

Local Energy Resources Network



Meeting 26
January 9, 2024

*Featuring a Conversation with TECH
Clean CA.*



Welcome!

Purpose

Interactive 1-hour meetings designed to be a regular space where local governments - and those who work with them - can help each other learn about (and possibly inform) available opportunities to advance their energy and climate goals.

TODAY'S AGENDA

- Opportunity Roundtable + Spotlight
- Featured Presentation from TECH Clean CA
- BPC Workshop - CEC RFIs
- Optional: Extended 15 minutes for Bonus Breakouts



Opportunity Roundtable

Need/Have
Board

View all
Opportunities

Policy Drives Investment

Agencies Scope/ Design Assistance Programs & Gather Input

Applicants Apply to Funding Solicitation

State

- FY 21-22 Budget (\$15B climate resilience)
- FY 22-23 Budget (\$38.8B climate change)
- Cap and Trade auction revenue allocations
(~\$19B raised since 2013)
- FY 23-24 Budget
- State agency proceedings (e.g. *CPUC
microgrid, CEC IEPR, *CARB Scoping Plan)
- NEW 9th circuit panel of judges denied
petition for an en banc rehearing of Berkeley's
gas ordinance.

Federal

- Infrastructure Investment and Jobs Act (IIJA)
(2021) = \$47B in climate resilience funding
- FY 22-23 Budget (\$44.9B climate change)
- Inflation Reduction Act (IRA) (2022)
- Biden's Proposed FY 23-24 Budget (\$52.2B
climate change)

Funding

- DOE: Grid Resilience and Innovation Partnerships (GRIP) Program - Concept papers due January 12, 2024
- CEC: CA's National EV Infrastructure Formula Program - January 26, 2024
- DOE: Community Energy Innovation Prize - due February 2, 2024
- CEC: Build Grid Asset Enhancements for Grid Reliability - due February 20, 2024
- EPA: Climate Pollution Reduction Grants (\$4.6B), Phase 2 Implementation - due April 1, 2024. EPN app guide
- CEC: A Decision Tool to Electrify Homes with Limited Electrical Panel Capacity - due March 5, 2024
- CEC: EPIC Grid-Supportive Transportation Electrification Grants - due March 29, 2024
- CEC: Charging Infrastructure for Government Fleets - due April 5, 2024
- EPA: Strategies to Increase Hydropower Flexibility - Concept Papers due January 18 - due April 11, 2024
- DOE: EECBG Formula Grants and Voucher - webinar Nov 16; due April 30, 2024
- DOE: Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) - Concept Paper due Dec 18 -
due April 30, 2024
- EPA: Environmental and Climate Justice Community Change Grants - Nov 21, 2024. EPN app guide.
- IRS: Consumer clean energy tax credits live!

Input

- State/Local Energy & Climate Coordination; next meeting: March
- CEC: EPIC Energy Storage Innovations to Support Grid Reliability Draft Solicitation Concept - comments due
January 16
- CEC: Community Energy Resilience Investment (CERI) RFI due January 19, 2024
- CEC: HOMES RFI due January 26, 2024
- CARB: Public Workshop on Draft Priority Climate Action Plan via Climate Pollution Reduction Program by early
Feb 2024
- CARB: Comment Log for Advanced Clean Cars II Amendments: Public Comments due January 15, 2024



Opportunity Spotlight - CEC RFIs

CEC: Community Energy Resilience Investment (CERI) - RFI due January 19, 2024

<https://www.energy.ca.gov/programs-and-topics/programs/community-energy-resilience-investment-ceri-program>

Over 5 years, will invest \$170M in deployment projects across CA that increase community energy resilience and reliability

Eligible Activities

- Weatherization technologies and equipment
- Fire-resistant technologies and fire prevention systems
- Monitoring and control technologies
- Undergrounding electrical equipment
- Utility pole management
- Relocation of power lines or reconductoring of power lines with low-sag, advanced conductors
- Vegetation and fuel-load management
- Use or construction of distributed energy resources for enhancing system adaptive capacity during electrical system outages, including microgrids and battery storage subcomponents
- Adaptive protection technologies
- Advanced modeling technologies
- Hardening of power lines, facilities, substations, and other systems
- Replacement of old overhead conductors and underground cables

Funding may also be used for the training, recruitment, retention, and reskilling of skilled and properly credentialed workers to perform the work required for the resilience activities proposed by applicants.

6. Groups

Each eligible applicant will fall in one of two groups and must identify to which group it is applying on the Application Form (Attachment 01).

- Group 1: Large Entities that sell more than 4,000GWh/year
- Group 2: Small Entities that sell 4,000GWh/year or less?

See Part II of this solicitation for project eligibility requirements. Applications will be evaluated as follows: Stage One proposal screening and Stage Two proposal scoring. Applicants may only submit one application per grant funding opportunity (solicitation) but may include subprojects under one application so long as they are appropriately accounted for in the Scope of Work (Attachment 03).

C. FUNDING

1. Amount Available and Minimum/ Maximum Funding Amounts

There is up to \$64,000,000 available for grants awarded under this solicitation. The total, minimum, and maximum funding amounts for each project group are listed below.

Project Group	Available Funding	Minimum Award	Maximum Award	Minimum Match Funding
Group 1: Large Entities	\$51,000,000	\$15,000,000	\$25,000,000	109%
Group 2: Small Entities	\$13,000,000	\$4,000,000	\$9,500,000	33%

Eligibility for Grid Resilience Formula Grants

Eligible formula grant applicants include:

- States
- Indian Tribes
- U.S. Territories
- Eligible applicants may further subgrant to "eligible entities" as defined by this provision

Subgrant eligible entities:

- [electric grid operators](#)
- [electricity storage operators](#)
- [electricity generators](#)
- [transmission owners or operators](#)
- [distribution providers](#)
- [fuel suppliers](#)



Opportunity Spotlight - CEC RFIs

CEC: HOMES - RFI due January 26, 2024

<https://www.energy.ca.gov/programs-and-topics/programs/inflation-reduction-act-residential-energy-rebate-programs-california>

The California Energy Commission (CEC) invites the public to provide comments on its approach to program design for the federal Inflation Reduction Act Home Efficiency Rebates (HOMES) Program and its application to U.S. Department of Energy (DOE) for \$292 million in funds to support whole home energy retrofits.

CEC will design its HOMES Program to advance California's energy and climate goals, including reaching carbon neutrality by 2045, **installation of 6 million heat pumps by 2030**, and prioritizing energy equity. At this time, CEC is planning on **incorporating or "braiding" HOMES funding with the Equitable Building Decarbonization (EBD) Direct Install Program** to realize administrative efficiencies, thus allowing more funding to go towards decarbonization activities that benefit Californians. **If braiding the programs is not feasible, and CEC needs to develop a separate whole house decarbonization program to meet federal rules, CEC would like input as to program design.**

Requesting Input on:

- 1) Braiding HOMES with Equitable Building Decarbonization Direct Install program
- 2) Other program design options



Featured Guests



**Senior Manager, Energy Efficiency
Department, Energy Solutions**

Jeffery Liang

Local Energy Resources Network

January 9, 2024



TECH CLEAN
CALIFORNIA



TECH Clean California Overview

What is TECH Clean California?

- California's flagship heat pump market transformation initiative for space/water heating is designed to help put California on a path towards carbon-free homes by 2045
- Guiding principles of scale, equity, regulatory simplicity, and market transformation
- Incentives offered statewide
- \$95M in new funding from the Greenhouse Gas Reduction Fund (AB 209 & AB 102)

For a more complete overview of TECH Clean California, check out the slides and recordings from our previous quarterly Stakeholder Meetings at techcleanca.com/about/reporting.

California Heat Pump Goals



Heat Pump Water Heating



Heat Pump HVAC

6 million heat pumps installed by 2030

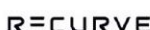
Climate ready / friendly homes:

- 3 million by 2030
- 7 million by 2035

50% of funding delivered to low-income households or disadvantaged communities

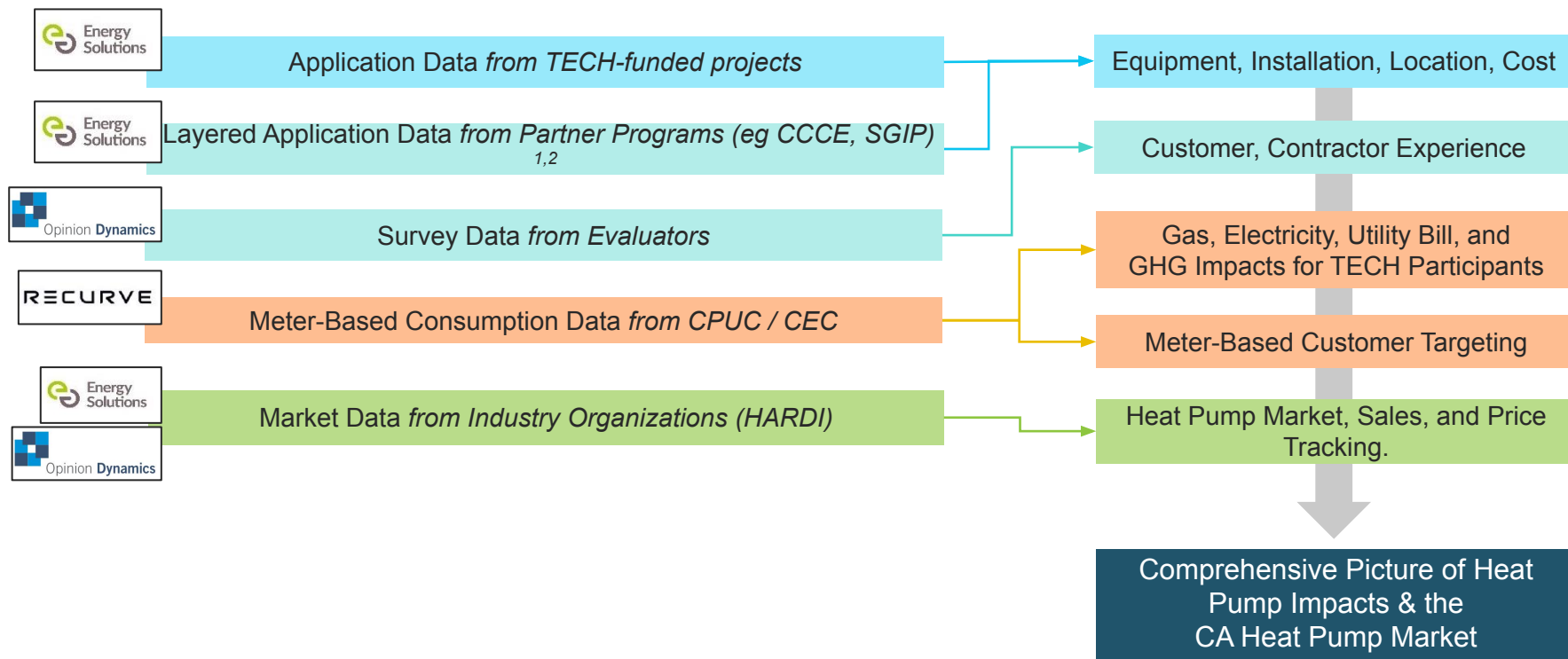
Source: California Office of Governor website, July 2022.
"Governor Newsom Calls for Bold Actions to Move Faster Towards Climate Goals"

Our Team:



The TECH Clean California initiative is funded by California ratepayers and taxpayers under the auspices of the California Public Utilities Commission.

Major Data Flows



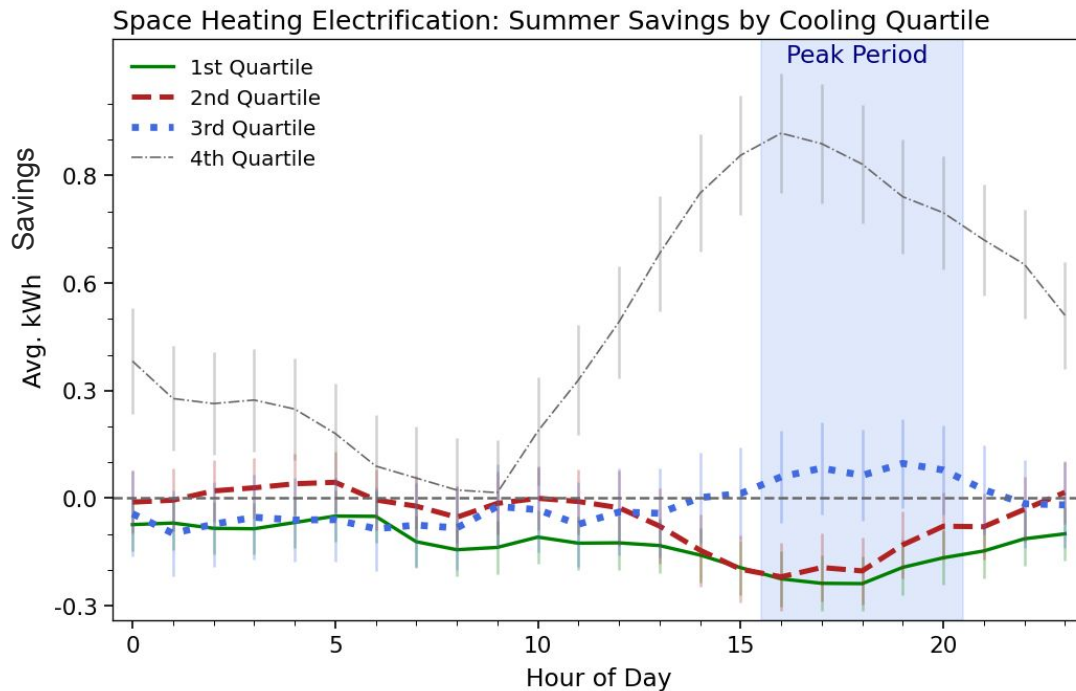
¹ Central Coast Community Energy

² Self Generation Incentive Program

Heat Pump HVAC Electrification Retrofits

Striking Difference in Electricity Impacts for Highest Cooling Users

- Top quartile pre-program cooling users achieved over 500 kWh/yr (~10%) summer peak savings
- New AC users (bottom 50%) added about 100 kWh of summer peak usage
- Moderate cooling users (3rd quartile stayed about the same



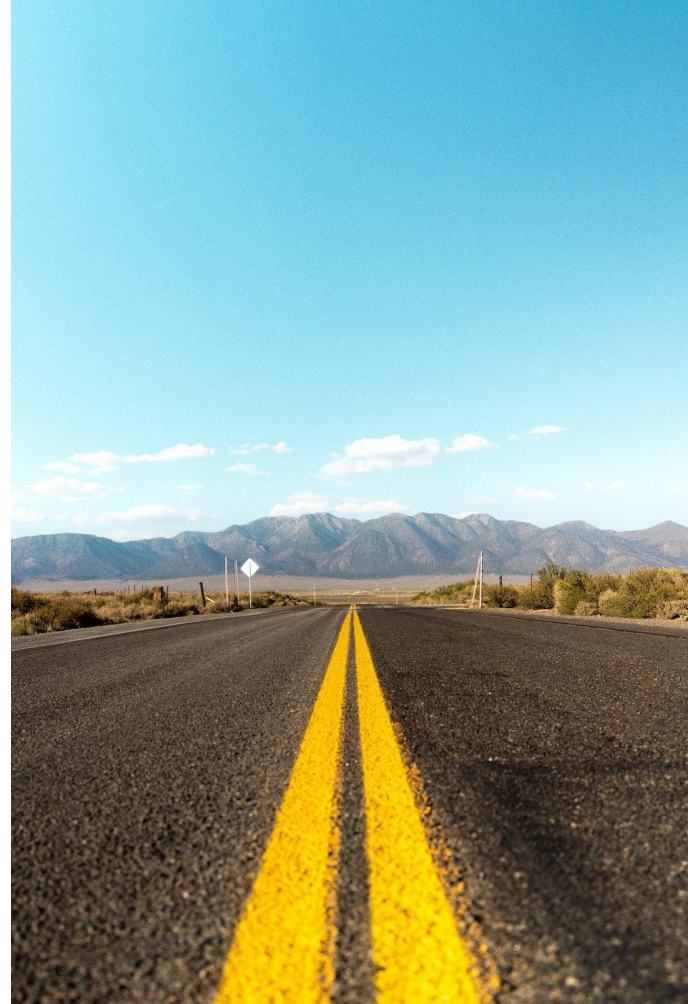
Heat Pump HVAC Retrofit Cost Drivers

Top 5 Most Statistically Significant Drivers for Single Family Homes

Field	Mean and Range	Average Impact on Cost of a 3-ton Installation	Example
Avg Age of Homes in the Census Tract	Range: 11 to 103 yrs Mean: 50 yrs	For every 10 yrs added to avg home age in a tract, project cost increases by \$826 (\pm \$59)	Projects in tracts with avg home age of 70 yrs cost \$4k more than projects in tracts with avg home age of 20 yrs
Seasonal Energy Efficiency Ratio ("SEER")	Range: 14 to 30 Mean: 17	For each unit of SEER above 14, project cost increases by \$637 (\pm \$48)	All else equal, a 20-SEER unit costs ~\$3,600 more than a 14-SEER unit
Installation Duration (Days)	Range: 1 to 366 Mean: 5	Project cost increases logarithmically with the installation duration	A 10-day installation costs ~\$1,200 more than a one-day installation
Duct Replacement (T/F)	True for 15% of projects	Projects involving a duct replacement were \$2,926 (\pm \$277) more expensive	N/A
Number of TECH-Certified Contractors Serving County	Range: 11 to 279 Mean: 144.	Project cost decreases logarithmically with number of enrolled contractors serving the county	Projects in counties served by 100 TECH contractors cost \$1,031 (\pm \$147) less than projects in counties served by 10

TECH Data Priorities Q4 2023-Q1 2024

1. Publish meter-based impacts for single-family retrofits on techcleanca.com, expecting >2,000 projects in Q1 2024
2. Complete data reporting pipeline for SGIP heat pump water heater projects, boosting our dataset with ~20k new heat pump water heater installations (over program duration)
3. Publish real home vintage and parcel data in anonymous program datasets on techcleanca.com/public-data/download-data
4. Increase integration of meter-based targeting in TECH Clean California pilots and incentive strategy to maximize bill savings and minimize grid stress



TECH Overall Equity Strategy

- Integrate Heat Pumps into Existing Low-Income Programs
- Provide Workforce Education & Training to Equity Priority Communities
- Conduct Community Engagement to Effectively Disseminate Information

TECH Equity Priority Populations

Address barriers for historically underserved communities

- **Limited English Proficiency**

- Limited outreach and training in languages other than English
- Lack of contractors providing service in language

- **Disadvantaged Communities**

- Lack of trust in government/media/institutions
- Need of economic opportunities/career pathways

- **Income Qualified Households**

- Lack of awareness of low-income programs/HPWH Equity Adders



Equity Customer Requirements



Single Family

- Live in single family, low-income residences
- Have household income which is $\leq 80\%$ of the area median income (AMI) or $\leq 250\%$ of federal poverty level (FPL) (whichever is less stringent)
- Participated in/are eligible for other specific programs that verify income



Multifamily

- Deed-restricted, low-income residential housing and is either:
 - Located in a disadvantaged community
 - Have at least 80% of the building's household incomes at or below 60% of the area median income
- Participated in/are eligible for the MASH or SOMAH

Statewide HPWH Incentive Details

Category	Customer Class	HPWH Incentive	Low-GWP Kicker Incentive	≥ 55 Gallon Capacity Incentive	Electrical Panel Upgrade Incentive	Max Incentive
Residential Unitary	General Market	\$3,100	\$1,500	\$700	\$2,000*	\$7,300
Residential Unitary	Equity	\$4,185	\$1,500	\$700	\$4,000**	\$10,385
Residential Central	General Market Multifamily Central	\$900/kWh	\$200/kWh	N/A	N/A	\$300,000 per project
Residential Central	Equity Multifamily Central	\$1,000/kWh	\$200/kWh	N/A	N/A	\$300,000 per project

* For General Market customers, the Electrical Upgrade incentive is capped at 50% of eligible electrical costs

**For Equity customers, the \$4,000 incentive may cover a variety of other “pre-electrification” costs associated with a HPWH installation

TECH Equity Focus Workforce Education & Training

- **Heat Pump Water Heater Learn & Earn**

Participating contractors may receive free HPWH units by taking extensive training from TECH and manufacturer partners. 12% of these units have gone to DAC areas.

- **Technology Equipment Donations**

TECH donates heat pump units to trade schools and colleges to learn on the newest equipment, including the Cypress Mandala Training Center in Oakland and Fresno City College.

- **Local Training**

57% of TECH trainings have been conducted in high unemployment areas and 60% of the attendees reside in high unemployment areas.



Community Engagement

- Quick Start Grants
 - Diversity Coalition Inclusive Marketing Material
 - 350 Bay Area Heat Pump Deployment for Low-Income Urban Areas
 - Redwood Coast Energy Authority Heat Pump Deployment for Rural Customers
 - The Energy Coalition HPWH pilot in Bassett and Avocado Heights

Opportunities for Collaboration

- **Equity**

- Income Qualified Program Outreach
- Language Access
- Workforce Development
- Financing

- **Outreach**

- Contractors
- Homeowners
- CBOs (CPUC Grant)
- Workforce Development Agencies

- **Data Sharing**

- Climate Action Plans
- Permit Data



TECH Clean California Reports and Data

techcleanca.com

Find Information About

- Data about project volume, costs, geographic distribution, etc.
- Contractor project data by single family, multifamily, and low-income segments
- Evaluation reports, stakeholder meeting recordings
- Listserve sign-up

TECH CLEAN CALIFORNIA

Home About Public Data Incentives Pilots Quick Start Grants Events Resources

Search [] Go

PUBLIC DATA

Contractor Data

Use the interactive tool below to search for contractors who performed heat pump water heater ("HPWH") or heat pump space heating/cooling system ("HP HVAC") installations in your county.

Customers, are you interested in your own heat pump?
Receive quotes from contractors who can claim rebates available near you.

[Switch is On. Find a Contractor Tool →](#)

Enter your county to find a nearby participating contractor:

TECH Program Name

Contractor Name	Single Family HPWH	Single Family HPWH	Multifamily HPWH	Multifamily HPWH	Low Income Program	Grand Total
San Joaquin Heating & Air Conditioning Inc.	4					4
A. J. J. Heating & Air Conditioning Inc.	10					10
A. J. J. Heating & Air Conditioning Inc.	12	3				15
A. J. J. Heating & Air Conditioning Inc.	0					0
A. J. J. Heating & Air Conditioning Inc.	26	24				50
A. J. J. Heating & Air Conditioning Inc.	11					11

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Q&A





Audience Q&A

Please add your questions in the chat or raise your hand

BPC Workshop

Topic: Discussion



CALL FOR SESSION
PROPOSALS OPEN NOW!

15TH ANNUAL CCEC FORUM



Deadline to Submit:
February 14, 2024

- **Comments**
 - ***CEC Community Energy Resilience Investment (CERI) program RFI***
 - ***CEC HOMES RFI***

Join us on Jamboard:

<https://jamboard.google.com/d/1i-rnLEuDkSNhFVF5uFaGUw4HJB11ynEG-mhfDwavlQQ/viewer?f=0>

Local Energy Resources Network



What's Next?

- Bonus Breakouts up next!
- Next meeting **February 13th, 2024**
- Share [invitation](#) with others



Optional: Bonus Breakouts

Thanks for joining us!

This is a space for informal discussion among the LERN network. Feel free to:

- Offer an announcement, success story, or opportunity
- Share a need for information, collaborators, or advice
- Raise a suggested topic or speaker for future LERNS

If you need an in-depth discussion, you can pitch a specific bonus breakout topic and invite others to join you (today or we can plan ahead for next month)



2024 Opportunities Prospective

*Here are a few opportunities on the horizon that we are tracking.
What are you looking forward to in 2024?*

**EPA Climate Pollution Reduction Grant (CPRG) -
Implementation Grant**

**CEC/CPUC/CARB: SB 100 “The 100% Clean
Energy Act of 2018” - Joint Agency Report**

CPUC Equity and Access Grants

SGC Housing, Equity, Climate Progress Report

**CEC’s Equitable Building Decarbonization
Program - Solicitation**

**CEC’s Community Energy Resilience
Investment (CERI) Program**

**CEC’s \$600M allocation for DOE Home Energy
Rebate Program + \$10 Contractor Training
Program**

**CEC’s \$18M formula allocation for DOE
Assistance for Latest and Zero Building
Energy Code Adoption**

**CEC’s \$10M allocation for DOE EECBG
Program**



CCEC Serves Local Needs



wEEkly Update



CURRENTS Quarterly



Webinars



Annual Forum



Active Funding Opportunities



Funding Program Database



Technical Assistance



Technical Assistance Directory



Local Government Roundtables



Best Practice Database



Interviews and Case Studies