



California Public
Utilities Commission

Electric Rates 101 and 2024 Senate Bill (SB) 695 Report Briefing

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California Energy Policy Overview

The California Public Utilities Commission

- ❖ Dates back to 1911, headquartered in downtown San Francisco, offices in DTLA and Sacramento.
- ❖ Five Commissioners, Governor appointed and senate confirmed, independent body.
- ❖ **Part regulatory agency and court, part policy think tank across several major industry areas:**
 - Energy (electric and gas), Water, Communications, Transportation (including Autonomous Vehicles).
 - Approximately 1500 staff – policy analysts, engineers, judges, administrative.
- ❖ **Energy occupies the largest portion (over 50%) of the Commission's portfolio, and it has grown substantially in influence over the years.**
 - Governance and close coordination with major California electric and gas investor-owned utilities.
 - Retail market is growing, including numerous Community Choice Aggregators (CCAs).
 - Solar, Storage, EV, and other Distributed Energy Resource (DER) providers.
 - Consumer and environmental advocates are critical voices in the policymaking process.
 - Ratesetting, Renewables, Integrated Resource Planning, Transportation and Building Electrification, Demand Side Programs.

California Electric Rates and Affordability: “A Tale of Two States”

❖ Coastal, cooler-to-moderate climate zones

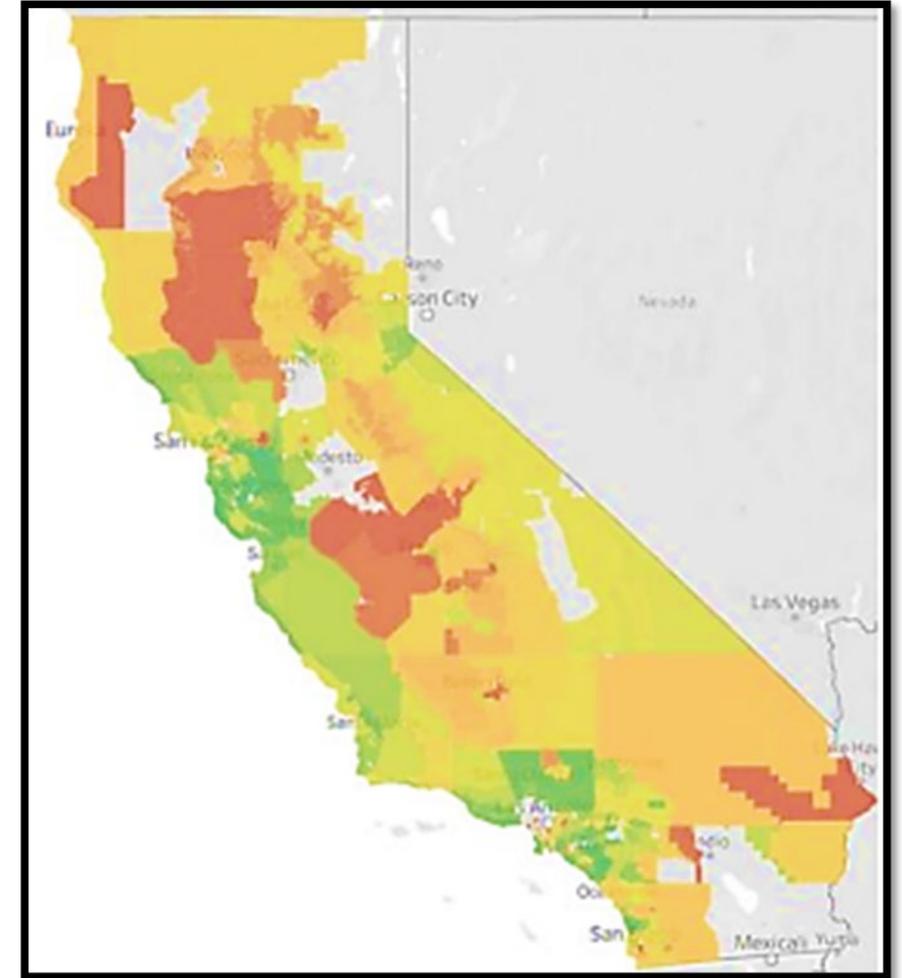
- Wealthier homeowners
- Higher Net Energy Metering (NEM) i.e., rooftop solar + storage adoption rates to offset monthly bill
- Higher Electric Vehicle (EV) adoption rates and more rate choices such as electrification rates to reduce bill impacts

❖ Inland, hotter climate zones

- Greater affordability issues
- Greater air conditioning needs resulting in greater average kilowatt-hour usage per month
- Less resources to invest in solar + storage, yet more likely to pay more for service due to cost shifts from those who do invest

❖ What’s the narrative for the next several years?

- Rates will continue to outpace inflation over the next few years due primarily to wildfire-related costs and NEM, although the new Net Billing Tariff (NBT) for rooftop solar should slow this increase somewhat.
- EV sales momentum + greater electrification should lead to lower household energy costs for all--not just EV owners--but not during the period covered by the 2024 SB 695 Report (through 2027).



Areas in red are where electric and gas affordability impacts are highest.

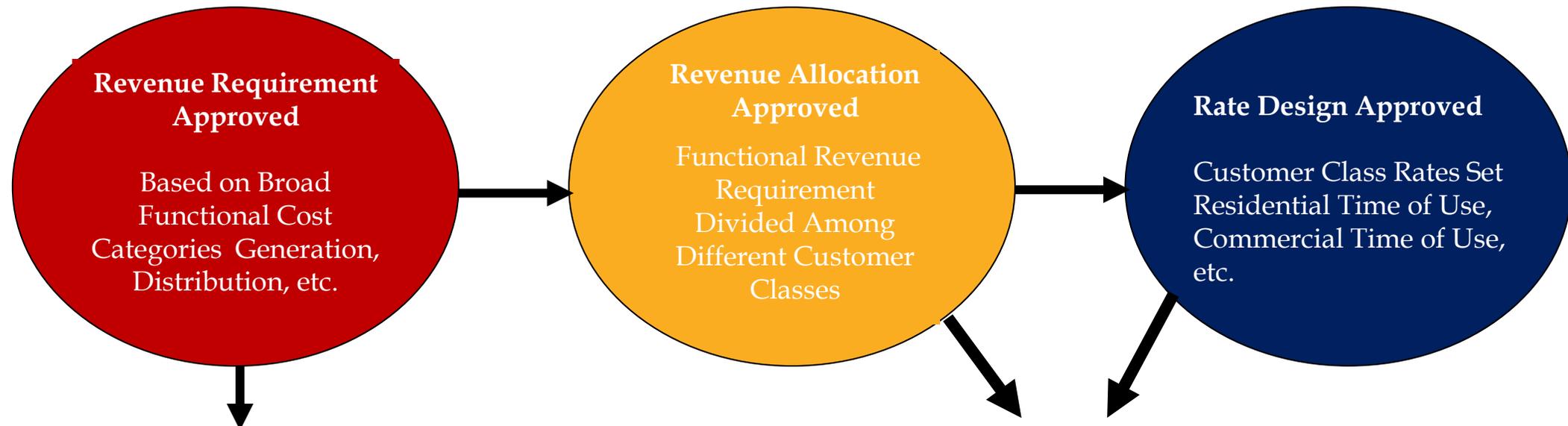
Source: 2022 CPUC Annual Affordability Report



Electric Ratesetting Overview

Electric Utility Rates Are Adjudicated in Major Formal Proceedings

The CPUC sets rates and applies adjustments to ensure that utilities collect no more and no less than necessary to recover just and reasonable costs and to allow the utility to earn a fair rate of return.

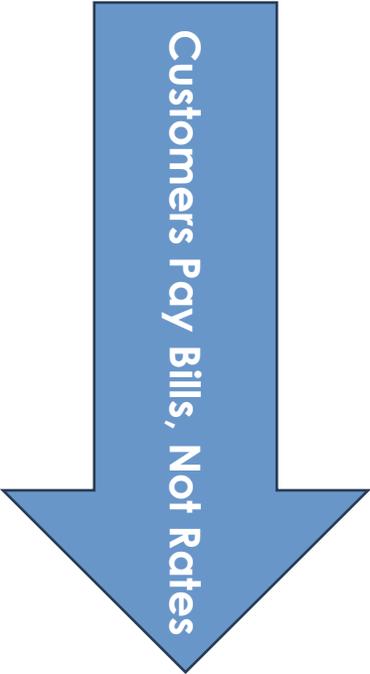
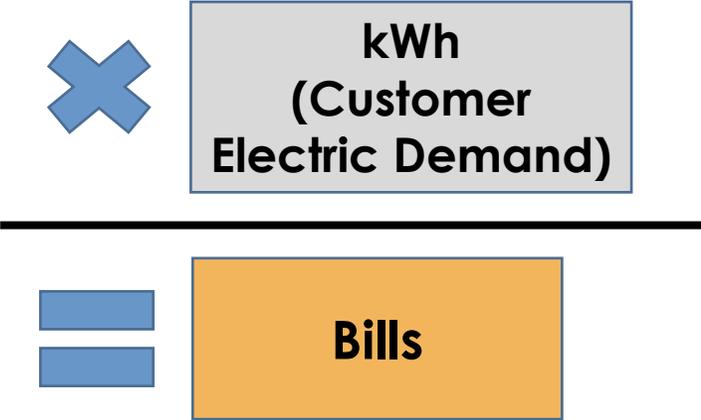


- General Rate Case (GRC) Phase 1 proceedings: Determines operating revenues to recover operating costs (other than the costs shown below) and to recover the rate of return
- Energy Resource Recovery Account (ERRA) Forecast proceedings: Determines operating revenues to recover fuel procurement costs, which are pass-through expenses---the utility receives no rate of return on these costs
- Costs pursuant to legislative mandate proceedings: For example, funding for Public Purpose Programs

- GRC Phase II proceedings: Evaluates marginal cost of service (the cost of providing an additional unit of electricity to meet customer demand) and allocates revenues largely based on cost causation by customer type and tariff
- Other Ratesetting proceedings: For example, Rate Design Windows or Rulemakings that are categorized as ratesetting proceedings, such as the "NEM 3" proceeding, which besides reflect cost of service principles also dictate the economic value of imports and exports of electricity, as seen in payback periods for solar and other DER investments

Utility Costs, Rates, and Bills

After an Electric IOU GRC Phase II or other rate-setting proceeding, the authorized revenue requirement and authorized forecasted sales are implemented in current rates.



- Historically, while California bundled residential average rates have been higher than most of the nation, bills have been lower due to usage in California being low compared to most of the United States.

- However, low usage is no longer counteracting overall rate impacts, and bills are rising as a result of higher rates.**

The Difference Between Operating Expense Revenue Requirement and Capital-Related Revenue Requirement

Operating expense and capital-related costs authorized for recovery during ratesetting proceedings must be converted to revenue requirement to be recovered in rates.

- Operating expenses generally convert to revenue requirement on a 1:1 basis with no authorized rate of return (profit).
- Only a fraction of capital-related costs convert to revenue requirement in any given year, consisting of: (1) depreciating expense as the underlying asset depreciates over time and (2) the authorized rate of return (profit) on the net capital investment (rate base) that is paid during the same time period.

**Comparison of Timing of Recovery of \$1 Billion in Costs
(Operating Expense Revenue Requirement versus Capital-Related Revenue Requirement)**



A difference of about \$2 million due to the total return (profit) paid by ratepayers

- As capital expenditures grow, the capital-related revenue requirements corresponding to the capital expenditures also grow as the function of two effects—increased depreciation expense and increased return on the net capital investment.

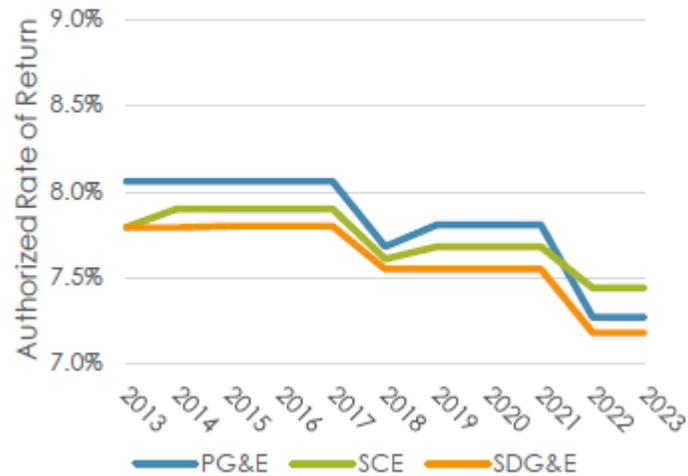
Return on Rate Base Revenue Requirement

CPUC-authorized ROR, which is the weighted average cost of debt and equity used to finance capital investments, has declined over the last ten years:

However, CPUC-jurisdictional rate base, which is the utility's net capital investment, has been increasing:

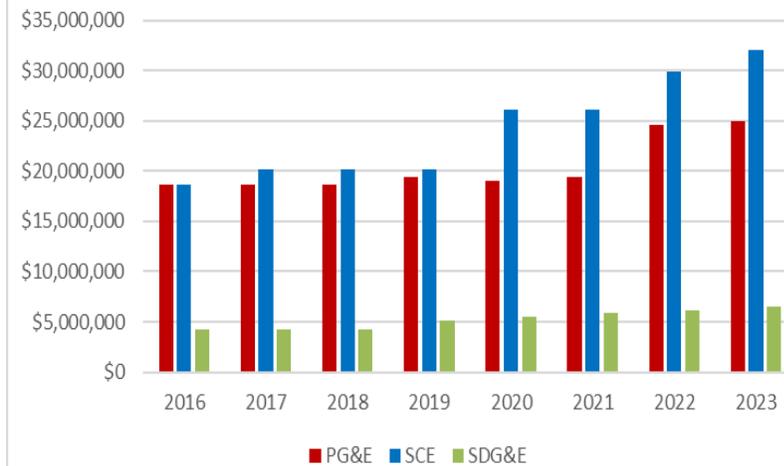
ROR is multiplied by rate base to calculate what is an increasing return on rate base revenue requirement, which ends up in customer bills:

Trends in Weighted Average Rate of Return (ROR)



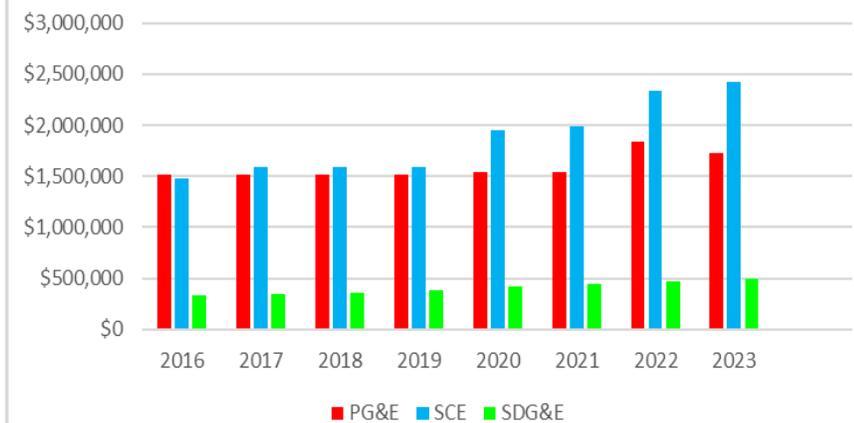
Source: 2023 AB 67 Report

CPUC-Jurisdictional Rate Base (\$000)



Source: Derived from data in 2024 SB 695 Report

CPUC-Jurisdictional Return on Rate Base Revenue Requirement (\$000)



Source: Derived from data in 2024 SB 695 Report

It is estimated that in 2023, the return on rate base revenue requirements shown above comprised the following percentages of a typical residential customer's bill: PG&E 10%, SCE 13%, SDG&E 10%.*

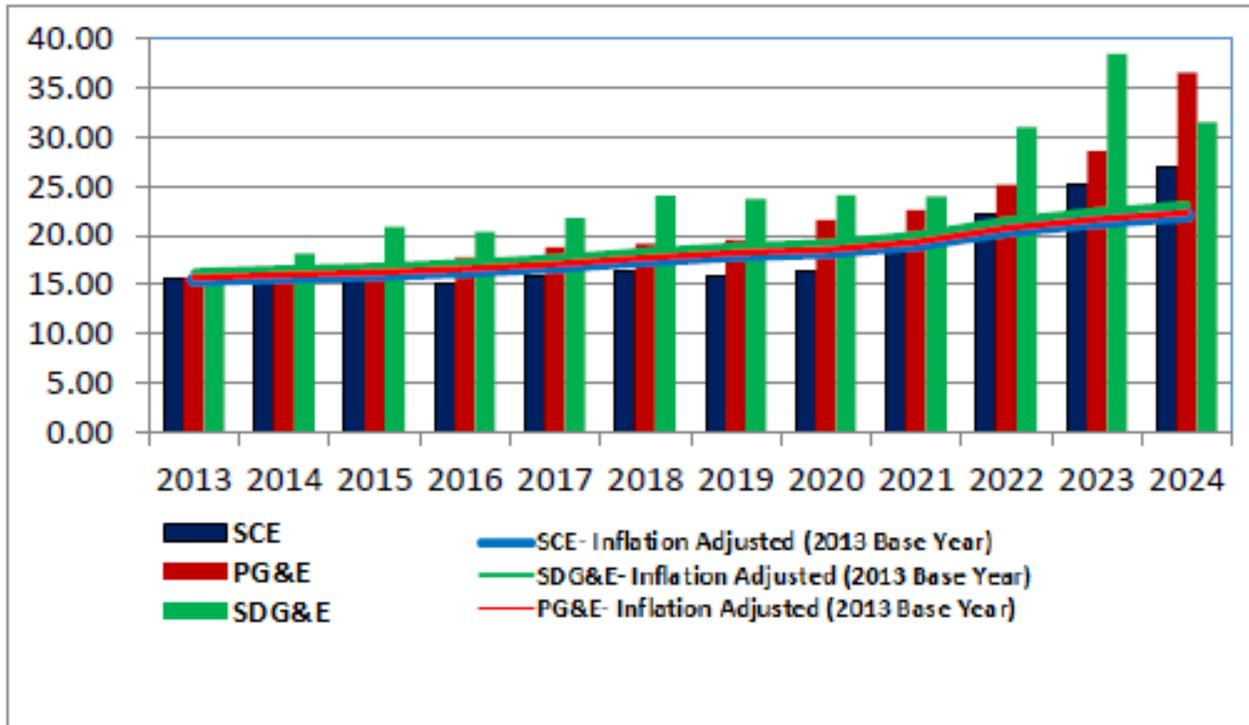
*For illustrative purposes only.



**Highlights from the 2024 SB 695
Report to the Governor and
Legislature on Actions to Limit
Utility Cost and Rate Increases**

Electric Utility Rates Continue to Outpace Inflation Due to Multiple Cost Pressures

PG&E, SCE, and SDG&E January 1 Bundled System Average Rate, Nominal and Inflation-Adjusted Comparison (cents/kWh)



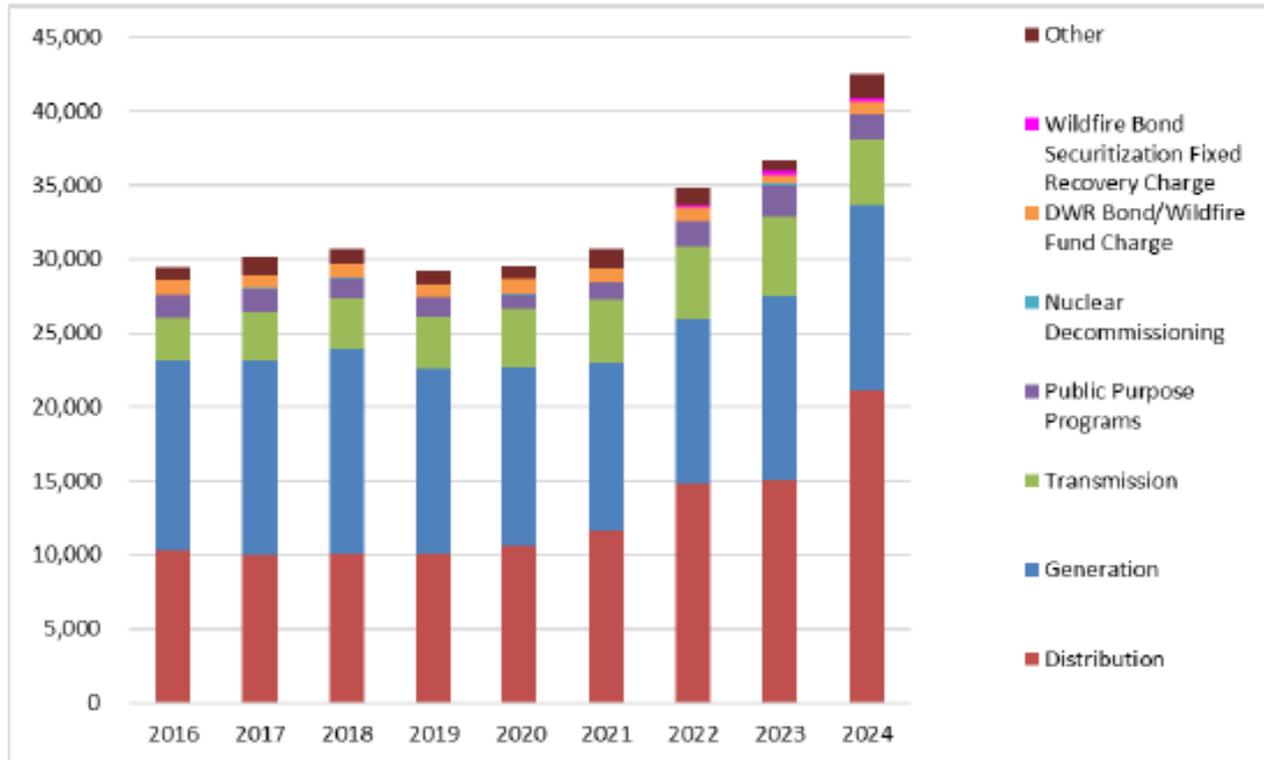
- ❖ Beginning in 2021, rate increases for the three major electric IOUs' bundled customers began to outpace inflation.
- ❖ The largest contributors to recent rising electricity rates are wildfire risk reduction costs and Net Energy Metering (NEM) costs.
- ❖ At year-end 2023, wildfire-related costs accounted for about \$15 - \$25 of a residential customer's monthly electricity bill.
- ❖ For customers without rooftop solar, NEM-related costs accounted for about \$20 - \$35 of their residential monthly electricity bill.
- ❖ The wildfire-related cost burden can not be simply added with the NEM-related cost burden as there is overlap between the two types of cost burdens with respect to the distribution cost recovery mechanism and doing so would double-count this overlap.

The downward trend in SDG&E's bundled system average rate between 2023 and 2024 is expected to reverse later in 2024 when rates resulting from its 2024 GRC go into effect.

Source: 2024 SB 695 Report

Utility Operating Costs (Revenue Requirements) Are Rapidly on the Rise

PG&E, SCE, and SDG&E Combined Electric Revenue Requirement by Rate Component Category (January 1, \$ Millions)



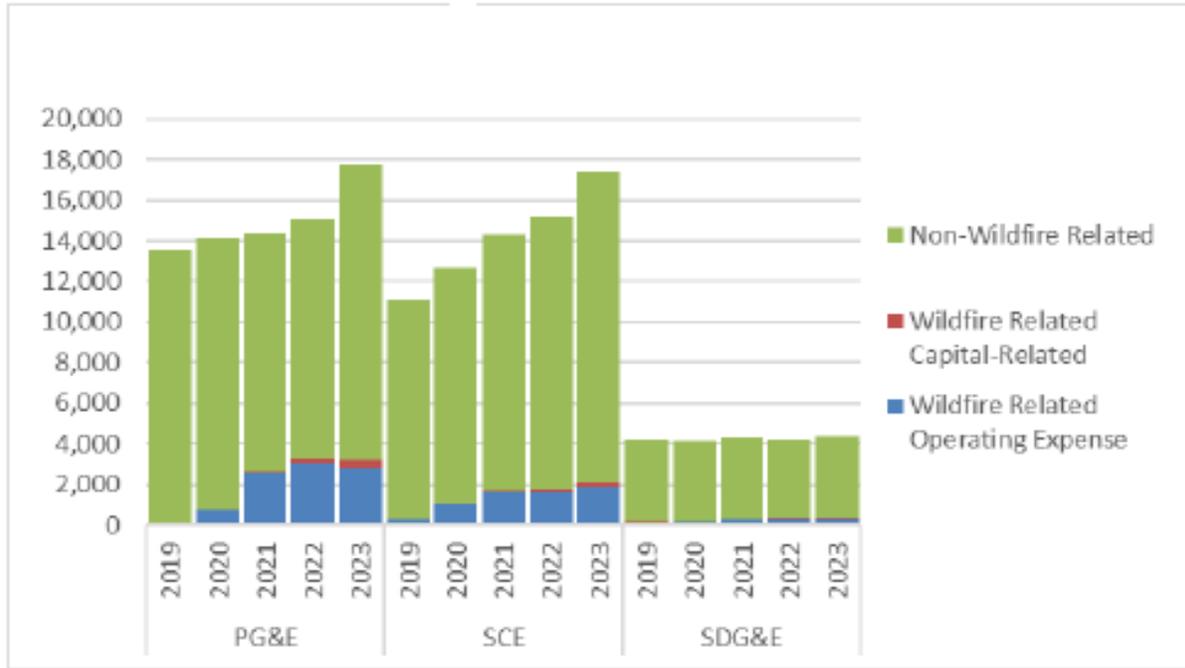
- ❖ The fastest growing element is **distribution** which includes wildfire-related spending.
- ❖ While our existing distribution system will need significant upgrades to accommodate the anticipated load from electric vehicles, heat pumps, and other electric appliances and end uses, these types of costs are not evaluated in this report since these emerging costs were under review in active general rate cases at the time of report preparation.
- ❖ **Generation**, while a large portion, is relatively stable and primarily reflects pass-through costs on which the utility earns no rate of return.
- ❖ Clean energy costs, which have been relatively stable, are detailed in a separate report, the 2024 Padilla Report on Costs and Cost Savings for the RPS Program.

This large distribution increase between 2023 and 2024 substantially reflects PG&E's 2023 General Rate Case (GRC) implementation in 2024.

Source: 2024 SB 695 Report

Wildfire-Related Revenue Requirement in Rates

Wildfire-Related (WR) Revenue Requirement
Relative to Total Revenue Requirement (Year-End, \$ millions)



In 2021, significant wildfire-related operating expenses, including vegetation management efforts and wildfire liability insurance coverage, began to push up rates.

Wildfire-Related Costs =
Wildfire mitigation costs +
Wildfire insurance premium and catastrophic events costs

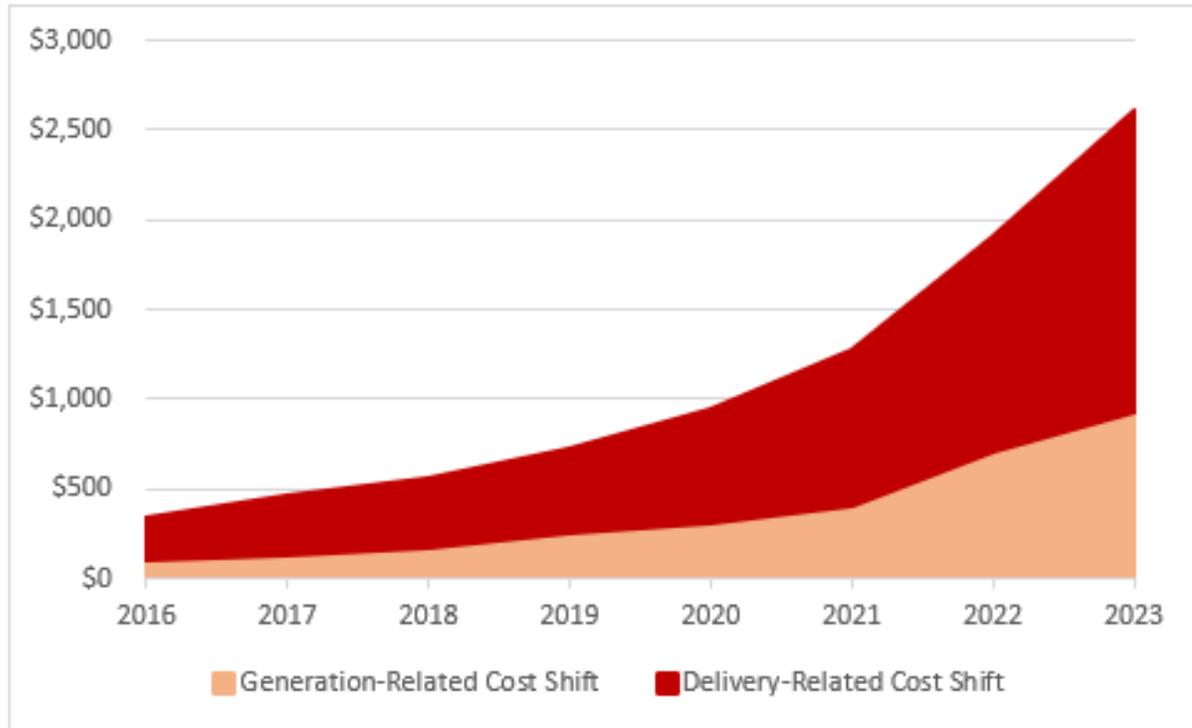
- **Wildfire mitigation costs**
 - Forward-looking, preventative in nature
 - Wildfire Mitigation Plan (WMP) costs
 - Costs are classified as operating expense i.e. vegetation management or capital-related i.e. covered conductor for grid hardening
- **Wildfire insurance premium and catastrophic events costs**
 - Disaster response and recovery oriented
 - External to the activities described in the WMP
 - Costs are typically more of an operating expense nature

At year-end 2023, the percentage of wildfire-related revenue requirement to total revenue requirement for each utility is:

- PG&E: 18%
- SCE: 12%
- SDG&E: 9%

Net Energy Metering Costs

PG&E NEM Cost Shift
by Generation- and Delivery-Related, Residential Customers (\$ millions)



Although the NBT existed in 2023, the cost shift attributable to it is substantially smaller and is not included here.

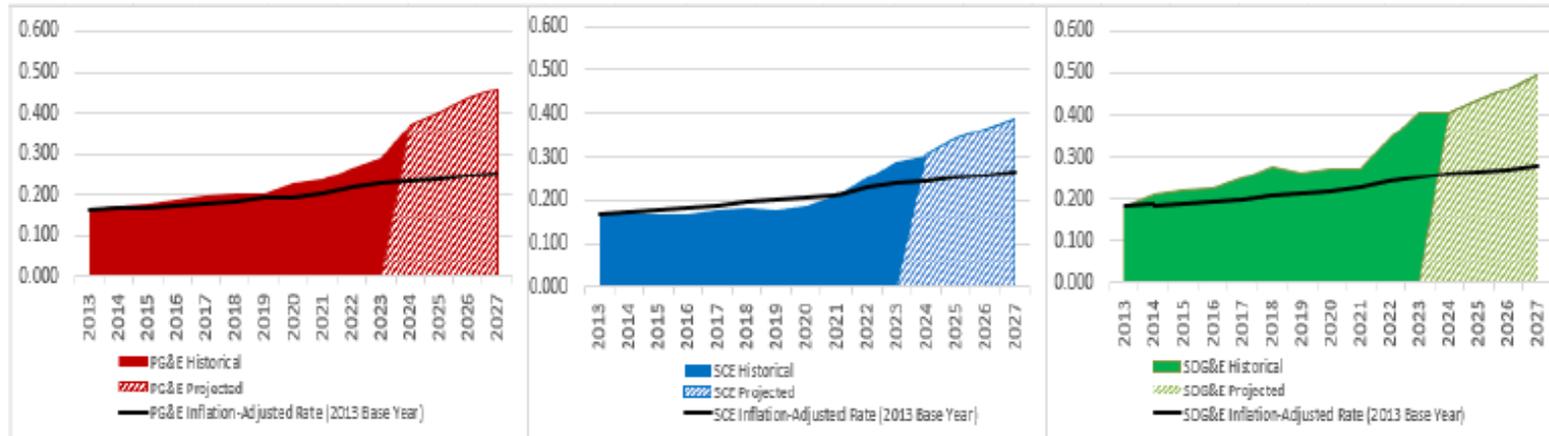
Source: 2024 SB 695 Report

NEM 1.0 and NEM 2.0 costs increase electricity bills in two ways for customers without rooftop solar:

- **The Generation-Related Cost Shift:** Customers pay for the generation that is exported to the grid from another customer's NEM system at a higher rate than other available generation. **The Net Billing Tariff (NBT) implemented in early 2023 reduces the growth of this cost shift by lowering the amount customers are required to pay to new rooftop solar customers.**
- **The Delivery-Related Cost Shift:** Customers pay for the part of bill savings experienced by NEM customers because NEM allows rooftop customers to bypass their share of fixed costs to maintain the electric grid, with the fixed costs then being spread across fewer units of usage. **The Flat Rate to be implemented 2025 – 2026 will move some existing fixed costs into a “flat rate” line item on bills that all residential customers, including NEM customers will pay.**

Forecasted Rate and Bill Trends - *Electric Bundled IOU Residential Customers*

PG&E, SCE, and SDG&E Electric Bundled Residential Average Rates (\$/kWh)

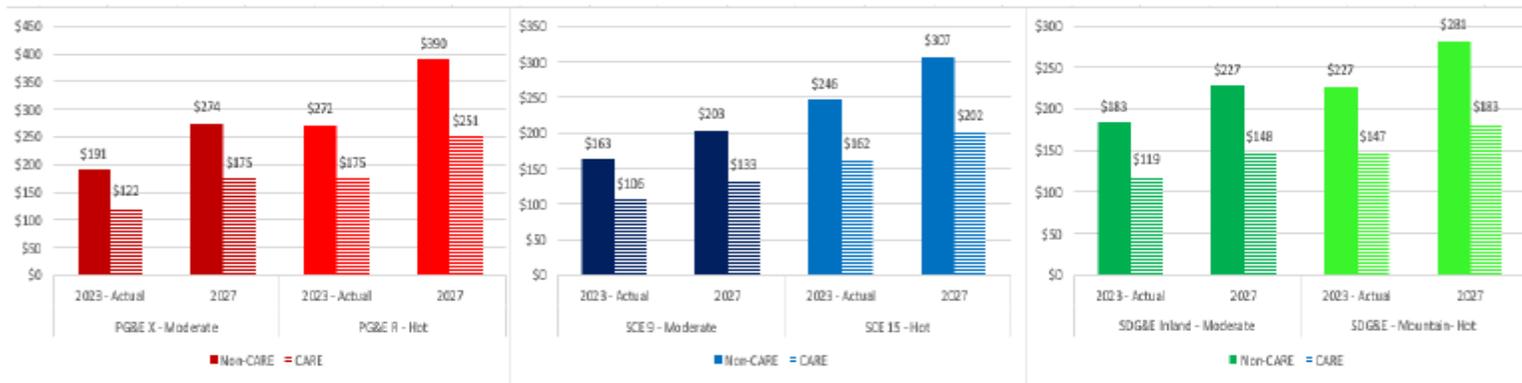


Between year-end 2023 and year-end 2027, electric bundled customer residential average rates are expected to rise about:

- **PG&E** – 10.8% annually
- **SCE** – 6.8% annually
- **SDG&E** – 5.6% annually

This is in comparison to an assumed inflation rate of 2.6%.

PG&E, SCE, and SDG&E
Current and Projected Residential Average Monthly Bills, Year-End 2023 – Year-End 2027
Typical Customer Living in a Moderate and Hot Climate Zone



Between year-end 2023 and year-end 2027, electric bundled customer residential average monthly bills are expected to rise for moderate (mod) and hot climate zones about:

- **PG&E Non-CARE** – \$85 mod / \$120 hot
- **PG&E CARE** – \$55 mod / \$75 hot
- **SCE Non-CARE** – \$40 mod / \$60 hot
- **SCE CARE** – \$25 mod / \$40 hot
- **SDG&E Non-CARE** – \$45 mod / \$55 hot
- **SDG&E CARE** – \$30 mod / \$35 hot

Cost Containment is Essential

The CPUC is taking multiple actions to responsibly cut costs, focus on low-income customers, tribal communities, and disadvantaged communities, and put downward pressure on rates while maintaining safety and reliability.

Actions Underway to Limit Costs and Save Ratepayers Money

Wildfire-Related Costs	Implementation of wildfire self-insurance, continued evaluation and improved planning for IOU vegetation management expenses, and securitization of capital spending to spread costs out over longer time horizons.
NEM Cost	Implementation of the Net Billing Tariff which more closely aligns the compensation rooftop solar customers receive with the value that their system provides to other customers, and approval of the Flat Rate which will make certain fixed costs unavoidable for NEM customers.
Focus on Low-Income, and Tribal and Disadvantaged Communities	Approval of the Flat Rate, under which customers enrolled in low-income assistance programs will benefit from a discounted flat rate ranging from \$6 to \$12 per month. At the same time, consumption-based rates will decrease, for an overall decrease in an average low-income customer's bill.

Thank You!

Paul Phillips

Paul oversees the Electric Rates section of the CPUC Energy Division, developing statewide pricing strategies for an evolving grid, including dynamic pricing programs and the CalFUSE framework. Earlier in his career, Paul focused on AB 32 implementation, energy procurement, wholesale communications market development, utility cost modeling, mergers & acquisitions, and academic consulting on electric market restructuring and the energy crisis. He later served as an energy advisor in renewable procurement, net energy metering, and gas and electric rates. Paul holds an MPA from the Harvard Kennedy School and a BA in Economics and English Literature from UCLA.

Bridget Sieren-Smith

Bridget has about nine years of experience in energy-related areas within the CPUC, first briefly as an energy utility program auditor, and currently as an Energy Division analyst. She focuses on electric rate forecasting and electric affordability policy. Bridget received a BS in Agricultural and Managerial Economics from UC Davis and is licensed in California as a Certified Public Accountant.

