Study Session
PRESENTATION

Affordability Study Session

August 14, 2024

SILICON VALLEY
CLEAN ENERGY

Purpose and Agenda

Key Goals for Attendees

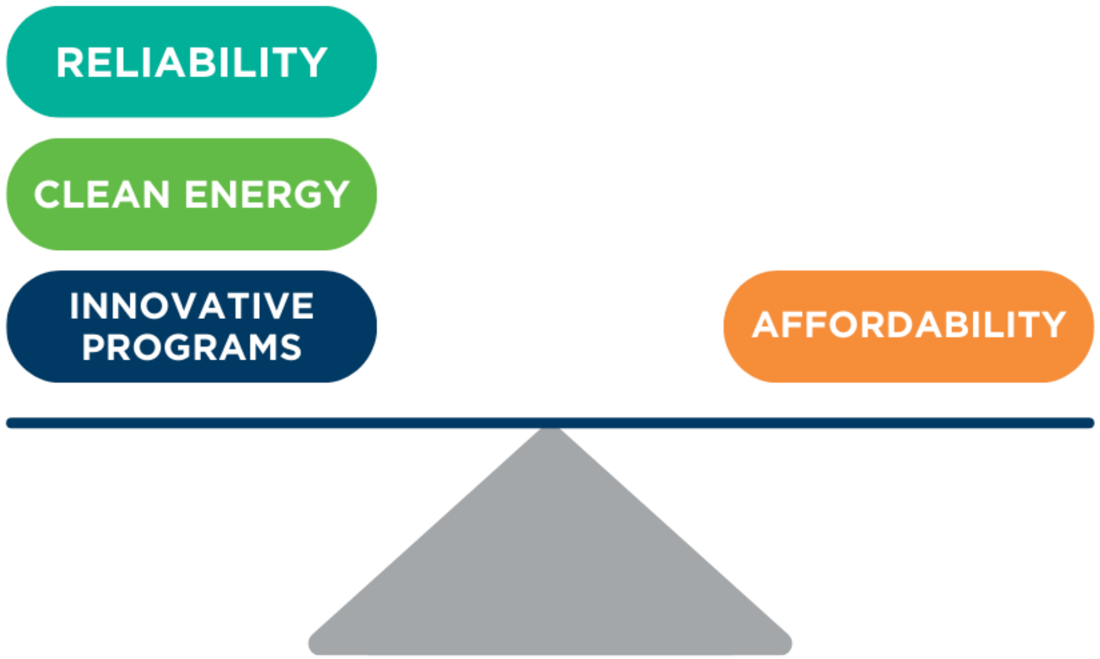
- Deeper understanding of:
  - Rates, bills, and cost drivers
  - What SVCE is doing and how you can help

Agenda

- Rates Overview
  - What is in our rates?
  - What are customers paying for energy?
  - What are the cost drivers?
- Affordability and SVCE
  - What is SVCE doing through rates and programs?
  - How can Board Members help?

Why We Care: SVCE's decarbonization mission is at risk if energy is not affordable.

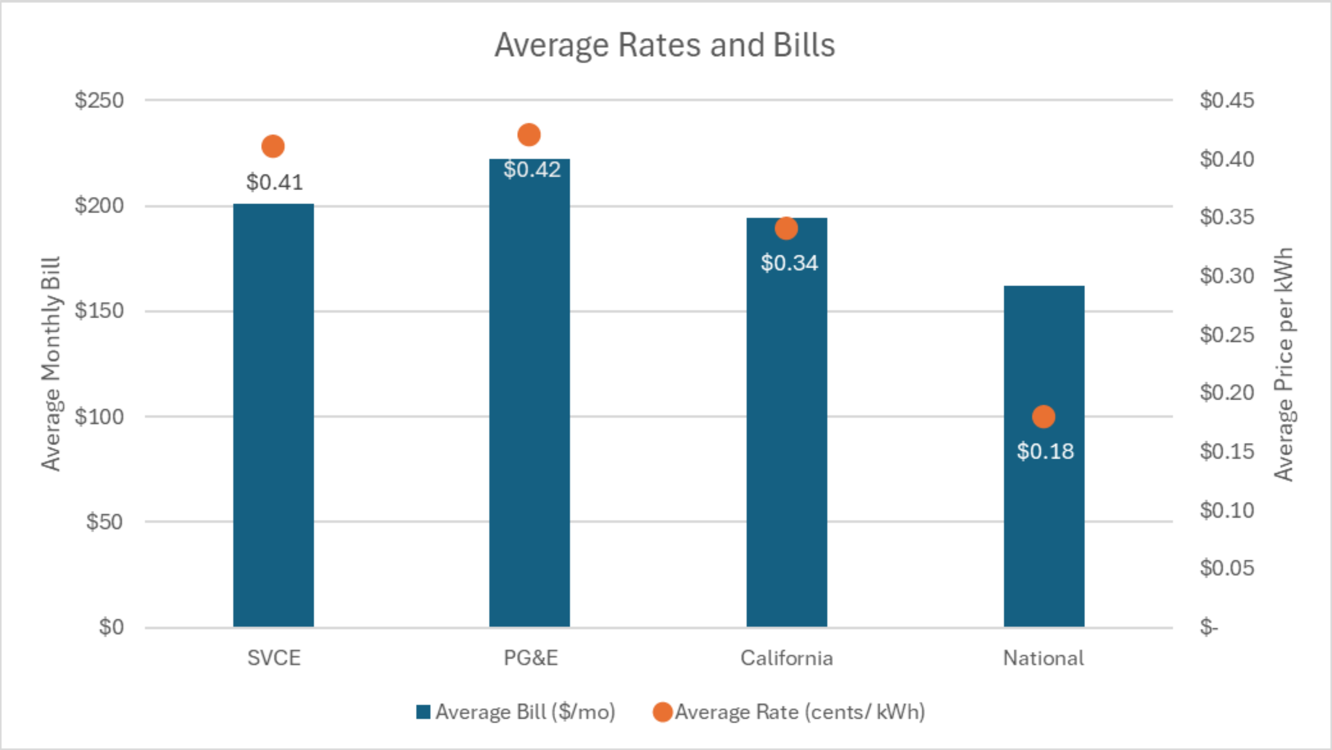
This is a challenging balancing act.



Rates Overview

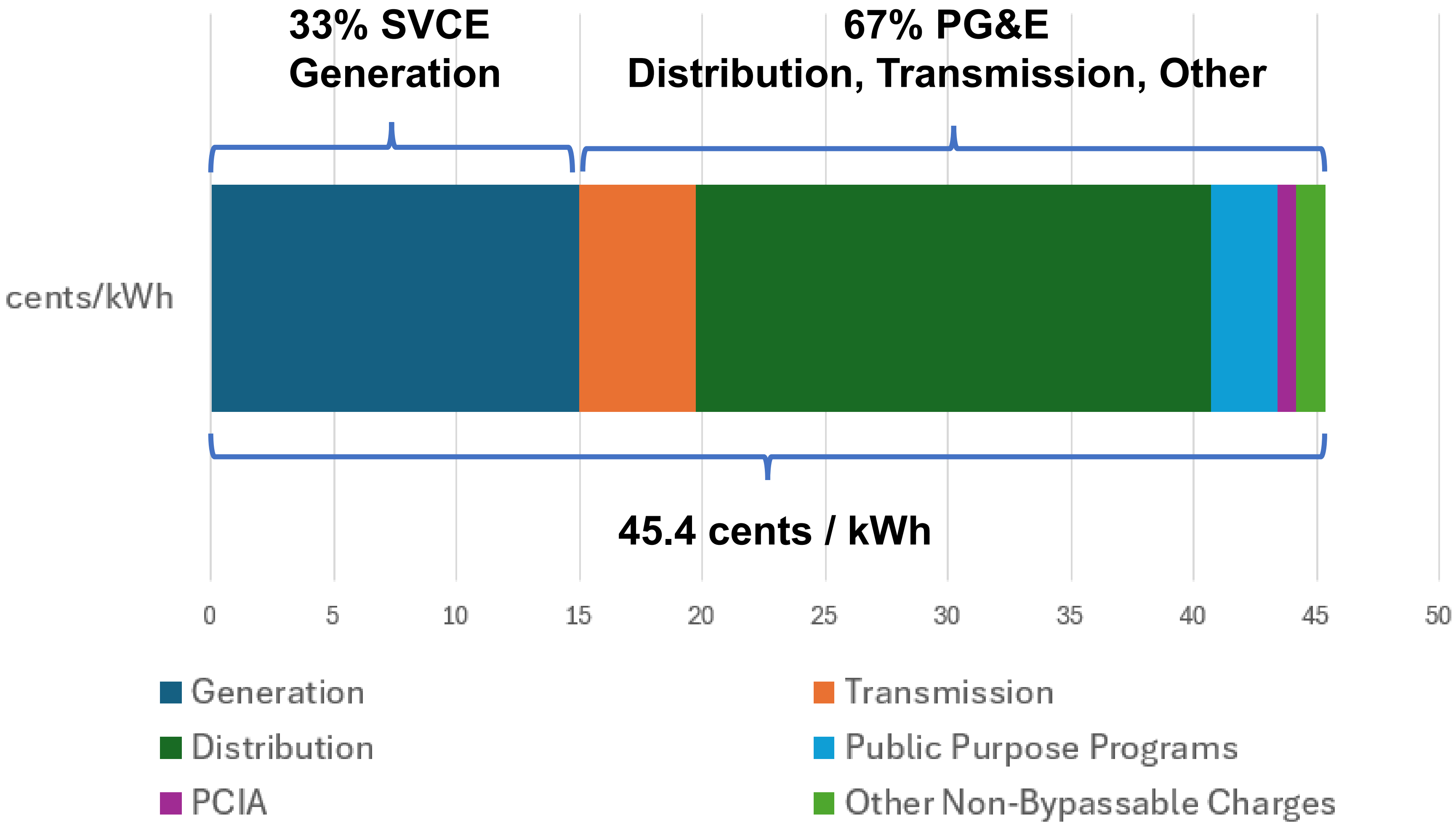
Rates vs. Bills and how California compares

While California rates in general, and PG&E's rates in particular, are high relative to the national average, mild weather in the area and decades of energy efficiency measures help reduce rate impact.



What comprises the overall rate a customer pays for electricity?

Residential Electricity Rate



Source: PG&E E-1 residential rate, non-baseline

Capital investment is a key driver of IOU profitability.

PG&E's rates are determined by the company's revenue requirement, which is comprised of both "pass through costs" and capital expenditures; the utility's share holders only earn on the capital expenditures – "steel in the ground".

Revenue Requirement = **Operating Expenses** + **Return on capital, Return of capital**

$$Rates = \frac{Revenue\ Requirement}{Total\ Load}$$

Operating Expenses:

- O&M (e.g. vegetation management)
- Business operating costs (e.g. staff, offices)
- Procurement costs for non-IOU owned resources (e.g. PPAs)
- Taxes

Return on capital, Return of capital:

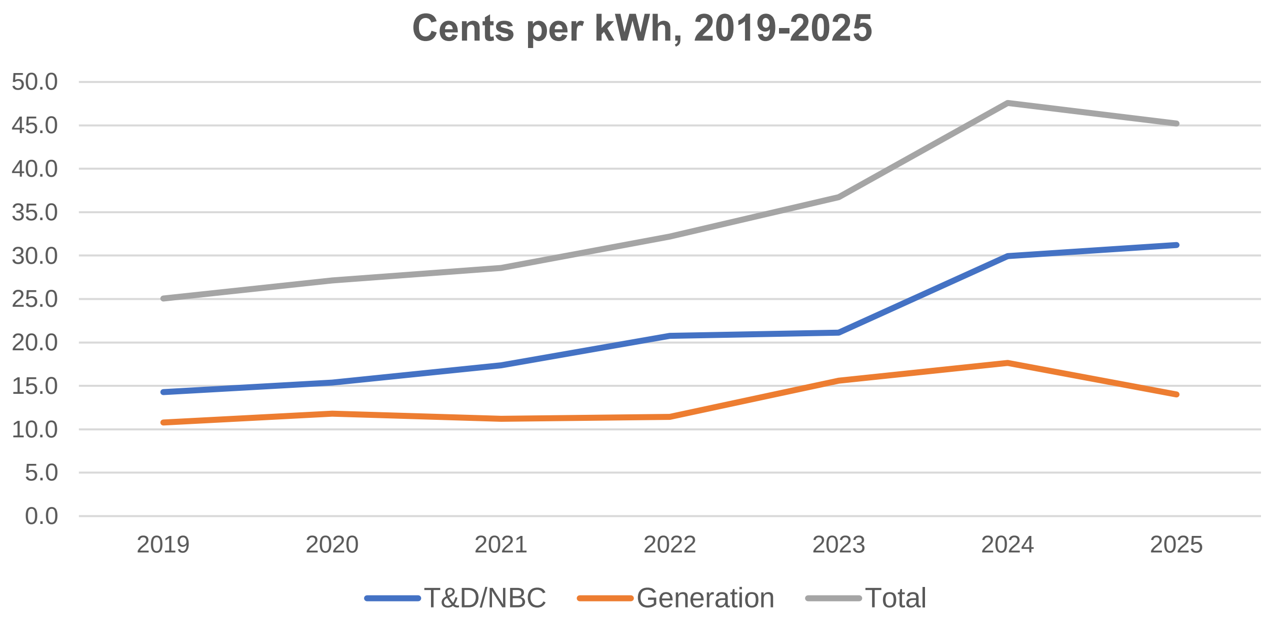
- Depreciation on capital assets
- Rate of Return (ROR)

*Where ROR = Rate base * Weighted Average Cost of Capital (WACC)*

PG&E shareholders receive revenues from ROR after debt costs are covered.

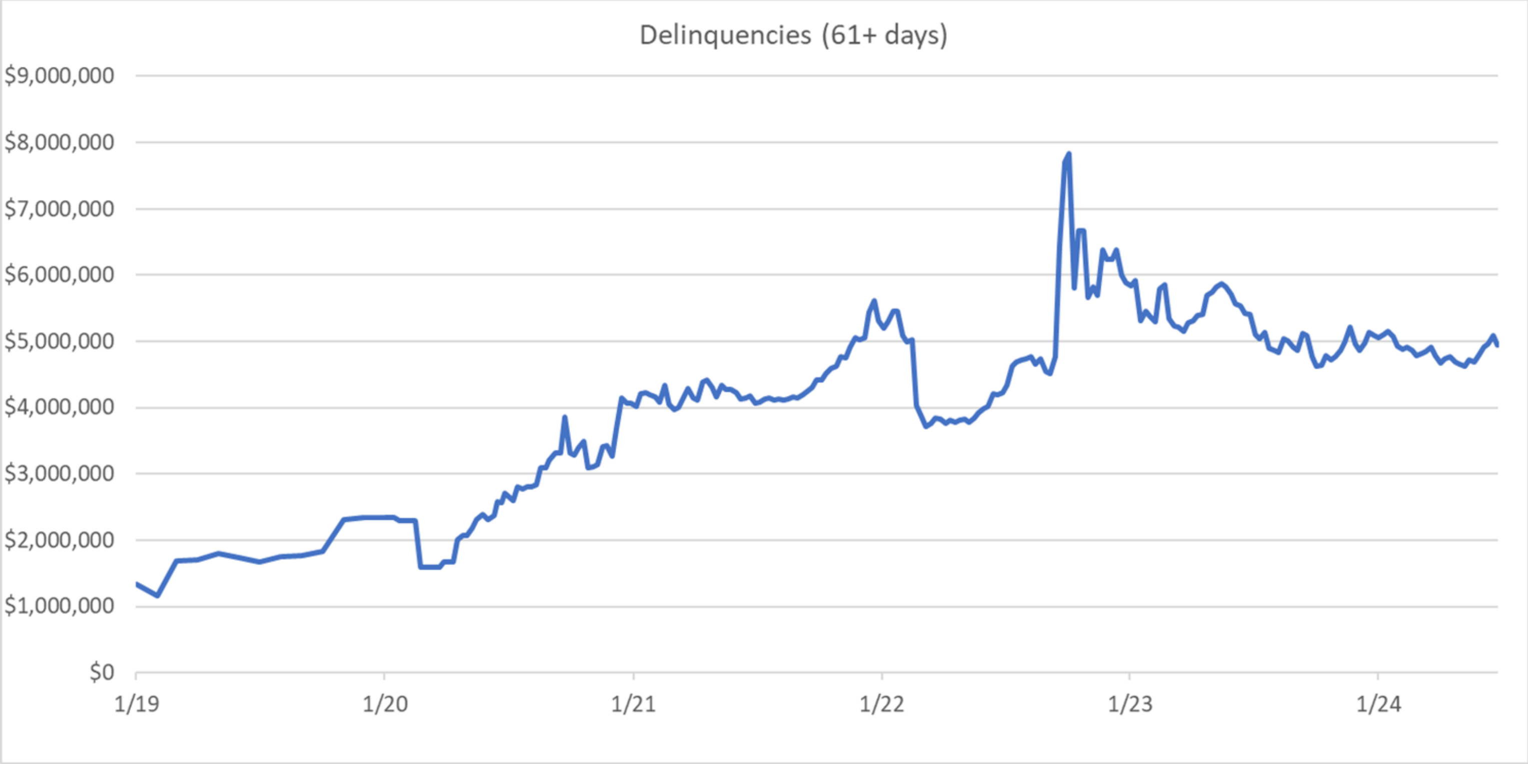
PG&E's bundled (Generation + T&D) residential electricity rates have increased 80% since 2019.

Bundled Residential Electric Rates Over Time



- **Transmission and distribution rates increased 4x** compared to generation for the same period.
- Generation rates have remained relatively stable while subject to market pressures.

Since 2020, the number of SVCE customers in arrears has grown by ~50%, as has the amount owed.



SVCE Arrearage Summary			
	Customers	Total Owed	Average
61+ days, as of 1/27/20	11,755	$ 2,390,396.29	$ 203.35
61+ days, as of 7/22/24	16,373	$ 5,235,660.60	$ 319.77

~10% of SVCE customers are enrolled in CARE/FERA.

California Alternate Rates for Energy (CARE)

- The program is a monthly discount of 20% or more on gas and electricity (for all customers).

Number of persons in household	Total gross annual household income*
1-2	$40,880 or less
3	$51,640 or less
4	$62,400 or less
5	$73,160 or less
6	$83,920 or less

Family Electric Rate Assistance (FERA)

- The program helps eligible households of three or more pay their energy bill. It offers an 18% monthly discount on electric rates.

Number of persons in household	Total gross annual household income*
1-2	Not eligible
3	$51,641-$64,550
4	$62,401-$78,000
5	$73,161-$91,450
6	$83,921-$104,900

On average, **CARE enrollment is at 77% of capacity** across the SVCE service area.

(PG&E estimate)

Lower-income customers pay more for energy as a percent of their total income.

Average Monthly Electricity and Gas Bills by Socioeconomic Vulnerability Index - Census Tracts

SEVI Quartile	Average Gas Cost	Average Electricity Cost	Average Energy Bill
1	$143	$238	**$381**
2	$112	$194	**$306**
3	$88	$176	**$263**
4	$80	$173	**$253**

Area Median Income
$166k
$145k
$116k
$79k

Socioeconomic Vulnerability Index (SEVI)

- Census tract metric calculated from CalEnviroScreen 3.0 scores for poverty, linguistic isolation, education attainment, housing burden, unemployment
- Regionalized, ranked into quartiles (SEVI 1 - 4) | SEVI 1 = lowest SEVI scores, most affluent | SEVI 4 = highest SEVI scores, most underserved/vulnerable

Policy (Legislative & Regulatory) Impacts on Rates

How Policy Impacts Rates

- Policy decisions are the primary driver of rates in California.
- Many of the policy decisions that lead to rate increases are for issues SVCE supports.
- However, we must balance clean goals and technology innovation with affordability.

Key Regulatory and Legislative Decisions

Both legislative and regulatory decisions impact costs to ratepayers.

Clean Energy Goals and Decarbonization

- **SB 100** – 100% clean retail sales by 2045
- **AB 32** – Established GHG emissions targets
- **SB 1020** – Interim SB100 Requirements
- **AB 1373** – Department of Water Resources centralized procurement

Reliability Requirements

- Resource Adequacy: Slice of Day
- Integrated Resource Planning: Procurement Orders

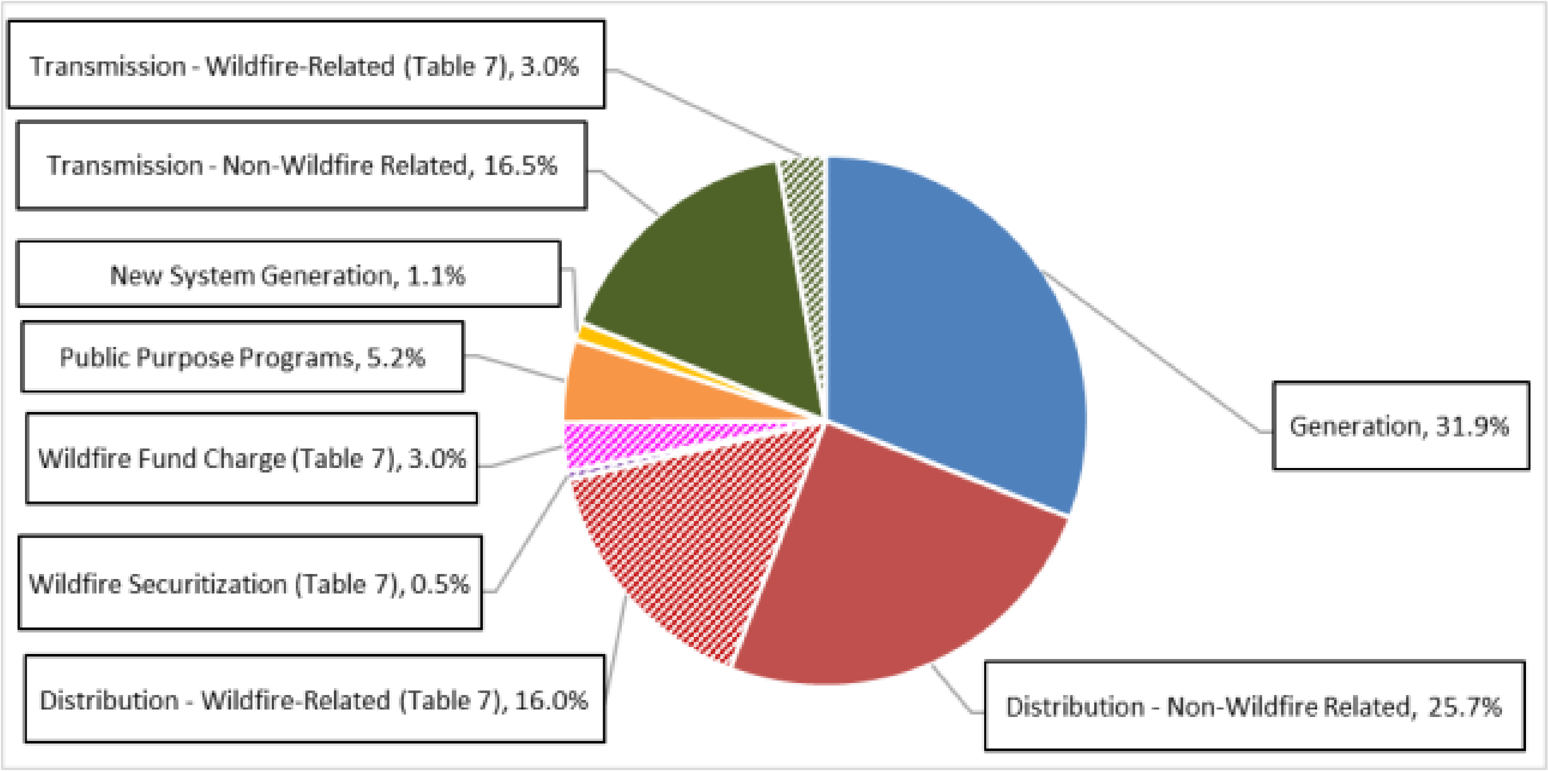
Public Policy on Electricity Bills

- **NEM – 12-15% of total customer bill for non-NEM customer is due to NEM subsidies**
- Energy Efficiency
- Low Income Programs
- **Wildfire Safety – 22.5% of total customer bill from wildfire safety (largely embedded in T&D)**
- Electric Program Investment Charge (EPIC) Pilots
- *Gas infrastructure transition (potential future)*

Electricity Customers Pay Significant Wildfire Recovery Charges ~20% of total bill.

- 'Wildfire recovery' revenue requirements are embedded in PG&E T&D Rate components and have fluctuated month to month.
- In recent years, wildfire recovery has grown to become roughly 20% of the total electricity rate.

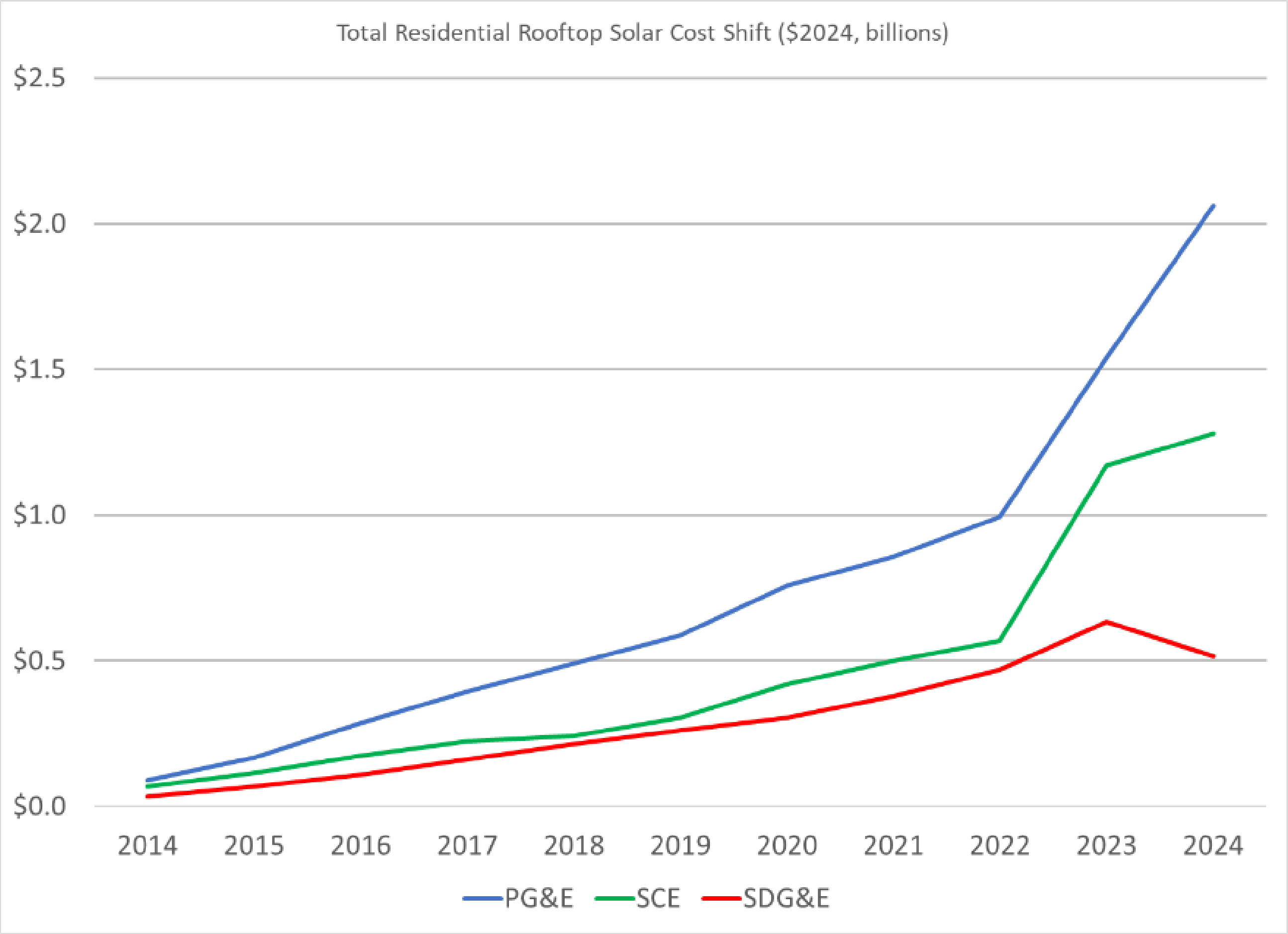
Figure 10: PG&E 2022 Year-End Total System Revenue Requirement by Rate Component with Additional Wildfire-Related Revenue Requirement Breakout



Source: California Public Utility Commission. *2023 Senate Bill 695 Report.* May, 2023. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2023/2023-sb-695-report---final.pdf

An additional ~12-15% of bill for non-NEM customers is due to cost shifts resulting from NEM

- Recent changes to NEM policy should reduce this cost shift over time.
- However, “grand-fathering” and continued subsidy under “NEM 3.0” or Net Billing Tariff (NBT) ensure it will exist for many years.

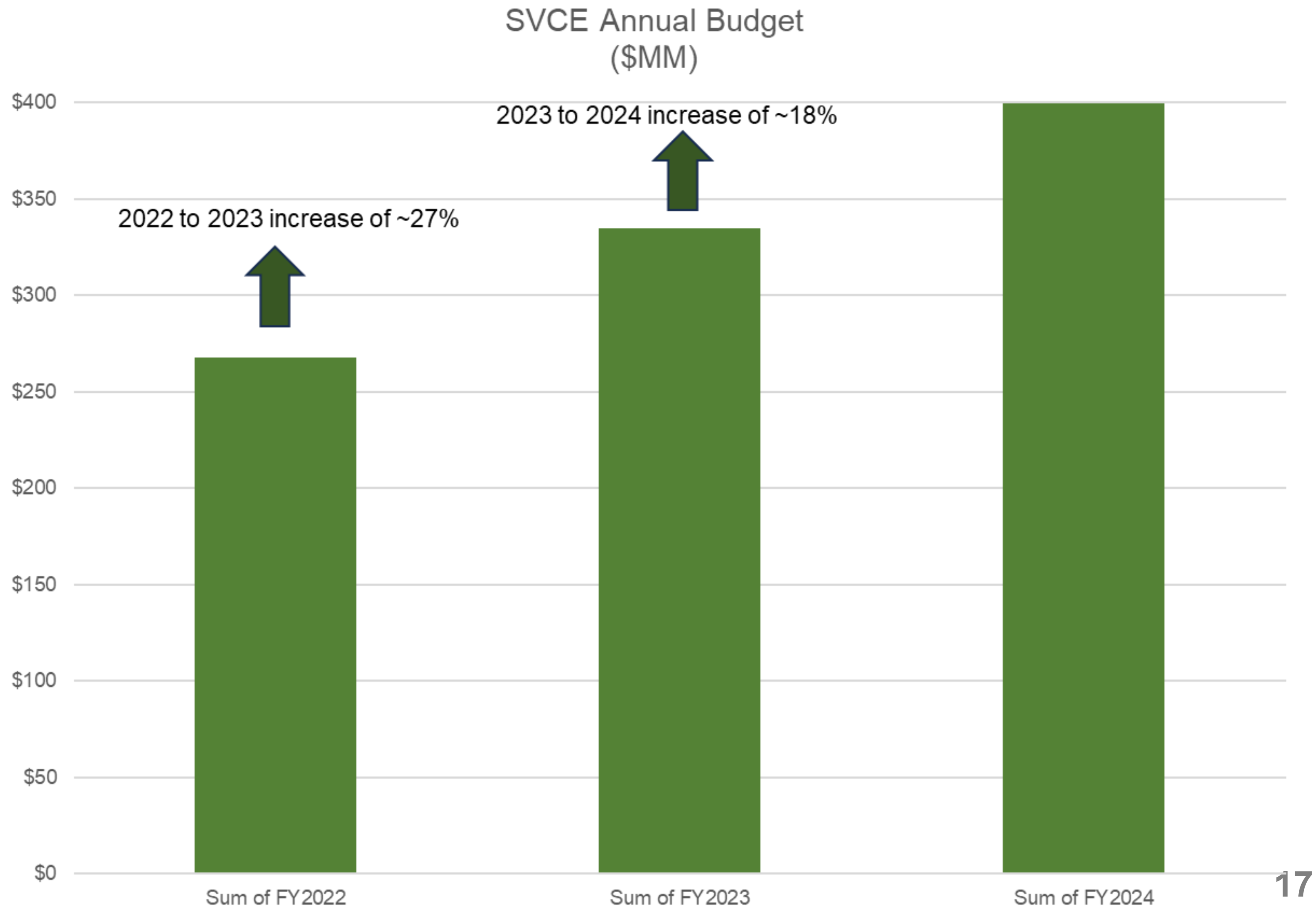


Source: *Borenstein, Severin.* “California’s Exploding Rooftop Solar Cost Shift” *Energy Institute Blog,* April 22, 2024, https://energyathaas.wordpress.com/2024/04/22/californias-exploding-rooftop-solar-cost-shift/

What are SVCE's energy-related costs, and how are they trending?

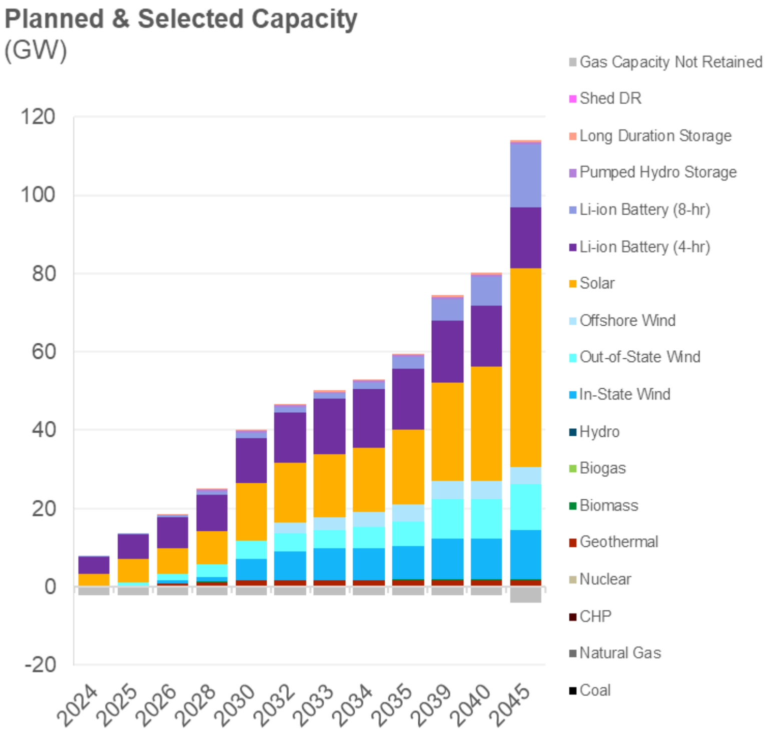
Costs continue to fluctuate with changing commodity prices.

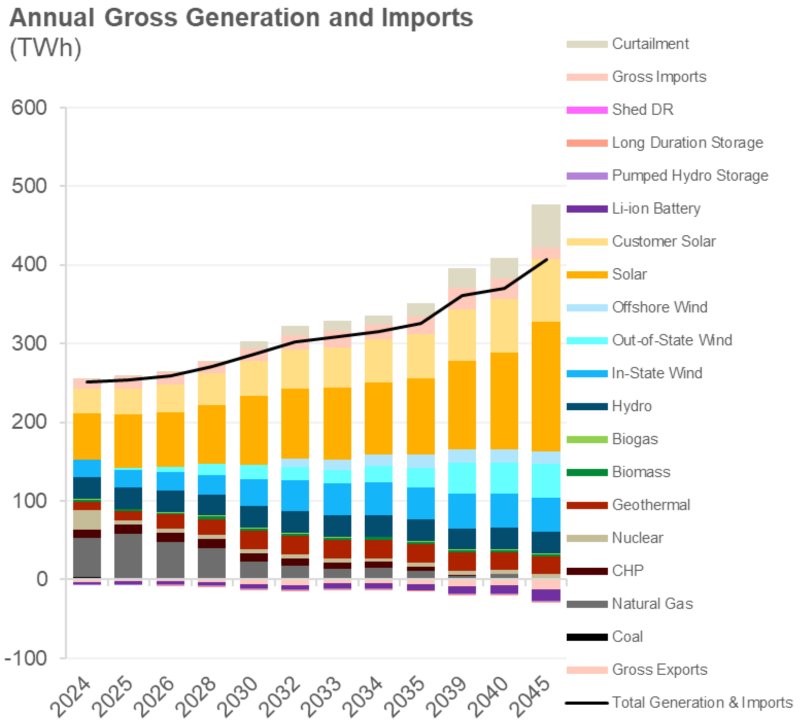
Annual budget includes costs such commodity costs as Environment Products, Resource Adequacy, Renewable Energy Supply, Energy Supply and the Net cost of Demand.



Clean Goals: Getting to 2045

- To achieve SB 100 goals, resource build for CA is expected to more than double relative to 2020.
- SVCE has supported the state in aiming for such aggressive climate goals.





Overview of the impacts of transmission and distribution needs

Analyses suggest significant investment in infrastructure at great expense to CA ratepayers

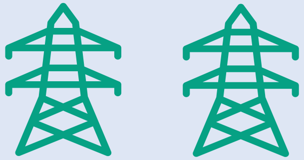
Given large uncertainties in assumptions these are very rough estimates – and are very likely conservative!

Generation

- **120 GW** new build
- Load growth largely keeps pace with cost of new generation

Source: 2023 CPUC Preferred System Plan

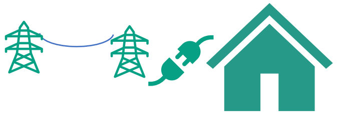
Transmission



- Upgrades to existing system plus offshore and out of state integration
- **$30.5 Billion+**
- Costs are only capital costs – Operations & Maintenance not included
- Some estimates significantly higher (3-4x current costs)

Source: CAISO 20-Year Transmission Outlook (2022).

Distribution



- Studies for 2035 range from **$8B - $51B**
- Scaling to 2045 load, a mid-point estimate is similar to Tx projections

Sources: Public Advocates Office Distribution Grid Electrification Model/ CEC IEPR Forecast

Public Policy

?

Examples:
- Offshore Wind
- Gas System Transition Charges
- Moving costs to general fund/ alternate funding sources

Key Drivers May Evolve Over Time

- The major cost drivers today are wildfire mitigation and rooftop solar.
- The major cost drivers tomorrow will likely include distribution and transmission infrastructure investments.
- Public Policy decisions are likely to remain a key determinate of rates.

What is SVCE doing?

The CARE/FERA discount and SVCE's CARE/FERA credit offer ~40% savings to lower-income customers.

SEVI Quartile	Average Monthly Energy Bill
1	$381
2	$306
3	$263
4	$253

Area Median Income
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$116k
$79k

CARE/FERA Enrollment by SEVI	CARE/FERA Total Energy Bill
6%	$191
8%	$173
13%	$158
25%	$158

Socioeconomic Vulnerability Index (SEVI)

- Census tract metric calculated from CalEnviroScreen 3.0 scores for poverty, linguistic isolation, education attainment, housing burden, unemployment
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Rates programs are offering customers more ways to save.

New opportunities for customers to take control of their energy use, and new rates that encourage electrification.

E-Elec Rate

- Electric Home rate for customers with heat pump equipment or EV charging.
- SVCE offers a "super discount" of 20% for off-peak rates.
- Seeing an average of $20 in monthly savings.

Dynamic rate pilots

- SVCE is participating in upcoming pilots to test hourly rates.
- Opportunity for customers to lower bills if they shift significant usage.

New programs are helping customers easily respond to rates, and limit future T&D, gen cost increases.

Lowering customer bills and shifting/reducing peak demand to minimize overall system costs.

GridShift: EV Charging App

- Automatically shifts charging into lowest-cost hours to reduce customer bill.
- Shifts EV load out of peak hours for CA grid.
- Could even help avoid local distribution system upgrades.

Push to Avoid Unnecessary Panel Upsizing

- Electrify using 100A panels if possible with circuit splitters, 120V equipment, etc.
- SVCE programs emphasize this pathway.
- Fewer service upgrades mean lower T&D system costs.

Energy Efficiency when Electrifying

- More efficient buildings have lower bills.
- SVCE's upcoming "direct install" programs include efficiency measures, particularly helping low-income customers.

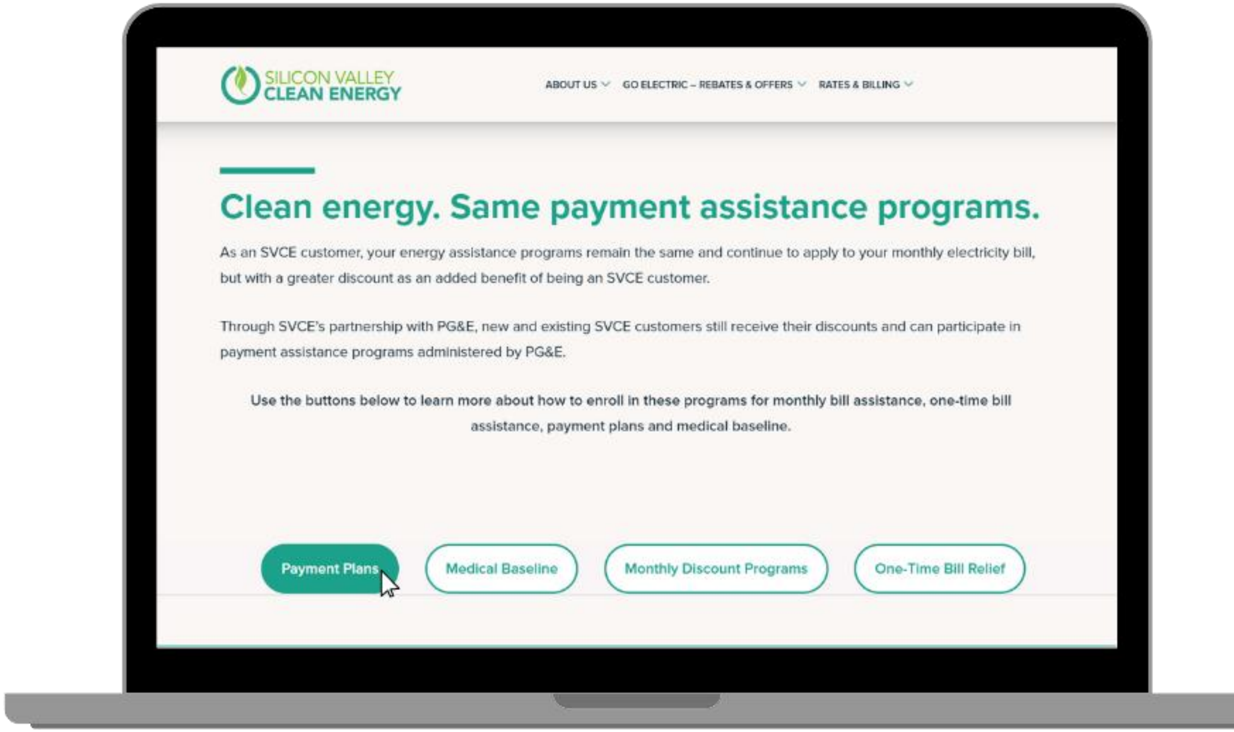
What can SVCE Board Members Do?

Help us communicate with customers and the public.

1. Direct customers to existing resources and programs.

2. Inform customers of SVCE actions, for example $117M in bill savings.

3. Educate customers and community stakeholders about root challenges and the balancing act needed.



svcleanenergy.org/payment-assistance

Help us communicate with policymakers

We can’t do this alone – the IOUs, the Governor, legislature, and CPUC are our partners.

State Policy Priorities and Actions

Energy affordability is top policy issue for Governor, legislature, and CPUC.

Major Cost Driver	Action or Anticipated Action
Wildfire Costs	Legislature authorized wildfire mitigation securitization. $170M in Nov. 2024 Climate Bond Measure.
Rooftop Solar	CPUC adopted Net Energy Metering 3.0 rules to reduce non-rooftop solar customer subsidies for rooftop solar.
Distribution Grid Investments	CPUC's High DER and Timely Energization proceedings are examining ways to improve distribution grid planning and build out processes.
Transmission Investments	Legislature pursuing permit streamlining for transmission projects and encouraging grid-enhancing technologies. California received $600M in federal funds for grid-enhancing technologies. $325M in Nov. 2024 Climate Bond.
Generation Costs	Legislature potentially considering environmental streamlining for renewable projects and regionalization.

Key advocacy points with policymakers

- Rising electricity bills are bad for customers and hurt our ability to reach our emission reduction goals.
- Focus on key areas:
  - Remove costs from bills and fund through other sources.
  - Reduce total grid build out costs through shifting load, smart technologies, and process streamlining for grid infrastructure.
  - Support assistance for customers who struggle to pay utility bills.

Affordability is a priority Strategic Focus Area for SVCE

Goal is to support all-electric as the most affordable and competitive option for customers.

- **Education**: Help stakeholders and customers understand key affordability issues and customer outreach to reduce bills and enroll eligible customers in CARE and FERA programs.
- **Advocacy**: Refine affordability policy platform and advocate for priorities at regulatory bodies and legislature.
- **Internal Rate Analysis**: Create dedicated rate analysis and cross-functional team to work on a rates strategy for SVCE.

Questions?