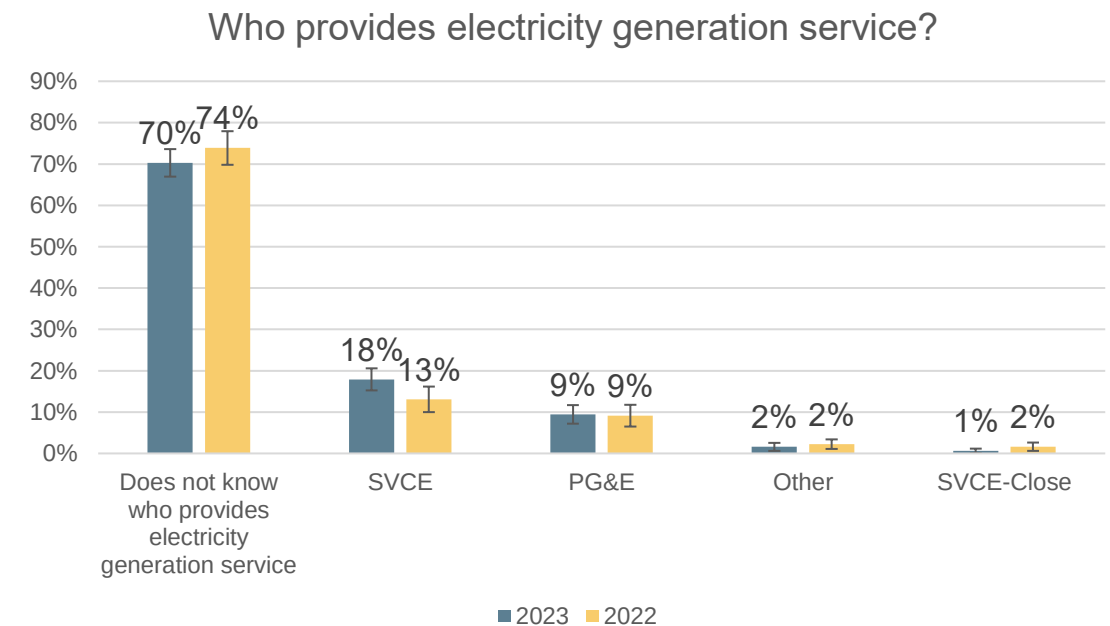




SVCE awareness remains consistent with prior years

- Unaided recall of SVCE was 7% of respondents
- 73% of respondents heard of SVCE, once prompted
 - *No statistically significant increase from past surveys*

Key takeaway: Most customers think of PG&E first as their power provider; majority do not know distinction of electric generation service

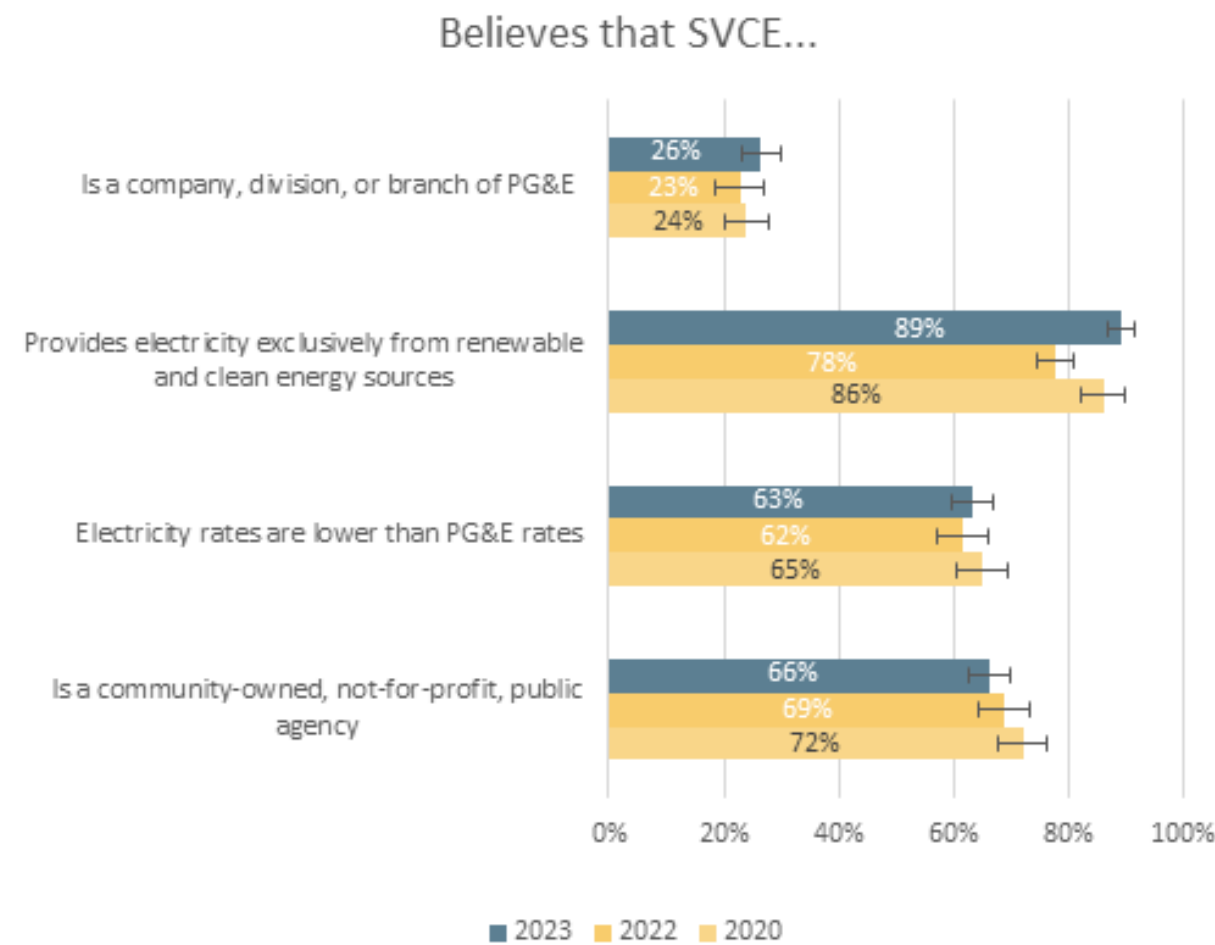




Customers understand we provide clean electricity

- A larger share of customers understood this about SVCE compared to past years
 - Could be result of increased communications around our PPAs

Understanding of SVCE Trends



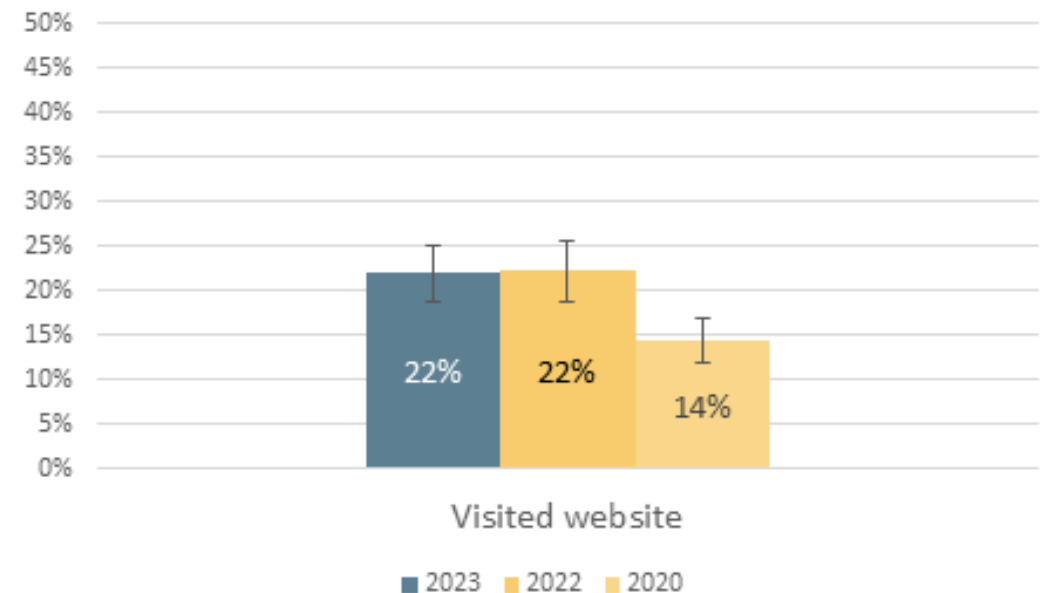


Our digital engagement efforts are paying off

- Share of customers who reported visiting the SVCE website in 2022 and 2023 is 22%, up from 14% in 2020
- 6% of respondents cited the SVCE website as a source of information on EVs. More SEVI 4 customers were likely to use this as a source of information than those in SEVI 1 or SEVI 3.

Key takeaway: We are driving interest from customers not otherwise seeking info about electrification.

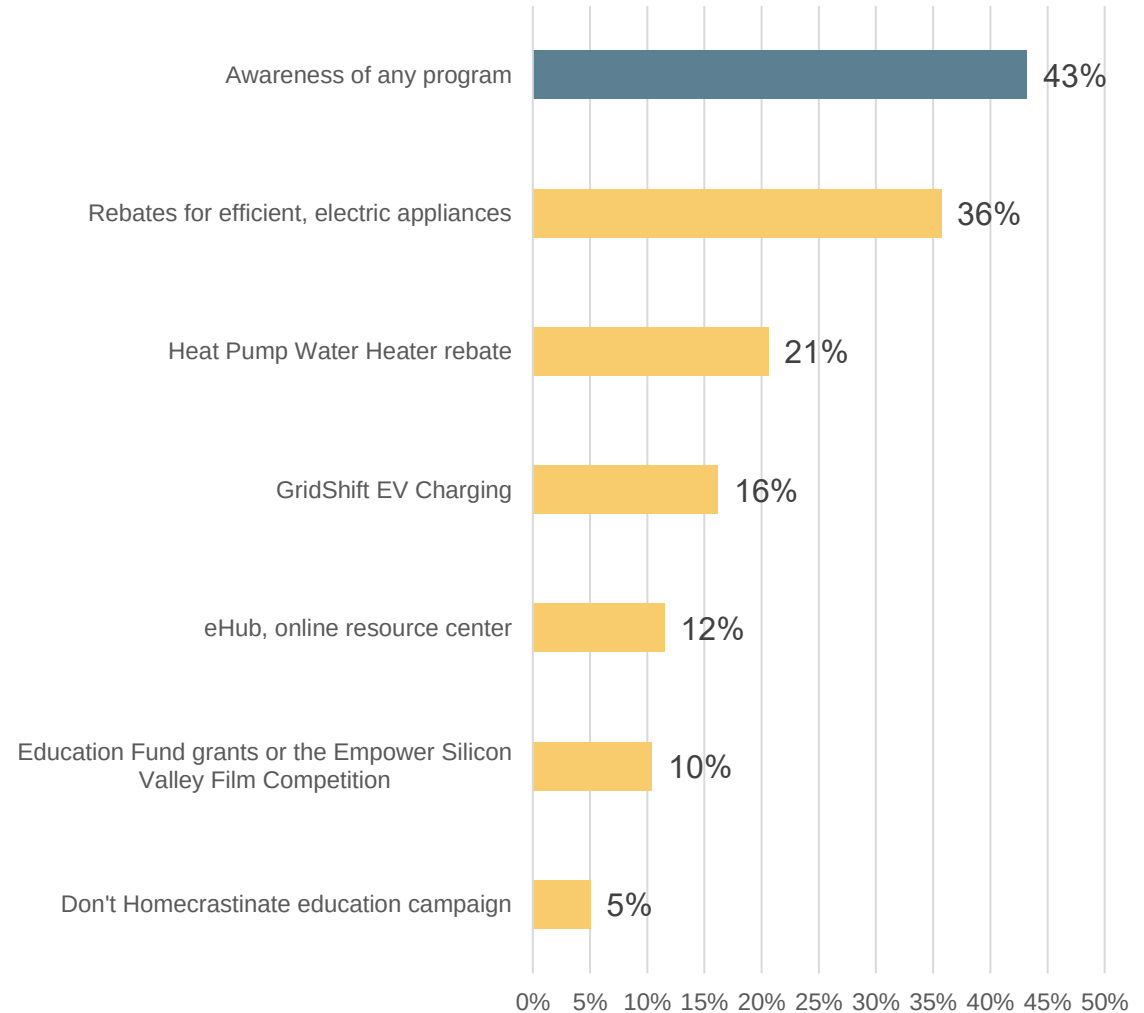
Website Visit Trends





43% Awareness of select programs

- Awareness highest for efficient, electric appliance rebates (FutureFit Homes)

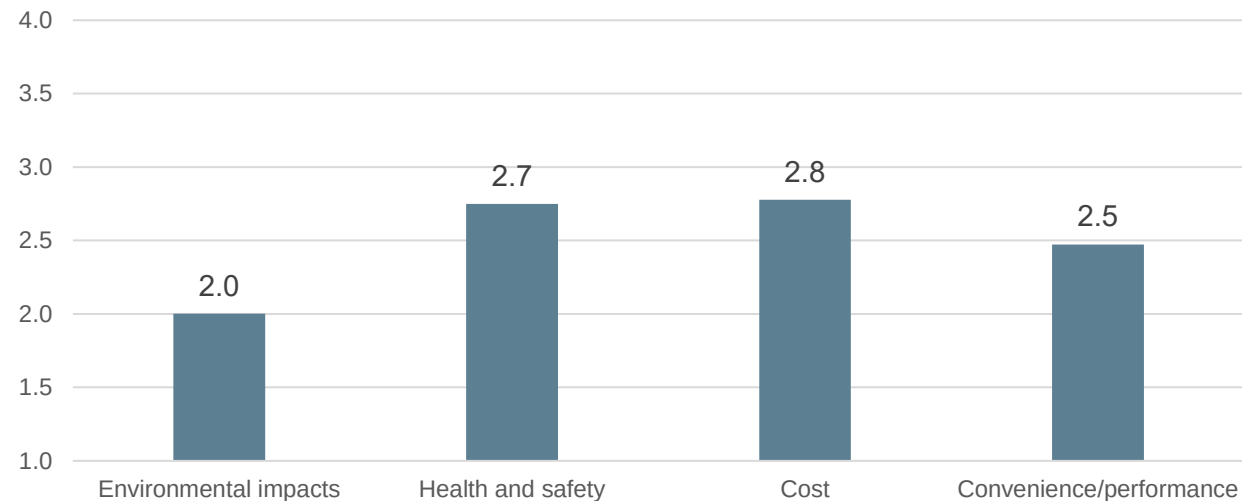




Cost, health and safety were the most important considerations in making purchasing decisions

- Convenience and performance were ranked higher for those customers in SEVI 1 quartile than those in SEVI 4 quartile

Key takeaway: Affordability, health and safety – aligns with key messages in existing buildings electrification work



(4 = Ranked most important 1 = Ranked least)



Cost was cited in the top 5 barriers for each technology

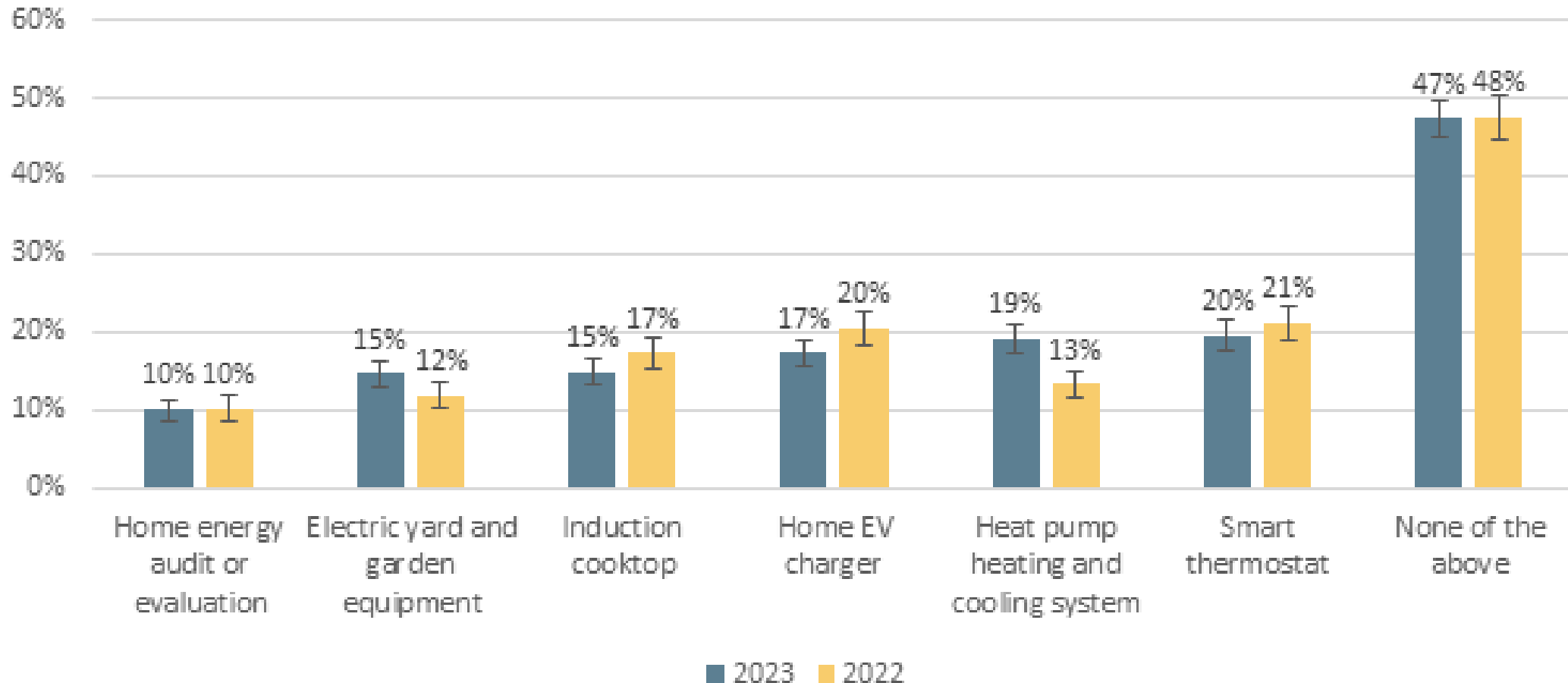
Technology-specific barriers that were among the top 5 barriers for each technology:

- **EVs:** Driving range and charging location
- **Heat pump water heaters:** Not enough info, need to upgrade electric panel, and technology reliability.
- **Solar/battery:** Not enough info, technology reliability and “other” barriers.
 - The other barriers included site conditions (other than roof), HOA / Condo approvals needed, not cost-effective, and roof type or condition issues.



Smart thermostats, heat pump heating and cooling systems, and EV chargers most likely purchases in the next three years

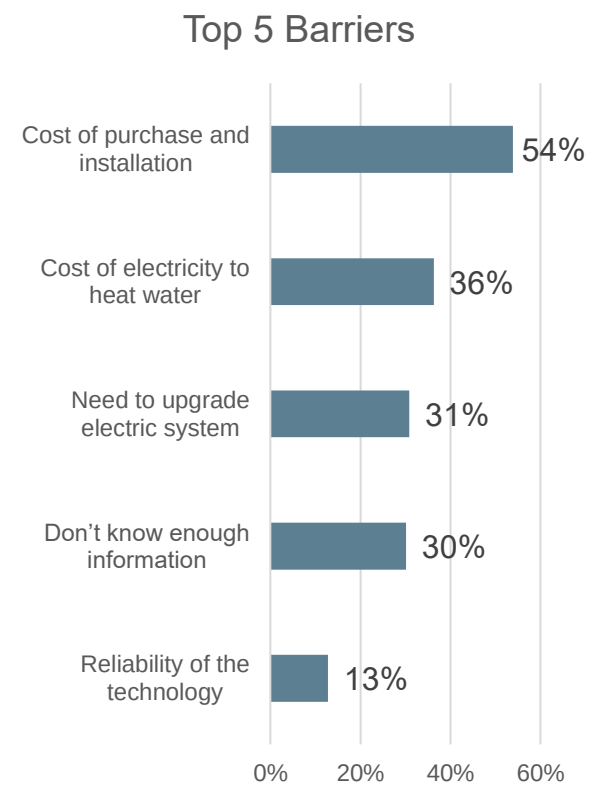
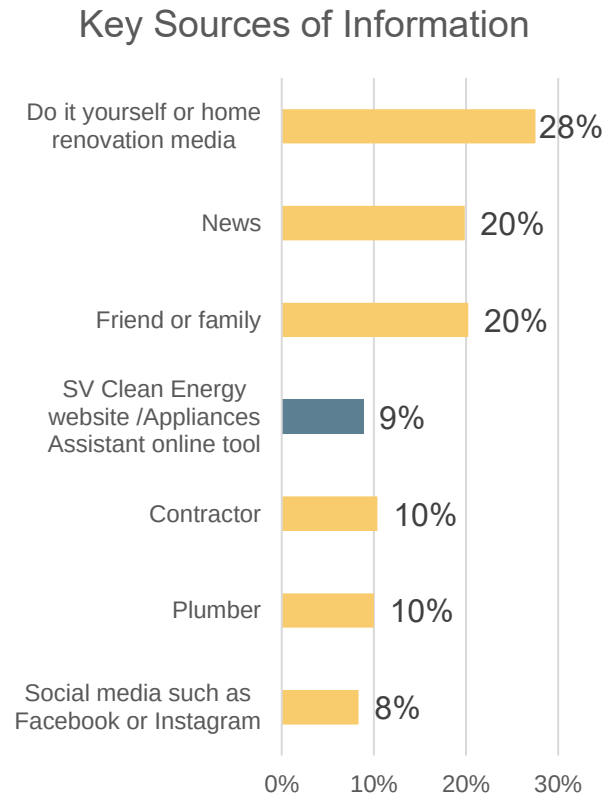
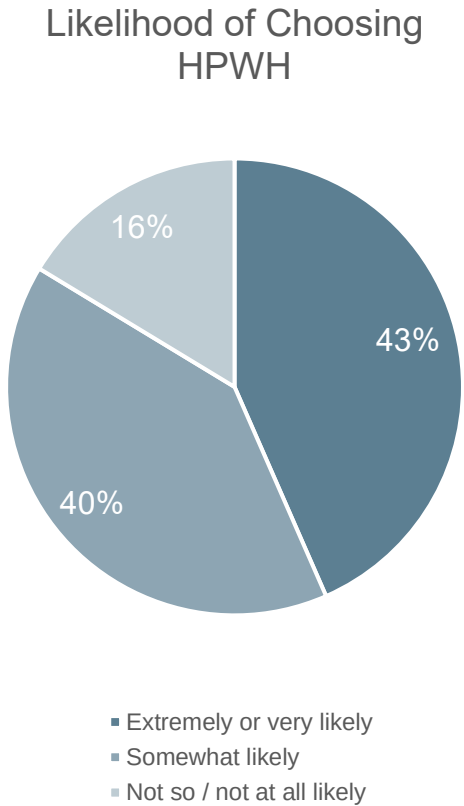
Key Takeaway - Increased interest in heat pump water heaters!





Heat Pump Water Heater Results – At A Glance

Key takeaways – Need to address barriers, and utilize key channels for how customers get more info about these kinds of technologies





Beliefs about electric homes mixed

- A clear majority (73%) of customers believed that all-electric homes improve indoor and outdoor air quality, but they were split as to whether or not they were more energy efficient (54% thought they were).
- **Sixty-four percent thought they were expensive.**

Key takeaway: Lots of continued education is needed, with an emphasis on affordability, i.e., rebates, E-ELEC rate, IRA tax credits, etc.



- Multi-family home residents were more likely to report that not having a location to charge was a barrier to ownership, which confirms our understanding and programmatic approach.

Table 3-25 Barriers by Multifamily and Single Family Home Type

Barrier	Single Family	Multifamily
Cost of purchasing or leasing an electric vehicle	44%	54%
Cost of operating an electric vehicle including electricity costs	22%	16%
Driving range of the vehicle*	54%	41%
Reliability of the technology	14%	14%
Don't know enough information about electric vehicles*	4%	12%
Not enough models or styles to choose from	8%	5%
Not having a place to charge the vehicle at my home*	20%	42%
Not knowing where I can charge it away from my home	28%	26%
Concern about the safety of electric vehicle battery systems	20%	15%
Unable to find one for sale	2%	3%
Other	16%	12%

*Indicates statistically significant difference across all groups at the $p < .05$ level.



Opportunity to grow interest in induction cooking

- **49%** not interested
- When asked what information on induction cooktops would be of interest, information on differences in the technology from gas ranges was the most desired information (18%).
- **Key Takeaway** – Need more outreach and education, big opportunity coming with new induction rebate.



Check out our latest induction reel!

Summary

- Results are aligned with expectations for SVCE awareness
- Technology-specific results offer insights into tailored messaging
- New or expanded marketing and outreach opportunities for different customer segments

Questions?



Appendix



Sample Bias

- Higher self-reporting technology adoption led the team to question sample bias assumptions
- Example – solar ownership reported higher rates compared to interconnection data, specially for SEVIs 3 & 4
- Differences between survey sample and population estimates may reflect differences in ownership of systems, misunderstanding of the question or response options, or a combination of these factors.
- Similar issues with EV and heat pump water heater ownership reporting

*Comparison of Survey and Interconnection Analysis
Estimates of Solar and Battery Storage*

Solar and Battery Ownership	SEVI 1	SEVI 2	SEVI 3	SEVI 4
Solar without battery (Survey respondents)	18%	14%	12%	17%
Solar without battery (Interconnection analysis)	14%	13%	8%	8%
Solar with battery (Survey respondents)	8%	7%	5%	4%
Solar with battery (Interconnection analysis)	2%	2%	1%	0%