

# Quarterly Stakeholder Meeting

October 11, 2022



# Welcome!

**Goal:** Review the goals and structure of TECH Clean California, provide key progress updates, and identify how you can get involved.

## Presentation Guidelines:

- This is a webinar format, so please direct your questions to the Q&A feature. We will do our best to answer questions there during the presentation.
- Today's slides and a recording of the presentation will be accessible on our website.



## Get Involved:

Submit your questions on  
**incentive layering, data  
sharing, and coordination** to  
[TECH.info@energy-solution.com](mailto:TECH.info@energy-solution.com)

# Agenda

1 TECH Clean California Overview

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2 Legislative Update

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3 Evaluation

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4 Incentives & Market Engagement

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5 Marketing

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6 Pilots & Quick Start Grants

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7 Q & A



# Presenters



**Evan Kamei**  
Energy Solutions



**Rory Cox**  
CPUC



**Ryan Wilson**  
Energy Solutions



**Jen Loomis**  
Opinion Dynamics



**Peter Florin**  
Energy Solutions



**Shweta Sanjeev**  
BDC



**Alison Seel**  
VEIC



# *1* TECH Clean California Overview

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# CPUC Policy Update – September 2022 Ruling

## Refrigerants

- According to previous decision, appliances that receive BUILD and TECH subsidies must use refrigerants that have a GWP of 750 or below by Jan. 1, 2023
- Market actors have informed us that this is unrealistic. A new Ruling in R.19-01-011 updates the established deadline to Jan. 1, 2025 to align with CARB policy

## \$50 million TECH augment from state budget

- California approved an additional \$50 million in the FY 2022-23 budget for TECH from General Fund revenues
- Ruling asks stakeholders for comments on whether the CPUC should make any changes to TECH for these new funds
- Comments are due Oct. 17



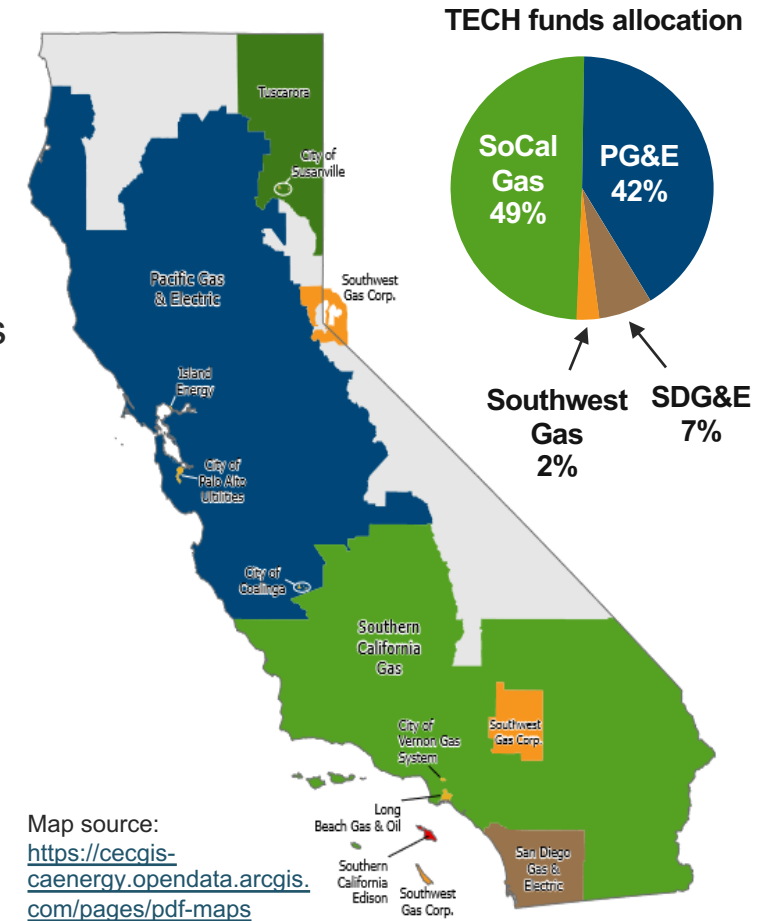
# TECH Clean California Overview

## What is TECH Clean California?

- CA's flagship heat pump market transformation initiative for space/water heating, designed to integrate and complement other existing offerings
- Purpose is to leverage a comparatively small initial investment to inform California's broader building decarbonization framework and future decarbonization investments
- Guiding principles of scale, equity, regulatory simplicity, and market transformation
- Funds are proportionally allocated by gas IOU territory

For a more complete overview of TECH Clean California, check out the slides and recordings from our previous quarterly Stakeholder Meetings at [techcleanca.com](https://techcleanca.com).

*The TECH Clean California initiative is funded by California gas corporation ratepayers under the auspices of the California Public Utilities Commission.*



TECH Team:

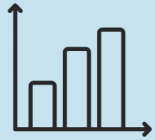


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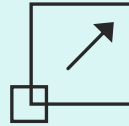


Tre'Laine

# The 3 Pillars of TECH



**Spur the clean heating  
market through  
statewide strategies**



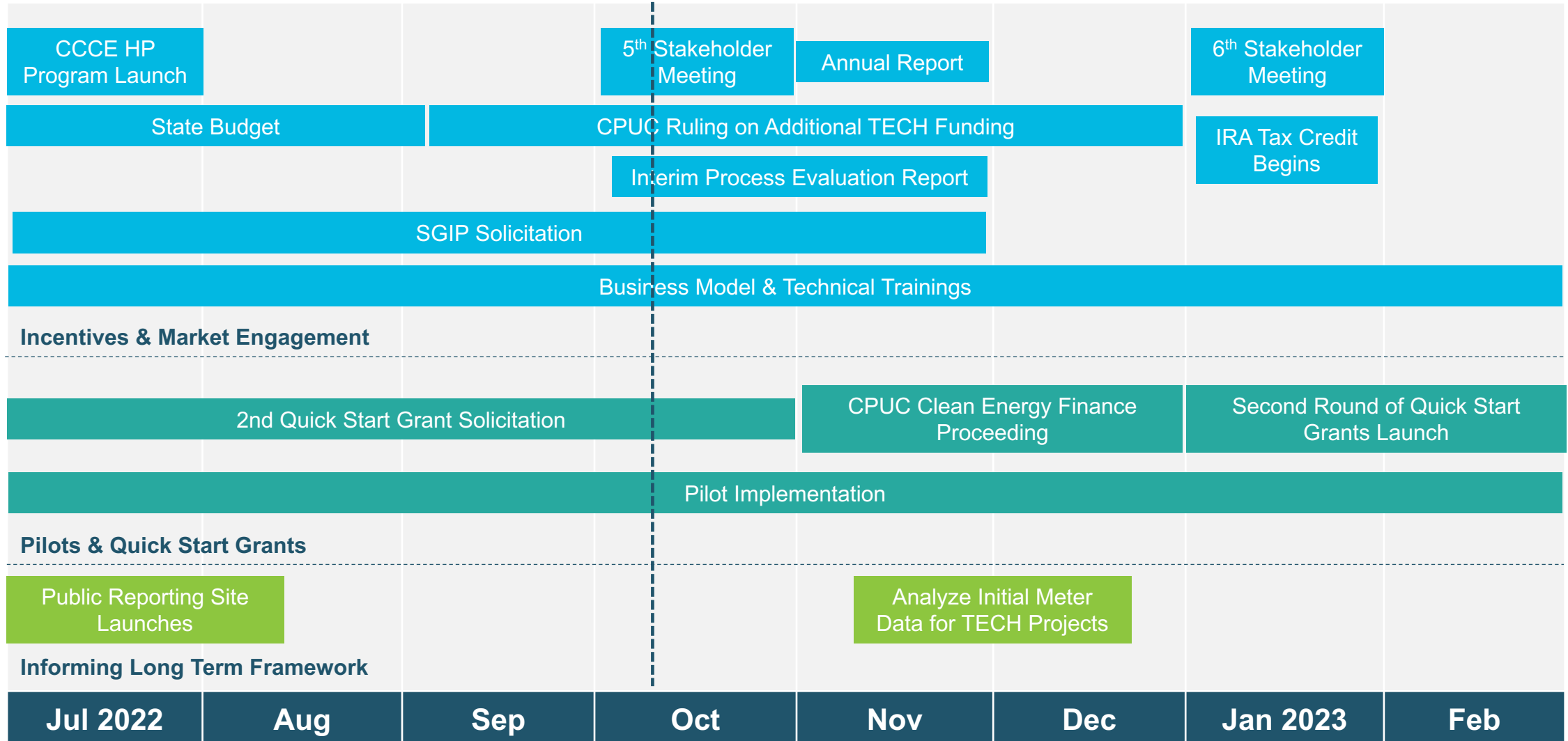
**Create scalable  
models through  
regional pilots**



**Inform long-term  
building decarbonization  
framework**



# TECH Clean California Timeline



# Public Reporting Website

## Updates in Q4

### New Pages

- Pilots
- Quick Start Grants
- Events
- Resources

### Expanded Data

- >3,000 new market rate SF projects since July (~10k tot)
- Low-income SF direct install projects
- Opinion Dynamics’ TECH Baseline Market Assessment

### Coming in 2023

- Multifamily project data incl. central units
- Meter-based results for TECH participants
- SGIP HPWH project-level data
- Opinion Dynamics’ customer survey reports

Explore data and see  
our new content at  
[TECHCleanCA.com!](https://TECHCleanCA.com)



# 2 Legislative Update

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# CA 2022/2023 FY Budget

- Additional funding for TECH was approved with the passage of the CA FY2022/2023 budget on 9/6.
- The budget bill ([AB/SB 179](#)) allocated **\$50M** to the PUC to expand TECH to benefit all CA residents, regardless of whether they reside within gas IOU territory. An additional **\$95M** was committed for FY2023/2024, contingent on the state meeting revenue projections.
- The TECH team is awaiting guidance from the CPUC on how we can use additional funding. An [ACR](#) was released on 9/26 with an opportunity for parties to comment by 10/17.
- Funding likely won't be available until Q1 2023; there will be an update at the next quarterly update.
- A second energy trailer bill ([AB 209](#)) allocates \$922M to the CEC to establish new **Equitable Building Decarbonization Programs**, including (1) a LMI direct install program for EE measures and (2) a statewide low-carbon building technologies incentive program.





# Inflation Reduction Act (IRA)

## **Residential Energy Efficiency Tax Credit (25C):**

Individual tax credits for up to 30% of qualified electrification projects, including equipment and labor costs (to an annual maximum of \$3200).

*Effective 1/1/2023*

## **High-Efficiency Electric Home Rebates (HEEHRA)**

- Point-of-sale, income-qualified rebates for qualifying electrification projects, up to \$14,000
  - 50% project cost for <150% AMI
  - 100% project cost for <80% AMI
- Contractors receive up to \$500 incentive for installing a QEP
- Administered by State Energy Offices (CEC).

*Will likely take until mid/late 2023*

## **Whole-Home Energy Efficiency Program (HOMES)**

- Fuel-agnostic rebate program, capped at 50% project cost (low-income cap at 80%)
- Modeled or measured savings pathway
- \$200 contractor incentive for DAC projects
- No double-dipping on federal programs

**State-Based Home Energy Efficiency Contractor Training Grants (50123):** \$200M to SEOs to develop and implement state programs that train and educate contractors involved in home EE installation and electrification measures

# 3 Evaluation

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Opinion **Dynamics**

# TECH: INTERIM PROCESS EVALUATION FINDINGS

Jen Loomis, PhD

October 11, 2022



# Interim Process Evaluation Research Objectives (May-July)

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- Evaluate program processes
- Investigate contractor experiences
- Assess TECH projects
- Understand single-family customer experience





# Process Evaluation Research Methods

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- TECH-enrolled contractor survey
  - n=184; June-July
  - RR of 21%
- Contractor interviews
  - n=4; June
- Incentive application database analysis
  - Closed paid projects through May 23
- Post-training contractor survey
  - n=118; June
- Single-family customer survey
  - n=728 HVAC; 240 HPWH
  - Installs through July 10
- Manufacturer interviews
  - n=5



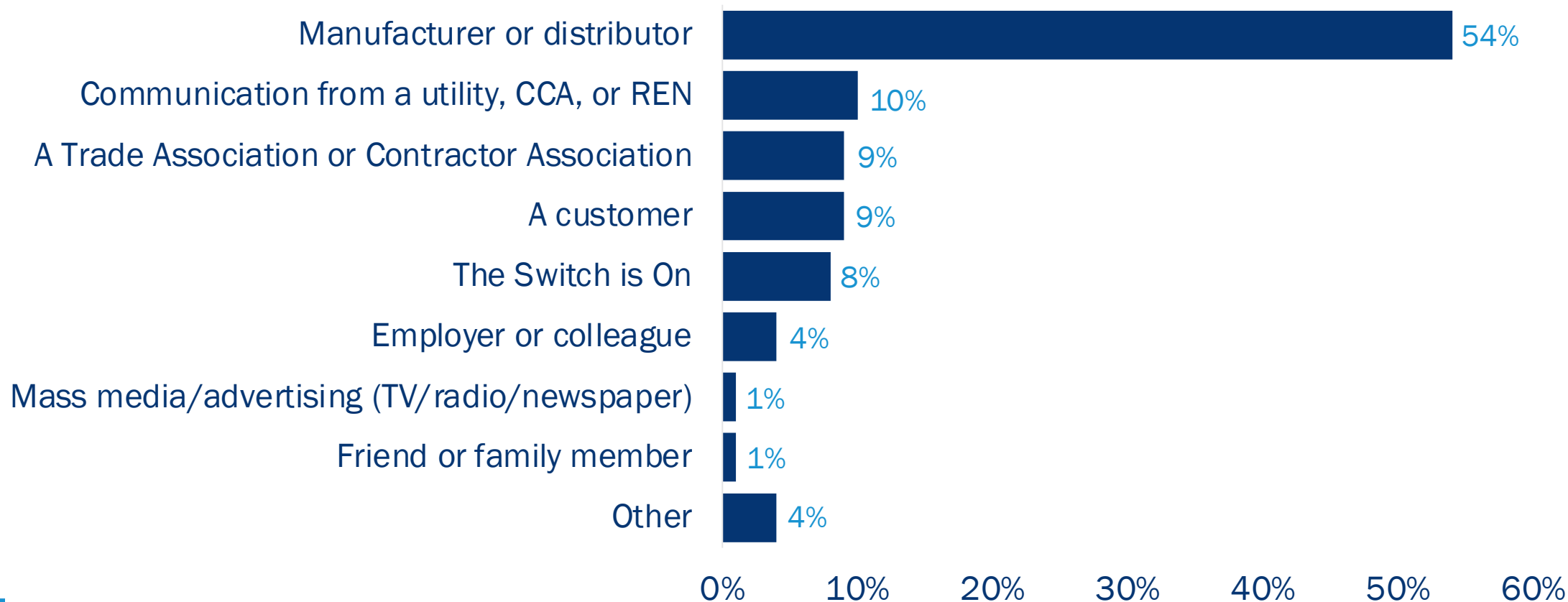
Opinion **Dynamics**

# FINDINGS

## Contractor Experience

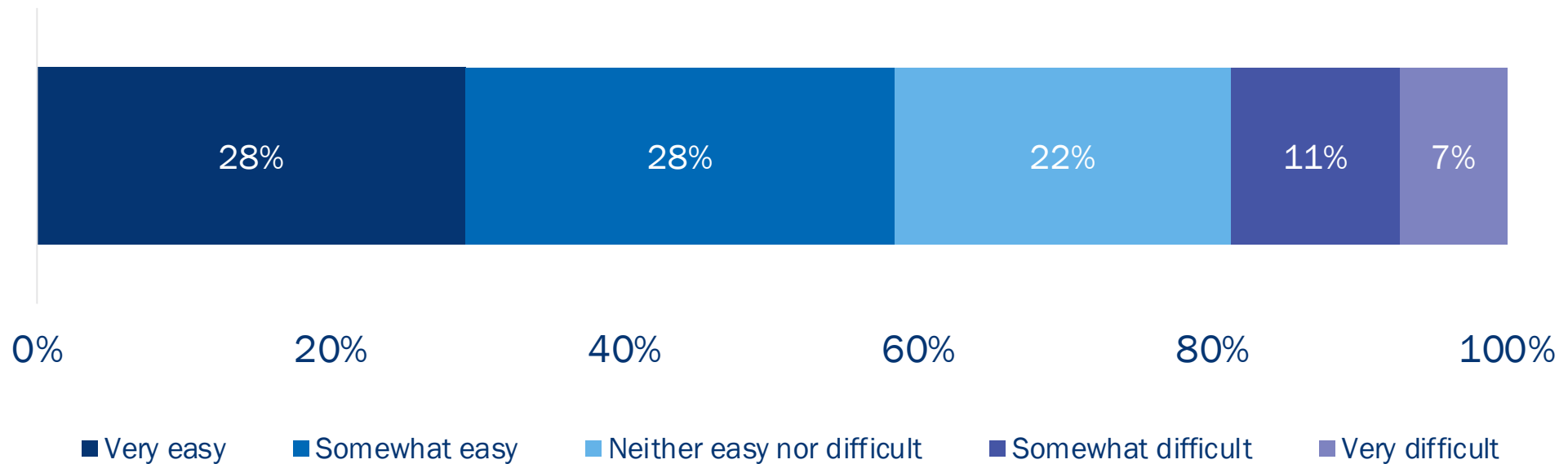
# How Contractors Learned About TECH

Manufacturer engagement by the TECH implementer was an effective strategy to enroll contractors.



# Enrolling in TECH

- Over half of surveyed contractors (56%) found enrolling in TECH to be somewhat or very easy
- Most common reasons for difficulty included slow communication with TECH staff, too much paperwork, and took too long.





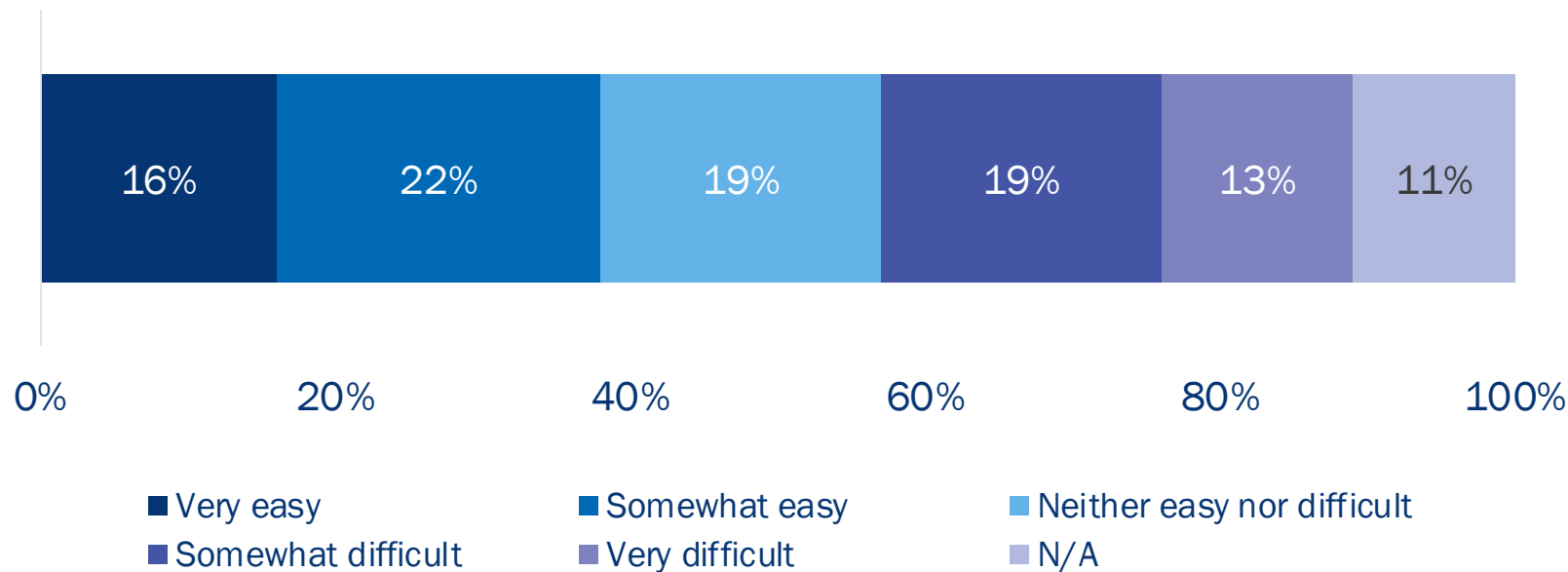


# Where TECH Contractors work

Service Region	Count	Percent
Greater Los Angeles	236	24%
Bay Area	111	12%
Sacramento	91	9%
Inland Empire	75	8%
San Diego	69	7%
Missing data	258	27%

# Contractor Experience with Incentive Application

Fewer than half of contractors (38%) found the application easy to fill out.

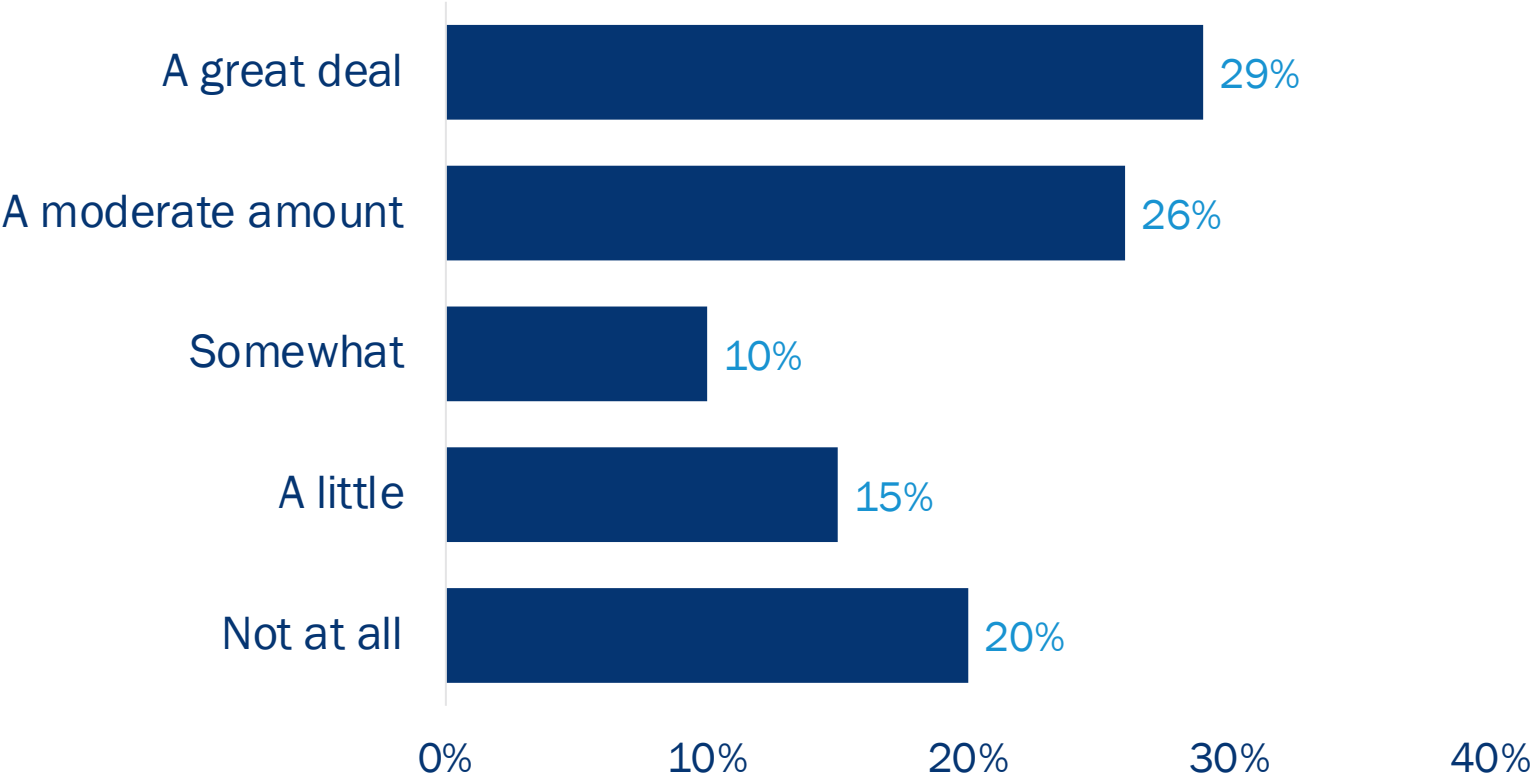


“The application would ask for things we did not have. Such as photo of electrical panel or we couldn’t find the model number listed.”

# TECH Participation Increased Sales

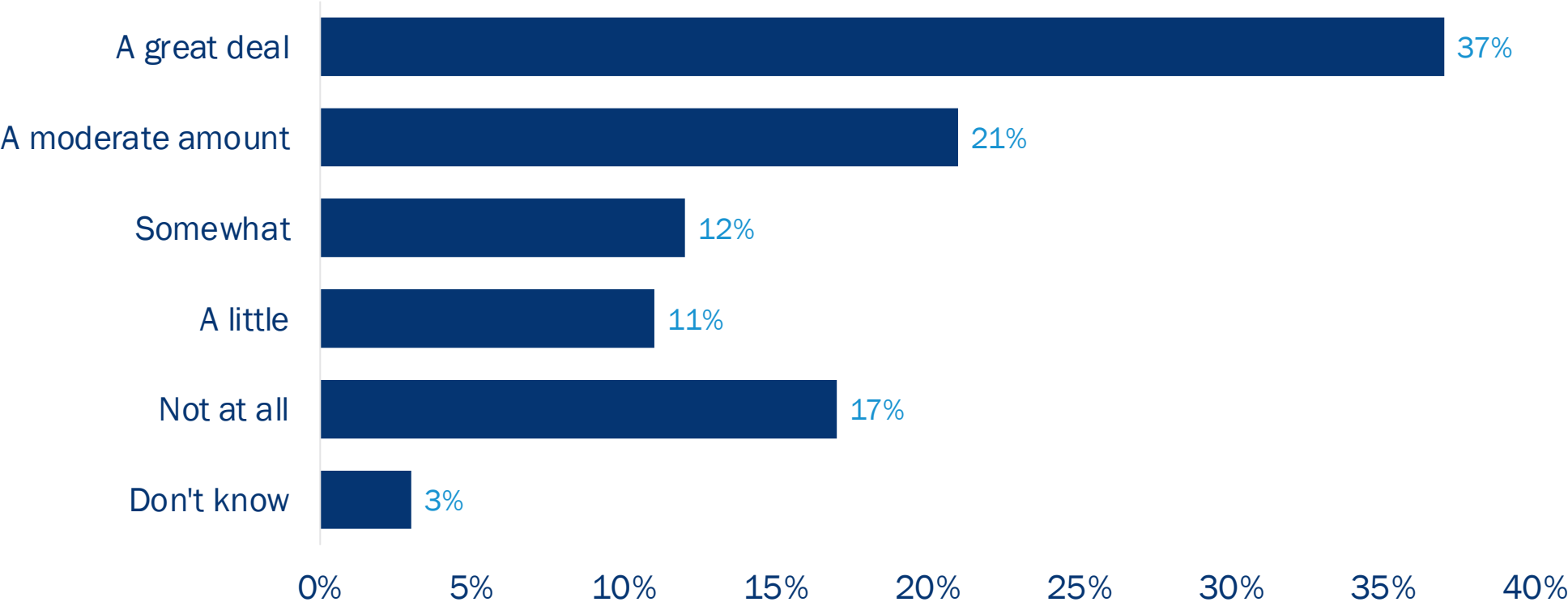
The TECH incentive stimulated heat pumps sales, contractor revenue, and market growth.

“The rebates and marketing have been instrumental in boosting sales of heat pump technology. Prior to the campaign we were at zero heat pumps and now we install over five a month.”







# Suspension of TECH Incentives Effect on Sales

- Sales fell due to abrupt loss of program funding.
- Contractors who TECH helped the most were among the most impacted.



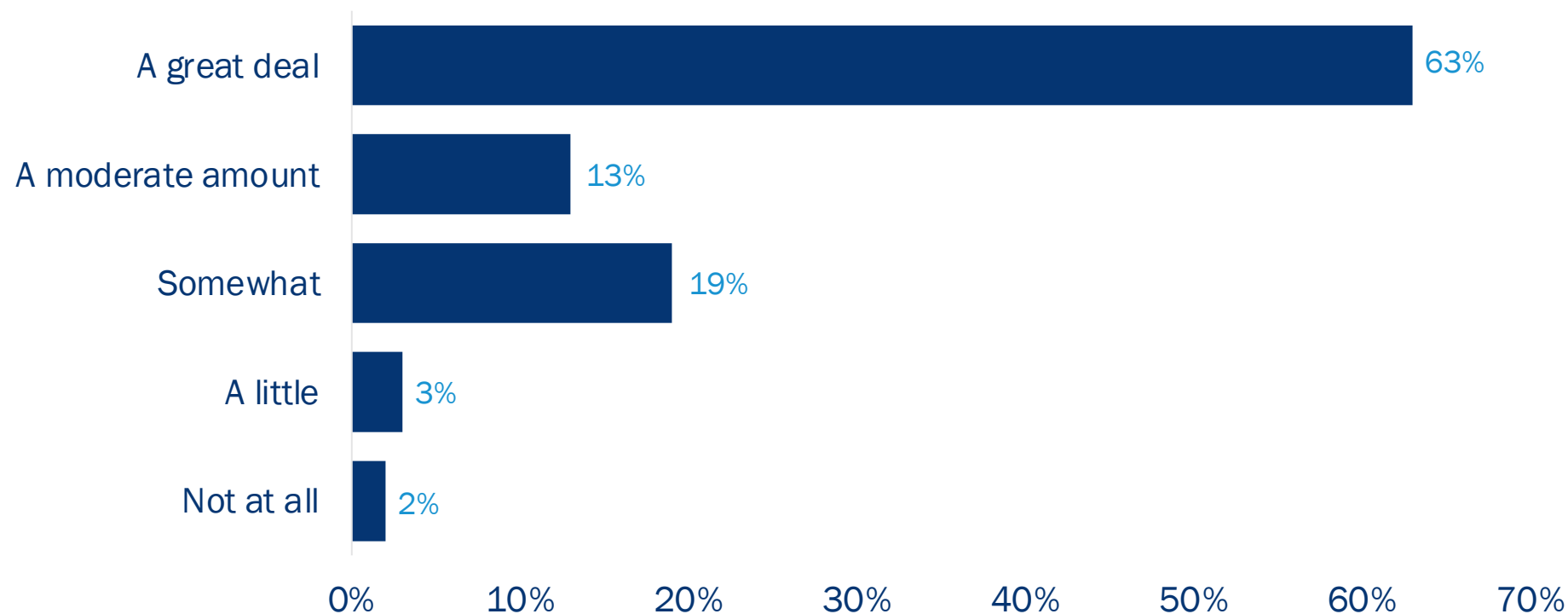
# Heat Pump Installs Layered with Non-TECH Incentives

- SMUD accounted for more than half of layered incentives
- BayREN only provided incentives for HPWHs, PG&E only provided incentives for HVAC heat pumps.

 Incentive Source	 All Installs (n=835)	 HVAC Heat Pump Installs (n=343)	 HPWH Count Installs (n=492)
SMUD	53%	52%	53%
BayREN	27%	0%	46%
PG&E	20%	48%	0%

# Layered Incentives Helped Contractors Sell Heat Pumps

Contractors found layered incentives to be helpful in selling heat pumps to customers.







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# FINDINGS

WE&T Trainings

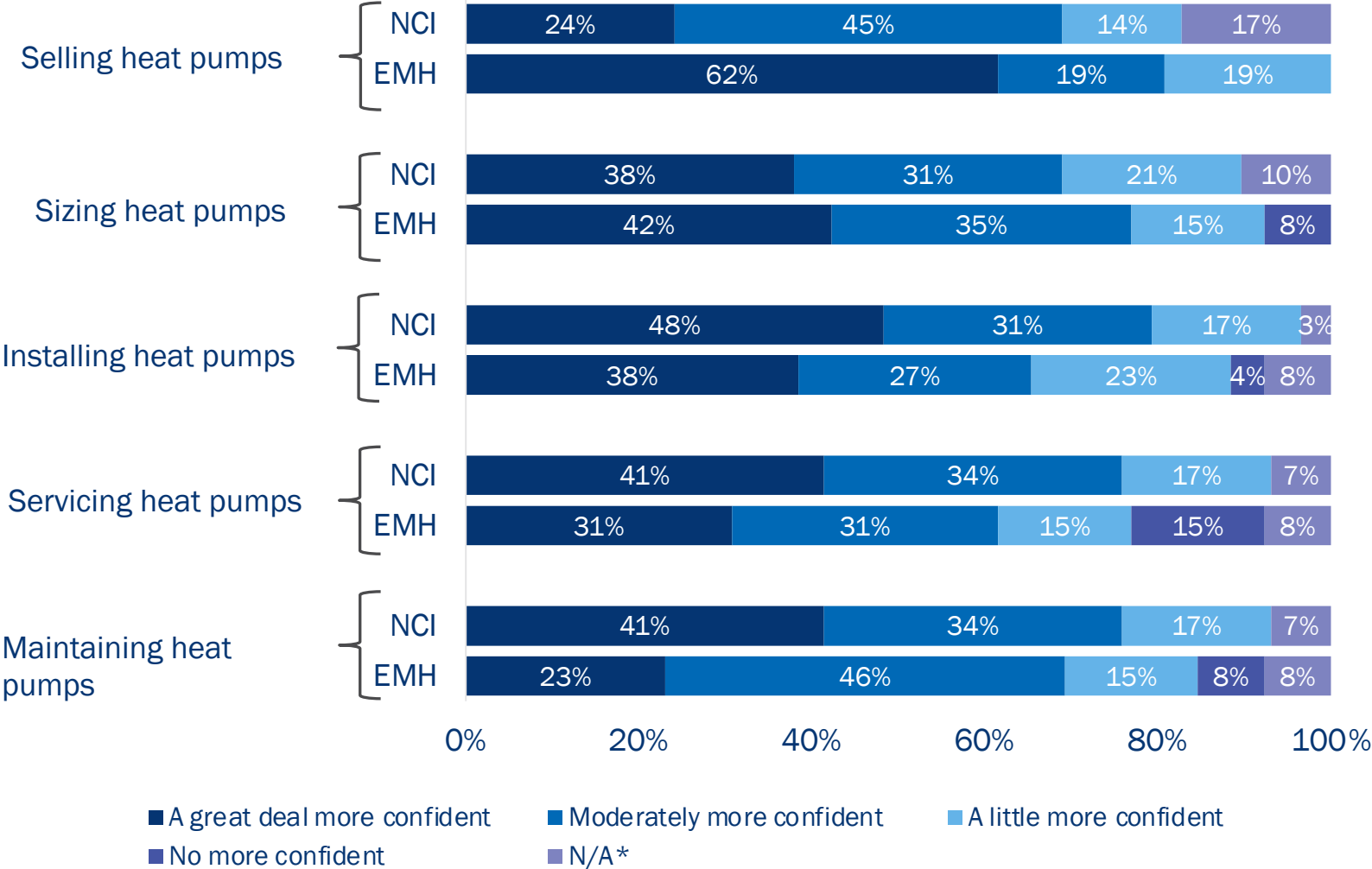
# Reason for Attending Training

Respondents most often attended training to gain new skills (82%) or to learn about new technologies and practices (77%).



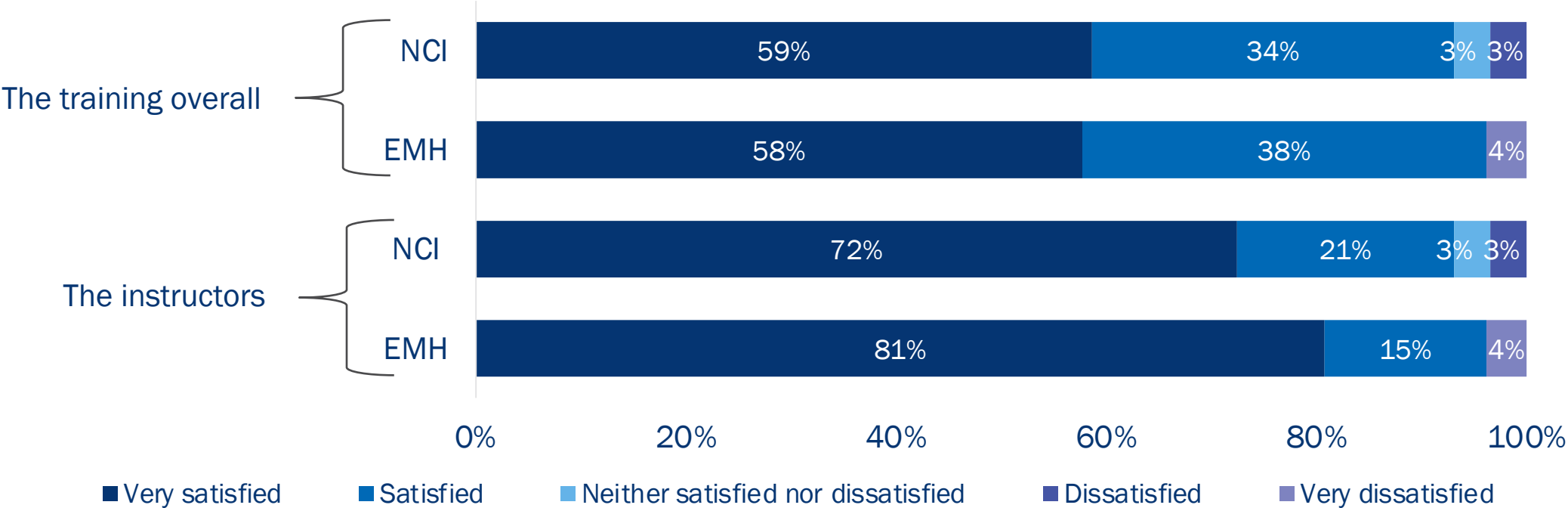
# Contractor Change in Confidence in Heat Pump Job Tasks

- Trainees became more confident in heat pump tasks following TECH training.
- NCI attendees saw the largest impact in their confidence in installing heat pumps, EMH attendees saw the largest impact in selling heat pumps.



# Contractor Satisfaction with Training and Instructors

- Trainees were generally at least “satisfied” with the training they received.
- Attendees reported higher satisfaction with instructors than with the training overall.





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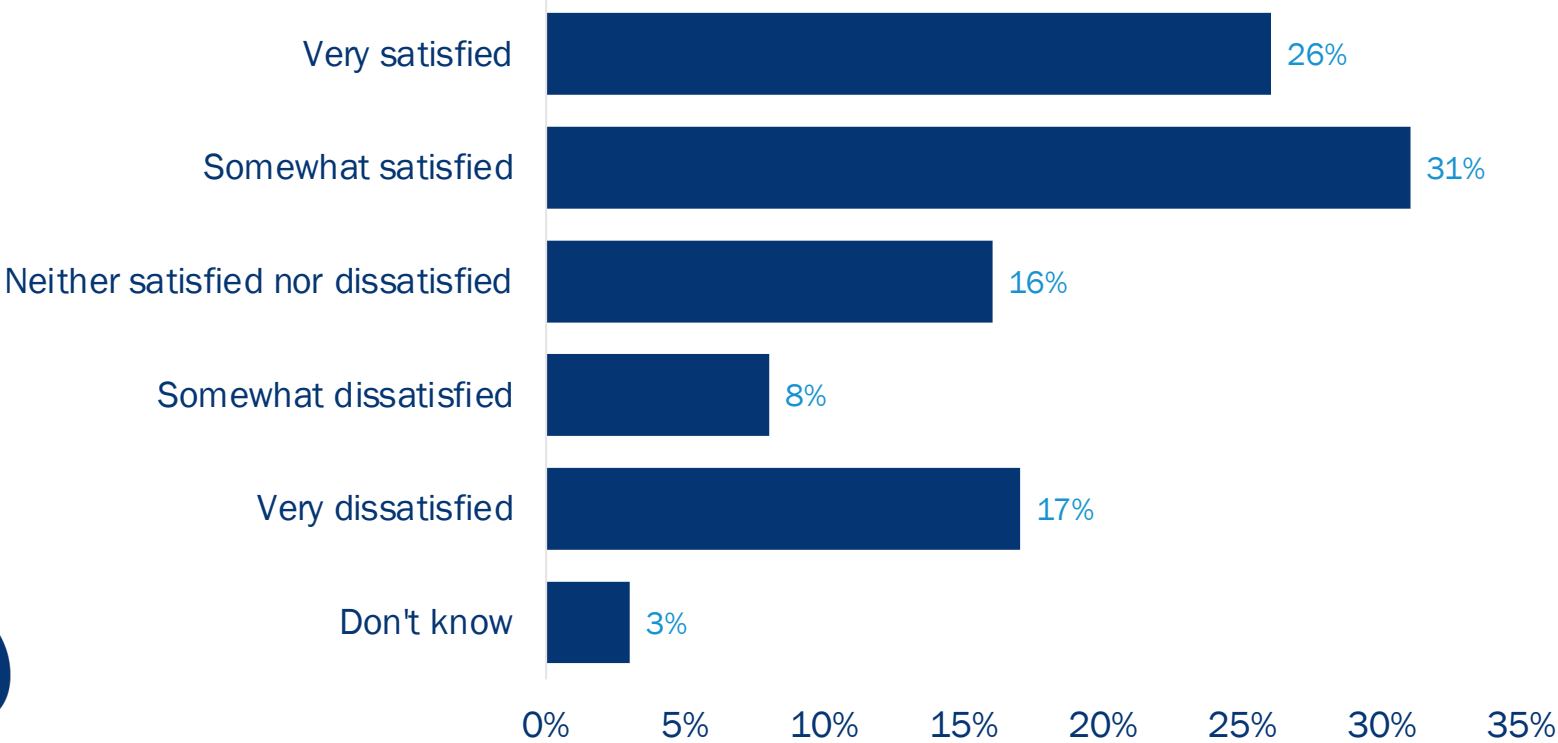
# FINDINGS

Program Processes

# Contractor Satisfaction with TECH Communication

A quarter of contractors (25%) expressed some dissatisfaction with communication from TECH.

“Email just doesn’t seem like a good way to communicate something as drastic as an incentive being cut completely short. What if we didn’t see that email until it was too late. Not a great way to communicate urgent items.”





# Data Tracking and Management

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Improvement needed to better develop insights to inform program design modifications.



Omissions in data tracked



Inability to link data across different systems



Lack of a comprehensive data dictionary



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# WHAT'S NEXT

# Interim Process Evaluation Draft Report

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- Will be available for public comment in October
- Will be posted to the Public Documents Area (PDA)
  - <https://pda.energydataweb.com/>
- Has lots more information on
  - Program processes
  - Contractor experience
  - Project locations and characteristics
  - Conclusions and recommendations



Opinion **Dynamics**

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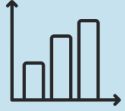
# 4 Incentives and Market Engagement

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Market incentives and workforce education and training to make it easier and cost-competitive for contractors to sell and install heat pump technology.



# TECH Clean California Activities



## Spur the clean heating market through statewide strategies

### Activate the supply chain

- Contractor incentives
- Streamlined Incentive Clearinghouse
- Technical and sales training

### Drive consumer demand

- Statewide marketing campaign and website



## Create scalable models through regional pilots

### Improve targeting and project finance

- Target customers using meter-based analysis
- Deploy a Tariffed-On Bill Financing Pilot

### Expand benefits to HTR customers

- Support low-income programs
- Multi-family pilots targeting property owners

### Streamline installation

- Streamline permitting and installation costs
- Enable load-shifting

### Innovation through Quick Start Grants



## Inform long-term building decarbonization framework

### Develop public reporting site

- Inform policymakers and market actors on progress and impacts

### Quantify decarbonization impacts

- Avoided costs, grid benefits, and customer bill impacts

### Inform policy development

- State, regional, and local regulatory policy

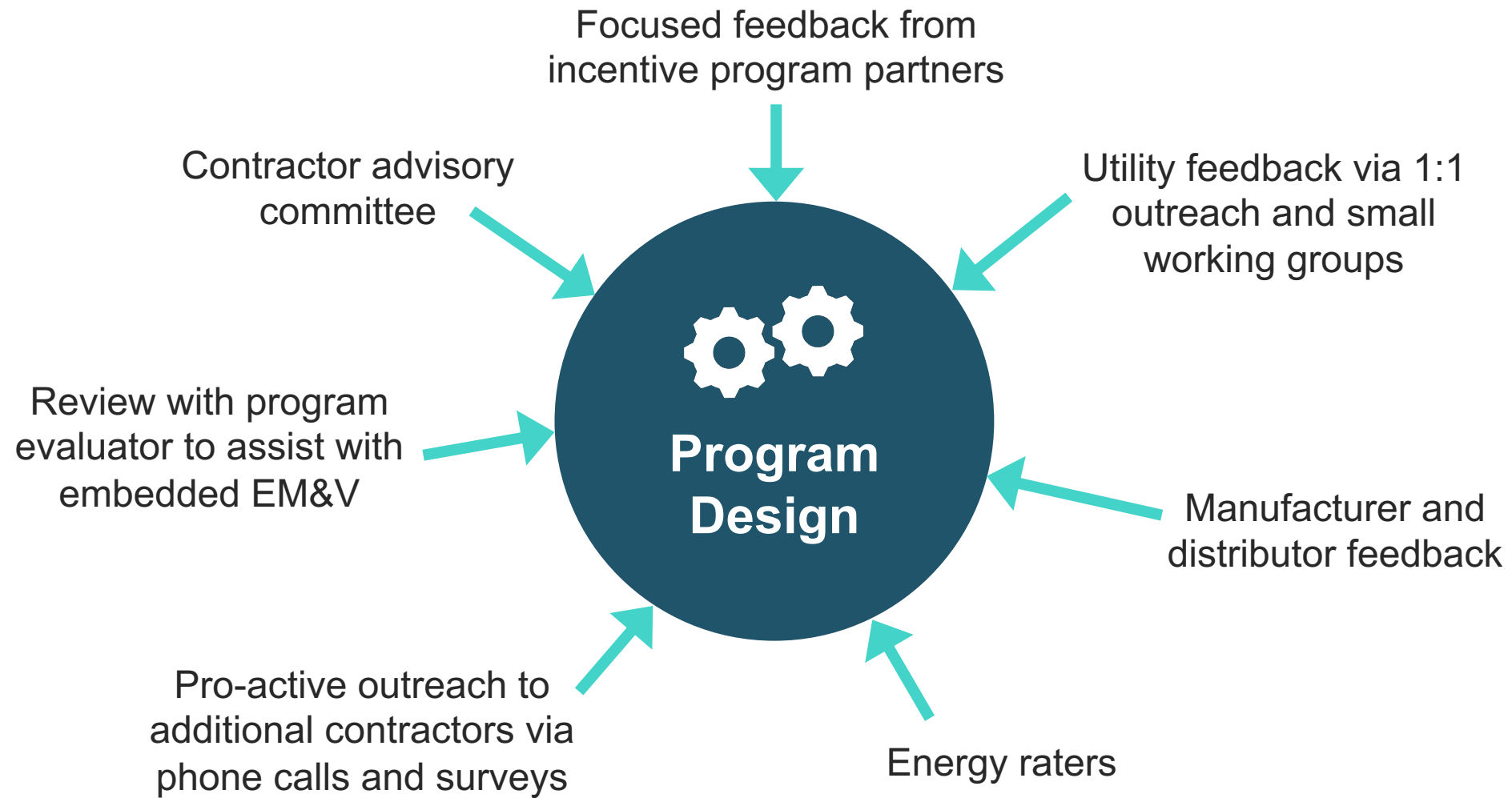
# Incentive Relaunch

Relaunch to be guided by our core principals of **simplicity**, **consistency**, and **scalability**

- Details to be developed, but design will aim to **decrease regional variation** and focus on **key goal of fuel switching**
- Pre-work to vet with market actors and other key stakeholders will help us close gaps and produce all required documentation on rules *before launch*



# Feedback is Critical



# Planning Sprints

*Restructuring TECH Incentive Program based on Contractor Feedback reported in Evaluation Report*

Contractors **could not find the model they installed** when the time came to submit application

- **QPL Sprint** to design a publicly accessible and searchable QPL, with easy method to request new units are included **before** application is ready to submit

Contractors had **issues determining customer eligibility**

- **Customer Validation** sprint to rethink system for contractors to confirm customer eligibility in a web-based search tool outside of password protected sites

Contractors felt that **completing applications took too long** and were **waiting too long to receive reimbursement**

- **Application Documentation Sprint** to review what we require to QA a application, and slim down where possible
- **Application Processing** sprint to develop innovative methods to cut down on claim review time

Contractors were **waiting too long to hear back** from us

- **Contractor Communication Sprint** to increase communication methods/automate where possible (e.g. via text messages)

Contractors felt **uncertain about reservation and claim status**

- **Reservation Process Sprint** to develop a more transparent reservation process, including additional statuses in Iris and auto-emails to notify participants about claim issues

# SGIP/IRA

*Leveraging TECH to fill gaps and provide education*

## **Self-Generation Incentive Program (SGIP) HPWHs**

- Over \$80M of funding going towards HPWHs
- TECH's role in HPWHs moving forward:
  - Fill geographic gaps
  - Provide market seeding incentive activities to overcome education, WE&T, and other gaps
  - Continue focus on pilots to increase HPWH activities.




## **Inflation Reduction Act (IRA)**

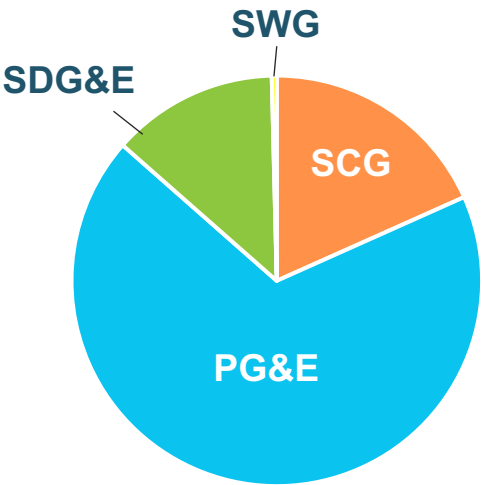
- Will provide additional incentives for HP technologies, although full implementation is not decided
- TECH will help to bridge education barriers to ensure use of TECH + IRA funds for HPs



# Single Family Incentives

## HPWH



-  **1,844\*** units submitted
-  **\$2.6M** in incentives
-  (+ **\$2.3M** layered from other programs)

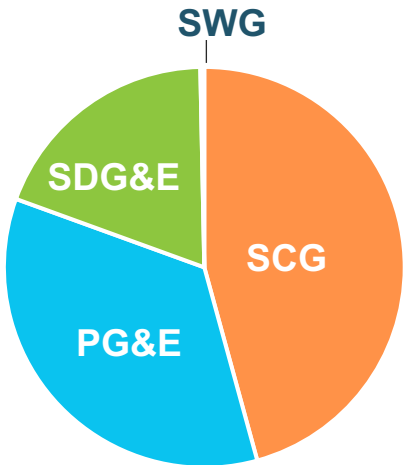


UEF	% of Total
3.00–3.19	1%
3.20–3.39	30%
3.40–3.59	27%

UEF	% of Total
3.60–3.79	20%
3.80–3.99	13%
4.00+	8%

## HVAC

-  **9,668\*** units submitted
-  **\$29.1M** in incentives
-  (+**\$3.1M** layered from other programs)



Efficiency	% of Total
< 16 SEER	28%
16 – 18 SEER	35%
> 18 SEER	37%

All this and more can be found on our public reporting site, [www.techcleanca.com](http://www.techcleanca.com)



# Current TECH Incentives Available

[incentives.switchison.org](https://incentives.switchison.org)

	Total Incentives Paid (\$)	Total Paid + In Process (\$)	Reserved Funds (Total Paid + In Process + Unsubmitted) (\$)	Allocated Incentive Budget (\$)	Non-Reserved Budget Remaining (\$)	% of Budget Remaining
<b>Total</b>	<b>30,239,900</b>	<b>43,046,350</b>	<b>49,667,250</b>	<b>51,235,986</b>	<b>1,568,736</b>	<b>3.1%</b>
<b>Single Family HPWH &amp; HP HVAC</b>	<b>30,165,200</b>	<b>31,595,850</b>	<b>36,629,850</b>	<b>38,002,986</b>	<b>1,373,136</b>	<b>3.6%</b>
Southern California Gas Territory HPWH Incentives	317,200	324,950	417,950	1,500,000	1,082,050	72.1%
Southern California Gas Territory HP HVAC Incentives	Suspended - All Incentives Reserved (\$15,245,583)					
Pacific Gas & Electric Territory	Suspended - All Incentives Reserved (\$15,414,962)					
San Diego Gas & Electric Territory	Suspended - All Incentives Reserved (\$5,386,041)					
Southwest Gas Territory	130,713	133,813	165,314	456,400	291,086	63.8%

Please go to <https://incentives.switchison.org> to see if you are in a qualifying territory

# Multifamily Incentives

Gas Utility Territory	Incentives Approved (\$)	Incentives Waitlisted (\$)	Budget Remaining (\$)
PG&E	5,080,800	5,735,200	-
SDG&E	1,304,720	-	-
SoCal Gas	5,793,800	-	-
Southwest Gas	-	-	195,600

Type	Approved units	Waitlisted units	Total
HP HVAC	3,405	1,719	5,124
HPWH	4,912	2,303	7,215
Panel Upgrade	419	701	1,120
<b>Total</b>	<b>8,736</b>	<b>4,723</b>	<b>13,459</b>

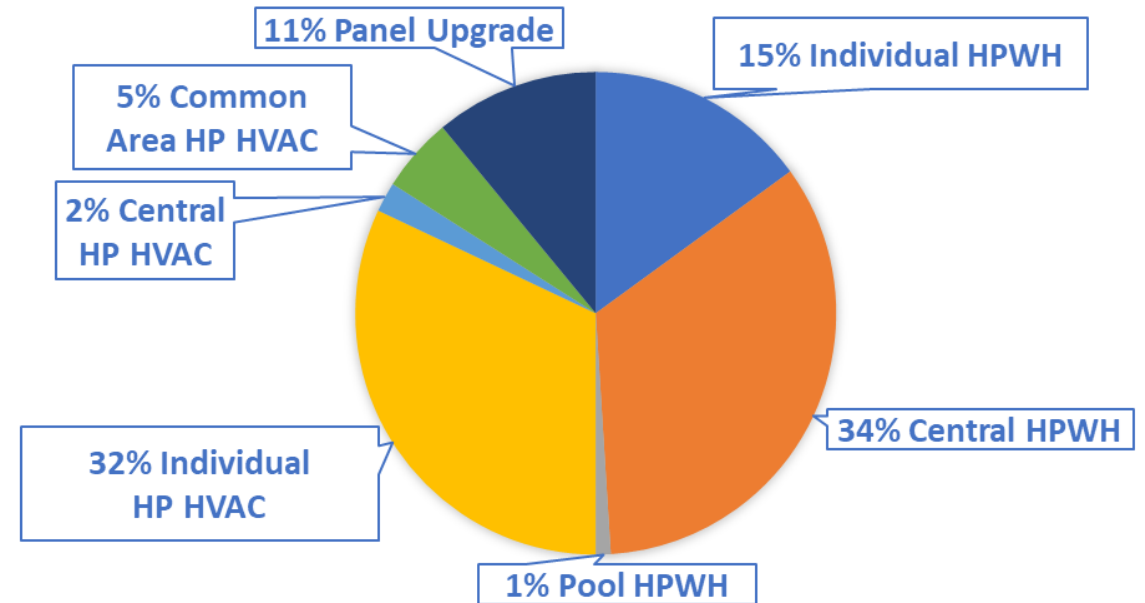


Data from October 6, 2022

# Multifamily Findings

- 7,082 Units being served – 69 properties
- Participating properties from 4 units to 647 units (avg 103 units / property)
- 49% of all MF projects are in DACs and majority are of projects are low income
- Greater HPWH incentives as water heating is typically the largest load in MF
- More Central HPWH than Individual HPWH

**% of Total Multifamily Properties Served by Measure Type**



# TECH Partner Program Incentives

*Providing a one-stop shop for heat pump incentives*

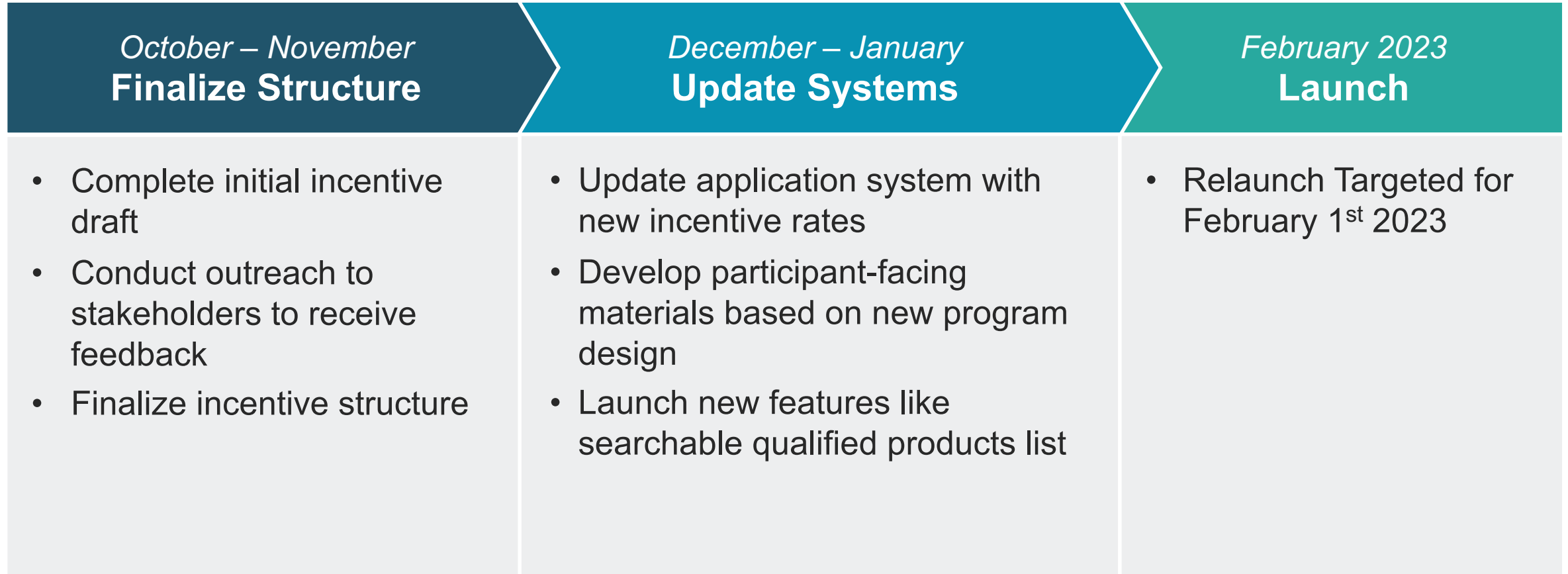


- \$1,000/HPWH installed to replace a natural gas or propane water heater
- Available for customers of EBCE, MCE, SVP or CPSF

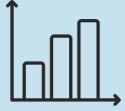
- Incentives available for heat pump HVAC and HPWH installations in single family and multifamily residences
- Available for customers of CCCE only
- Kickers available for income qualified customers and panel upgrades

Incentive details for be found at [switchison.org/contractors/incentive-resources](https://switchison.org/contractors/incentive-resources)

# Incentives- What is Next?



# TECH Clean California Activities



## Spur the clean heating market through statewide strategies

### Activate the supply chain

- Contractor incentives
- Streamlined Incentive Clearinghouse
- Technical and sales training

### Drive consumer demand

- Statewide marketing campaign and website



## Create scalable models through regional pilots

### Improve targeting and project finance

- Target customers using meter-based analysis
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### Expand benefits to HTR customers

- Support low-income programs
- Multi-family pilots targeting property owners

### Streamline installation

- Streamline permitting and installation costs
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### Innovation through Quick Start Grants



## Inform long-term building decarbonization framework

### Develop public reporting site

- Inform policymakers and market actors on progress and impacts

### Quantify decarbonization impacts

- Avoided costs, grid benefits, and customer bill impacts

### Inform policy development

- State, regional, and local regulatory policy



# TECH WE&T Updates

## Program Evaluation Findings

- Majority of contractors **found value** in training and **became more confident in selling and installing heat pumps** after trainings
- Contractors expressed value in having a **class focused on correct sizing** practices

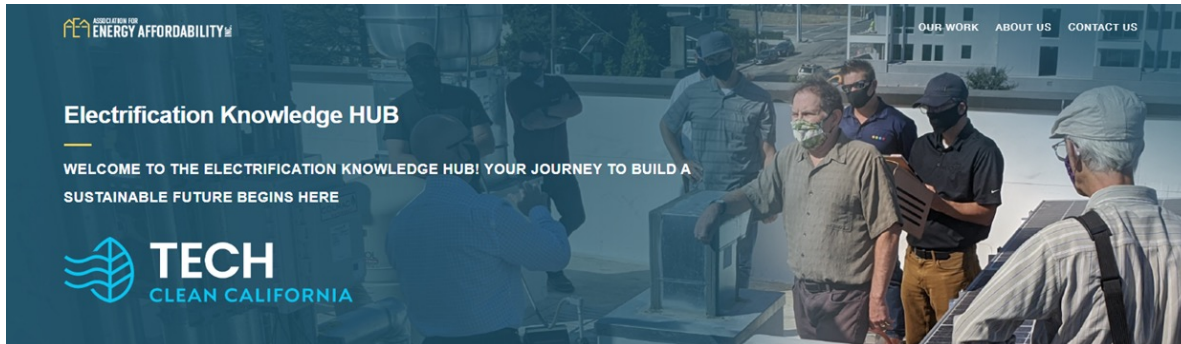
## TECH Updates

- Maintain HVAC and Electrification classes as they are through the end of the year
- Add HVAC class on sizing
  - Reduce barriers to training adoption by adding stipend for sizing software



# TECH Multifamily Training

- **AEA Trainings (On-demand, Webinar, Live/Field)**
  - Building Science
  - MF electrification 101
  - Installing Individual HPWHs (SF and MF)
  - Retrofits and Electrical Applications
  - MF Electrification Retrofits for Property Owners
  - Advance CHPWH Design and Installation
- **Held 7 Multifamily trainings YTD 2022**



## MF Elec 101:

*“Thank you, this presentation helped me be able to better explain to developers and builders why they should consider all-electric developments.”*

## Installing Individual Heat Pump Water Heaters:

*“Sizing would be useful to single-family homes, too! The sizing stuff was very useful. Thanks!”*

## Retrofit and Electrical Assessments:

*“The class last Friday was one of the best MF courses I have been a part of...The Load Monitoring Study example was where I could definitely learn by watching it again. I was totally humbled by the pre-training quiz but did pass it after the training, so you did a good job informing me”*

Training schedules and signups found at <https://www.switchison.org/contractors/training-hub>



# TECH WE&T 2023 Planning

TECH will break out water heating training from HVAC training as the launch date for SGIP draws closer and HPWH training needs additional scale.



HVAC Training:  
**NCI**



HPWH Training:  
**ESMAC**



Electrification Training:  
**EMH**



Multifamily Training:  
**AEA**

# TECH WE&T- ESMAC Partnership

*Contractors would prefer to attend HPWH training delivered online by manufacturers*

TECH is partnering with the ENERGY STAR® Manufacturer Action Council (ESMAC) to deliver online training from major HPWH manufacturers (AO Smith, Bradford White, ECO2 Systems, Nyle, and Rheem)

- Webinars to cover:
  - Presentation from each manufacturer, including overview of product lines and installation considerations
  - Presentation from TECH, including overview of TECH and other program incentives
- Trainings targeted for a November launch with sessions through February



# TECH WE&T – IHACI Show-Within-a-Show

IHACI is a HVAC focused conference held in Pasadena. Attended by 3,000–3,500 HVACR/SM industry actors  
Goals: Promote incorporating HP technologies into service offerings. Provide training on the value proposition and best practices for installing, servicing, and maintaining HP HVAC and HPWHs.

## 2 of 4 Main Sessions

- Grow Your HVAC Business with Heat Pump Water Heaters (ESMAC & TECH)
- HVAC Workforce Development and Career Building (TECH)

## HP Technology Aisle

- **TECH:** Advancing HP adoption — Technology & Resources
- **ESMAC**
  - Heat Pump Water Heaters on display
  - Incorporating Heat Pump Water Heaters into service offerings

## Mini Mastery Sessions

"15 Minutes to Mastery" mini sessions to promote TECH trainings:

- Manuals J/D/S
- Panel sizing considerations
- Demystifying and Value Proposition for HPs
- ASHRAE 221
- Navigating Utility Programs

# Intermission



# 5 Marketing

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## Purpose

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

## Campaign Goals

### EDUCATION

Drive awareness and educate consumers about electrification.

### INSPIRATION

Encourage adoption of electric appliances over gas appliances.

### SWITCHING

Support the process of switching to electric from beginning to end.

**EQUITY**

# EDUCATION



THE SWITCH IS ON

## Articles/Blogs/Spotlights

SwitchIsOn.org

Credit: Silicon Valley Clean Energy eHub

### This Santa Clara County Company Pays Contractors to Go Green (Yes, Really!)

## Creative Assets, Palm Cards

### HEAT PUMP TECHNOLOGY

THE SWITCH IS ON

This healthier, cleaner option is the future of water heating

**Your water heater is the second largest user of natural gas in your home – and water heating accounts for 20% of our country's overall energy use.**

Since a gas-powered water heater is the second-largest user of natural gas in your home after furnaces, that means we are combusting a ton of methane just to take our daily hot shower or wash our dishes. There is a more environmentally friendly option that's easy, safe, and cost efficient: a heat pump water heater uses proven technology to keep your water hot and your energy use low.

A heat pump water heater works by pulling heat from the surrounding air into a hot water tank. Think: a heat pump water heater pulls in air like a vacuum pulls in dirt. This heated water is then piped throughout the home to all the places you need it: showers, dishwashers, sinks, and washing machines.

**THE BOTTOM LINE:** Heat pump water heaters can be **three times** more efficient than conventional water heaters.

Learn more at [SwitchIsOn.org/water-heating](https://SwitchIsOn.org/water-heating)

#### Perks and Benefits:

- Cost.** A heat pump water heater can cut utility bills by pairing with your home's solar.
- Efficiency.** Three times more efficient than traditional water heaters.
- Safety.** Gas water heaters require open flame to heat water, but heat pump water heaters require no on-site combustion.

**There are many reasons to switch to a heat pump water heater – safety, efficiency, and cost. You can get started right away by finding incentives in your area.**

Thanks to Incentives in California, a new heat pump water heater is more affordable than ever.

When you purchase a heat pump water heater through a contractor, it allows you to take full advantage of the available incentives.

You can find a contractor and learn more about cost-savings on our website!

Scan the QR code to learn more!

Learn more at [SwitchIsOn.org/incentives](https://SwitchIsOn.org/incentives)

## Ambassadorship



### Ambassador Network

- Neighborhood: 150
- Community organizations: 10
- Influencer and Contractor

# INSPIRATION



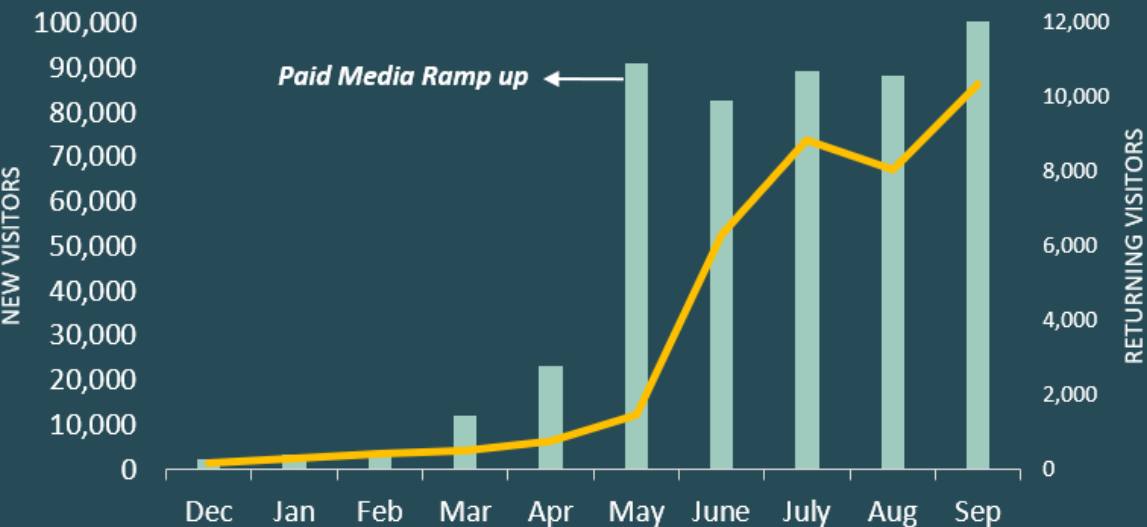
THE SWITCH IS ON

- **Paid Media** has increased the number of visitors by **10x** for a given region
  - Digital advertising mediums include Google and Facebook
  - Visitors stayed on the site longer and took more actions like requesting quotes or looking up incentives
- **Creative assets** such as videos available in English, Spanish, Mandarin, and Tagalog
  - Videos re-cast to represent distinct diversity of cuisine and culture of representative language group
- **Steady increase in quotes** requested in August and September

SIO Website Traffic

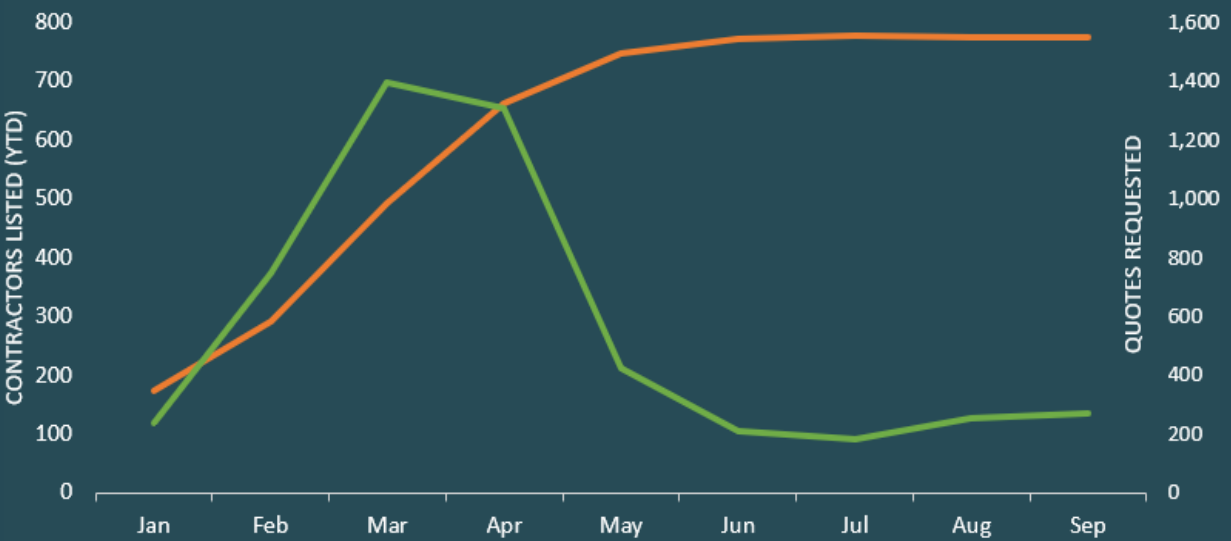
New Visitors    Returning Visitors

*Paid Media Ramp up* ←



Contractors

Contractors Listed in Directory (YTD)    Quotes Requested





# INSPIRATION

## Social Media Engagement

- Incorporating the new creative centered on the “myth-busting” themes
- Focus on direct, authentic engagements to build a return audience following
- Amplifying partners accounts and enriching the network
- Top Performing Post September: Tweet <https://bit.ly/3pD9mE8>



THE SWITCH IS ON

← Tweet



The Switch Is On  
@switchison

...

The ira poised to monumentally shift the home electrification space. Here's how [bit.ly/3pD9mE8](https://bit.ly/3pD9mE8) ✓




6:28 PM · Sep 6, 2022 · Twitter for iPhone

@switchisonca

@switchison

# SWITCHING

 THE SWITCH IS ON

Select Language ▼

[Learn More](#) [Make the Switch](#) [About](#) [Contact](#) [FAQs](#)

### INCENTIVE LOOKUP FOR CUSTOMERS

**BUILDING TYPE** ▼

☐ SINGLE-FAMILY

**EQUIPMENT TYPE** ▼

☒ HEAT PUMP WATER HEATER  
☐ INDUCTION RANGE  
☐ MINI-SPLIT HEAT PUMPS  
☐ CENTRAL HEAT PUMPS  
☐ HEAT PUMP DRYER  
☐ INSULATION AND DUCTWORK  
☐ AIR SEALING  
☐ SMART THERMOSTAT  
☐ WHOLE HOUSE FAN

**INCOME QUALIFYING?** ▼

☐ NO

**WHO CAN APPLY?** ▼

☐ CONTRACTORS  
☐ HOMEOWNERS  
☐ RENTERS

SEARCH CLEAR ALL


**SEARCH**  
for local California incentives by location, specialty and more.

**CONNECT**  
directly with trusted contractors, no middle-man.

**ENJOY**  
the benefits of your eligible rebates and incentives.


**(-) HEAT PUMP WATER HEATER**

**3 Incentives Available For 94607**


Local Governments Empowering Our Communities

**Save \$1,000 Per Unit - Rebate On Heat Pump Water Heater**

REQUIREMENTS  
Must use participating contractor and ≥ 3.1 UEF

WHO CAN APPLY  
 Contractors

GET REBATE LEARN MORE



**Save \$450 Per Water Heater - Rebate On Heat Pump Water Heater**

REQUIREMENTS  
Removal of gas powered water heater

GET REBATE



THE SWITCH IS ON

## Enhanced Incentive Finder

- Customer and Contractor user experiences
- Search filters
- New incentive profile pages
- Better administrator functionality
- Increased clarity for residents

# SWITCHING



THE SWITCH IS ON

## Income Qualifying Programs

### CALIFORNIA PROGRAMS

#### Bassett Avocado Heights Advanced Energy Community (BAAEC)



##### Where:

Communities in and surrounding Bassett and Avocado Heights unincorporated areas ([Eligibility Map](#))

##### Description:

BAAEC is offering free energy technologies, such as solar panels, battery storage, and heat pump water heaters for eligible Technologies are valued up to \$50,000. Complete the online interest form to be contacted for more information.

[MORE INFO](#)

### GENERAL PROGRAMS

#### Energy Savings Assistance Program (ESA)



##### Where:

Statewide

##### Description:

The Energy Savings Assistance Program (ESA) provides no cost weatherization services to energy users who meet CARI interested in using these program services apply to the program through their utility. Services include, attic insulation, refrigerators, energy-efficient furnaces, and more. Go to the ESA program page to find your utilities application page.

[MORE INFO](#)

## Find a Contractor



THE SWITCH IS ON

Select Language

[HOW IT WORKS](#)

[FIND INCENTIVES](#)

[FAQS](#)

[SPEAK TO AN EXPERT](#)

[FIND A CONTRACTOR](#)

Are you here to take advantage of TECH Clean California rebates? Not all contractors who are eligible for TECH incentives are listed in the directory. [Click here](#) for a full list of TECH contractors.

### FIND A CONTRACTOR

Contractor Name

Zipcode

Distance from Zip

SEARCH

CLEAR ALL

### REFINE SEARCH

#### SERVICES

- ☐ MINI-SPLITS
- ☐ SOLAR PV
- ☐ VARIABLE SPEED POOL PUMPS
- ☐ HEAT PUMP CLOTHES DRYER
- ☐ WINDOWS
- ☐ ENERGY AUDITS
- ☐ BATTERY STORAGE
- ☐ EV CHARGING
- ☐ SMART HOME CONTROLS
- ☐ DUCTED HEAT PUMP SYSTEMS
- ☐ PANEL UPGRADES
- ☐ INSULATION
- ☐ HEAT PUMP WATER HEATERS
- ☐ AIR SEALING
- ☐ FRESH AIR SYSTEMS
- ☐ WHOLE HOUSE FANS

#### SEARCH

for local California contractor by location, specialty and more.

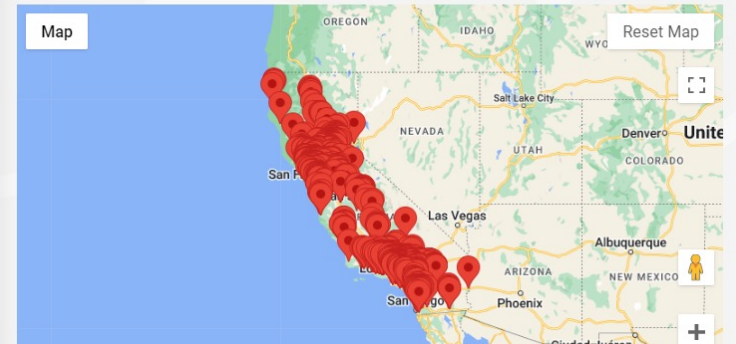
#### CONNECT

directly with trusted contractors, no middle-man.

#### COMPARE

quotes and pick the right professional for your project.

Map



# USER ANALYTICS

As of September 2022



THE SWITCH IS ON

## Top 10 Cities visiting SIO

1	Los Angeles (18,884)	6	Santa Maria (2,131)
2	San Francisco (8,430)	7	Sacramento (2,128)
3	San Jose (4,369)	8	Fresno (1,802)
4	Irvine (3,146)	9	Bakersfield (1,436)
5	Salinas (2,438)	10	Stockton (1,015)

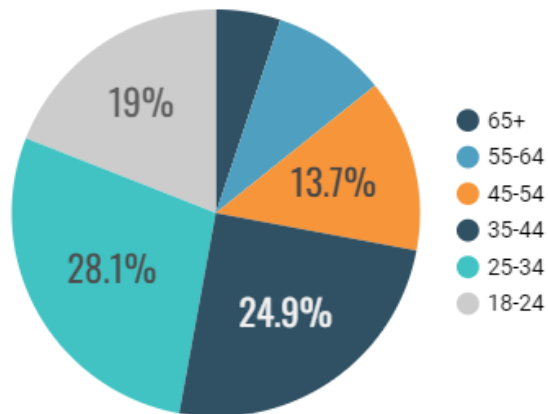
## Top 3 Languages

1	English	75.1%
2	Spanish	17.5%
3	Chinese	1.6%

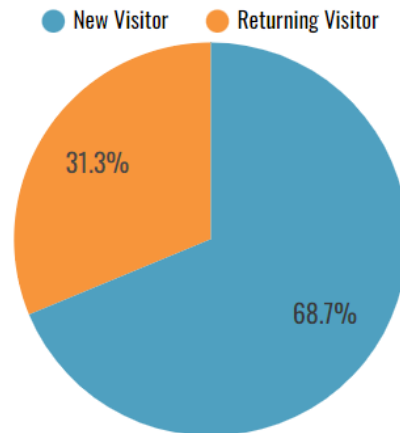
Most-Viewed Pages:

- **Incentive Finder**
- **Find a Contractor**

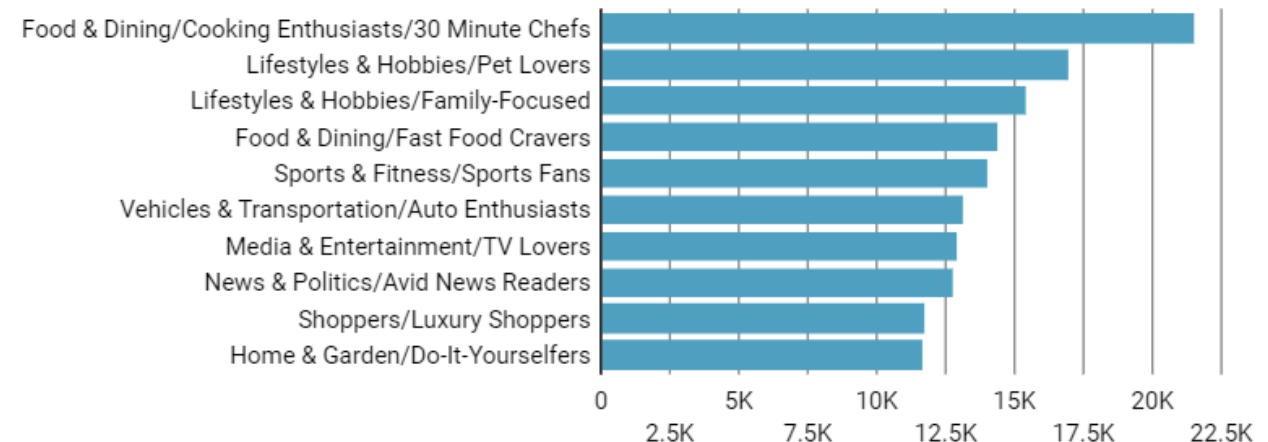
## By Age Group



## New Users vs Returning Users



## User Interest Categories by Number of Sessions



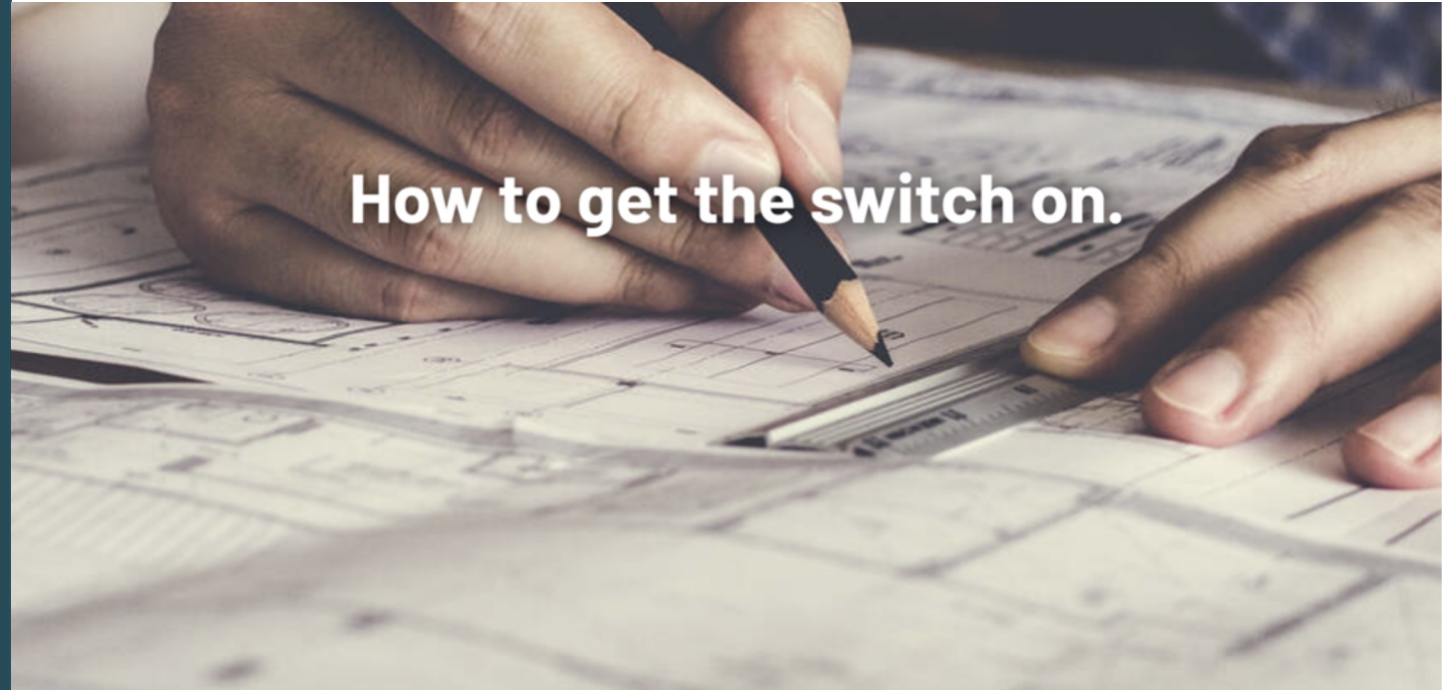


# Continuous Improvement

- Incentive Finder Enhancement ✓
- Financing Options page ✓
- Content Assessments ✓
- Translating Flyers ✓
- Tabling Resource Package ✓
- Switchison.org UX Review ⌚
- Partner Recruitment/Renewal ⌚
- IRA Explainers ⌚
- Retail Pilot 💡



THE SWITCH IS ON



**How to get the switch on.**

**[www.switchison.org](http://www.switchison.org)**

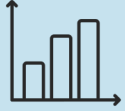
6

## Pilots & Quick Start Grants

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# TECH Clean California Activities



## Spur the clean heating market through statewide strategies

### Activate the supply chain

- Contractor incentives
- Streamlined Incentive Clearinghouse
- Technical and sales training

### Drive consumer demand

- Statewide marketing campaign and website



## Create scalable models through regional pilots

### Improve targeting and project finance

- Target customers using meter-based analysis
- Deploy a Tariffed-On Bill Financing Pilot

### Expand benefits to HTR customers

- Support low-income programs
- Multi-family pilots targeting property owners

### Streamline installation

- Streamline permitting and installation costs
- Enable load-shifting

### Innovation through Quick Start Grants



## Inform long-term building decarbonization framework

### Develop public reporting site

- Inform policymakers and market actors on progress and impacts

### Quantify decarbonization impacts

- Avoided costs, grid benefits, and customer bill impacts

### Inform policy development

- State, regional, and local regulatory policy

# Quick Start Grants: 2022 Project Update



## Enabling Faster Installations

**Barnett Plumbing**, Loaner Water Heaters for Emergency Fuel-Switching

**Small Planet Supply**, Parkside Apartments HPWH

**New Buildings Institute**, 120V HPWH Field Test

**IHACI**, Virtual Technician Software Platform

## Making Programs More Inclusive

**Redwood Coast Energy Authority**, Air Source Heat Pump Incentives for Unregulated Fuel Customers

**Franklin Energy and MCE**, Augmentation of Income-Qualified Electrification Program

## Reducing Energy Costs

**The Energy Coalition**, Basset Avocado Heights Advanced Energy Community HPWH

**AESC**, Interactive Impacts of HPWH in Manufactured and Mobile Homes

## Innovation for Multifamily Housing

**BlocPower and City of San Luis Obispo**, Better Buildings SLO Pilot

**Revalue**, Green and Healthy Homes

**USGBC-LA**, Electrification in Green and Affordable Homes Program

Learn more about the Quick Start Grant projects at <https://techcleanca.com/quick-start-grants/>



# Enabling Faster Installations (1 of 2)

## Barnett Plumbing

### *Loaner Water Heaters for Emergency Fuel-Switching*



**Objective:** Offer customers a gas water heater loaner to bridge the time from breakdown to HPWH install.

- 70% of heat pump sales are emergency replacements that require a loaner
- Customers are very enthusiastic about the loaner option
  - 46 loaners installed in month of August alone
  - 88 total HPWH installed so far; selling 2.5 HPWH per business day

## Small Planet Supply

### *Packaged Central HPWH for Farmworker Housing*



**Objective:** Install novel, easy-to-install packaged central heat pump boiler in a 40-unit multifamily complex to test viability of this solution similar buildings.

- Installation of equipment (displacing gas boiler) completed
- Delay in building-level power up
- Next step is equipment start up, site commissioning and long-term monitoring

# Enabling Faster Installations (2 of 2)

## New Buildings Institute 120V HPWH Field Test



**Objective:** Field test of emerging 120V HPWH

- 5 units in variety of tank sizes installed from 2 manufacturers
- Biggest barriers: Supply chain issues and permitting office unfamiliarity with heat pumps
- Next steps: Monitoring for energy and operating cost analysis, contractor and resident satisfaction surveys

## Institute of Heating and Air Conditioning Installers Visual Service Software Platform



**Objective:** Expansion of Visual Service software, enabling real-time virtual collaboration between master technician and installer

- Continuing to support 7 contractors and 37 technicians in use of Visual Service software
- 100 + triage calls performed using precision tools
- Continuing to improve contractors' training experience and platform, including new ability to track refrigerant usage and recycling



# Making Programs More Inclusive

## Redwood Coast Energy Authority

*Air Source Heat Pump Incentives for Unregulated Fuel Customers*



**Objective:** Support HP installs in rural and Native American communities on unregulated fuels

- 8 projects underway; 20 planned by end of 2022
- Unique situations in customers' homes – e.g. many older homes heated with radiator systems, oil burners, wood stoves, etc.
- Challenges finding interested contractors in the area

## Franklin Energy and Marin Clean Energy

*Augmentation of Income-Qualified Electrification Program*



**Objective:** Complete home repairs preventing electrification in existing income-qualified retrofit program

- After delays receiving equipment, 7 home upgrades have been performed so far, with total of 20 planned by the end of 2022
- Positive responses from contractors in the field who are now able to say “Yes” to interested households
- Electrical work, including knob and tube wiring, is a substantial hurdle

# Reducing Energy Costs

## The Energy Coalition

*Basset Avocado Heights Advanced Energy Community*



**Objective:** Study bill impact of HPWH in solar + storage LMI advanced energy community

- Performed 13 water heater “tune ups” and 7 Action Plans for community residents
- Challenge finding customers meeting all the requirements of layered programs, including roof suitable for solar. Obtained additional funds to improve roofing structures from CEC

## AESC

*Interactive Impacts of HPWH in Manufactured Homes*



**Objective:** Study impact of HPWH on on existing HVAC load in manufactured homes in high-poverty areas

- 10 manufactured homes identified for participation in Winton, CA (Cal Enviro Screen-designated disadvantaged community)
- Currently budgeting for the work so that HPWH installations can begin in October
- Prevalence of window A/C creates complications



# Innovation for Multifamily Housing (1 of 2)

## BlocPower and City of San Luis Obispo

### *Better Buildings San Luis Obispo Pilot*



**Objective:** Retrofit 10-12 affordable multi-family housing units with heat pumps; establish Green and Healthy Homes Roundtable to engage community members and develop a communications plan

- Audits of 4 Housing Authority of San Luis Obispo (HASLO) properties. One HASLO property prioritized to develop a BlocPower financing proposal
- Four “Green and Healthy Homes Roundtable” meetings held to date (pictured)

## USGBC-LA

### *Electrification in Green and Affordable Homes Program*



**Objective:** Install HPWHs and ASHPs in 10 affordable housing units in Eastern San Fernando Valley, CA and add heat pumps to an education and outreach program.

- Established pipeline of ~17 affordable housing heat pump conversion projects
- Plans completed or underway for multiple properties
- Resident education and engagement materials created in English and Spanish

# Innovation for Multifamily Housing (2 of 2)

## Revalue

### Green and Healthy Homes

**Objective:** Remediate home health hazards in multifamily affordable housing through electrification while training to contractors to improve the diversity of the HVAC workforce

- Held first 3-day training for local minority contractors at Cypress Mandela Training Center as part of ongoing partnership with Efficiency First and PG&E

*"I enjoyed learning how to install heat pumps and HVACs. It was apparent to me how crucial it is for the betterment of our environment and our communities. I'm glad to be a small part of change that has a positive impact in our community."*

**Robert Ricks, WorldWideBuilt Contractors (BayREN Participating Contractor)**

*"The transition to renewable energy seems to be a huge task but having this level of training for our contractors shows the commitment of what we can do collectively in a partnership"* **Mario Wagner, Vice President, National Association of Minority Contractors**

- Selected 8 multifamily homes in Oakland to receive remediation
- Launched Alameda County Green and Healthy Homes Initiative as well as partnerships with EBCE and Harvest Thermal



Images courtesy of Revalue



# Regional Pilot Updates: Inclusive Utility Investment Program

**Pilot Objective:** Launch program with partner utility to expand customers' access to up-front capital

## October 2022 Update:

- Partnering with Silicon Valley Clean Energy to install 500 HPWH and 500 HP HVAC systems in high energy use households
- Issued Request for Proposals for a Program Operator to implement the program; selection mid-November
- Awaiting approval in CPUC Clean Energy Finance Proceeding, hopefully by end of 2022
- Researching customer-facing savings estimation risks to inform risk mitigation plan
- Implementation could begin Summer 2023





# Regional Pilot Updates:

## Low Income Integration Pilot

**Pilot Objective:** Collaborate with low-income retrofit programs to incorporate heat pumps into existing offerings

### October 2022 Update:

- **24** home remediations completed in San Joaquin Valley (and growing)
  - 18 out of 24 are mobile homes
- Gathering data on cost and frequency of needed home remediations. Most common needs include:
  - Electrical upgrades, i.e. panels and trenching and/or tree trimming
  - Relocation of water heater
- Collaboration with PG&E's ESA pilot launching this fall
  - Focusing on electric resistance – HPWH conversions
  - TECH will provide education, outreach, and funding for home repairs







Photo credit: AEA

# Regional Pilot Updates: Multifamily Pilot

**Pilot Objective:** Provide deep technical support in building system design to reduce perceived risk of heat pump systems

## October 2022 Update:

- Continuing to sign up properties for all three pilot tracks
  - *Portfolio Roadmaps*
  - *Electrification Readiness plans*
  - *Central Heat Pump Water Heater technical support*
- Learn more at <https://techcleanca.com/multifamily-information/>

# Regional Pilot Updates:

## HPWH Load Shifting Pilot

**Pilot Objective:** Influence contractors as key actors to maximize HPWH load shifting

### October 2022 Update:

- Watch thermostatic mixing valve training with Caleffi:  
<https://www.youtube.com/watch?v=4DW1XNeWIfE>
- Currently: \$50 bonus incentive available to contractors who enroll contractors in demand response programs like
  - *PowerMinder*
  - *WatterSaver*
  - *Ohm Connect*
- Other DR programs can reach out to [tech.pilots@energy-solution.com](mailto:tech.pilots@energy-solution.com) if interested in participating





# Regional Pilot Updates: Streamlining Permitting

**Pilot Objective:** Design and test process for code-compliant, One Day HPWH permit, and support broad use and regional permitting consistency

## October 2022 Update:

- Began working with City of Pleasant Hill as implementation partner for the permit guidance package
- Seeking second partner jurisdiction in Silicon Valley Clean Energy territory
- Reviewing model permitting systems and processes from San Mateo County, Berkeley, and Petaluma
- Engaging broader group of building departments for trainings
- Tracking where existing guidance resources are being used



# Regional Pilot Updates:

## Customer Targeting

**Pilot Objective:** Identify and engage customers who can benefit most from heat pumps

### October 2022 Update:

- Recurve analyzed 2.4 million single family households' energy data to help SCE find ideal heat pump candidates
- Email campaign to test targeted vs. general outreach approaches will begin in 2023 when new incentives are available
- Next effort: using dashboard to identify ESA-eligible customers in SCE territory
- Future effort: regional focus on Aliso Canyon area



# Pilots and Quick Start Grants: Looking ahead



7

Q&A



# Thank You

*For more information or to get involved, contact:*

TECH.info@energy-solution.com



Tre'Laine



[www.techcleanca.com](http://www.techcleanca.com)