California electric affordability challenges

September 25, 2024

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The Utility Reform Network

THE UTILITY REFORM NETWORK
Lower bills. Livable planet.

TURN'S MISSION AND HISTORY

Founded in 1972 to fight unfair rate increases

- Electricity, natural gas, telecommunications
- Focus on opposing unreasonable rate increases, holding utilities accountable for poor performance and limiting profits for utility shareholders
- Leading representative of residential customers in CPUC proceedings

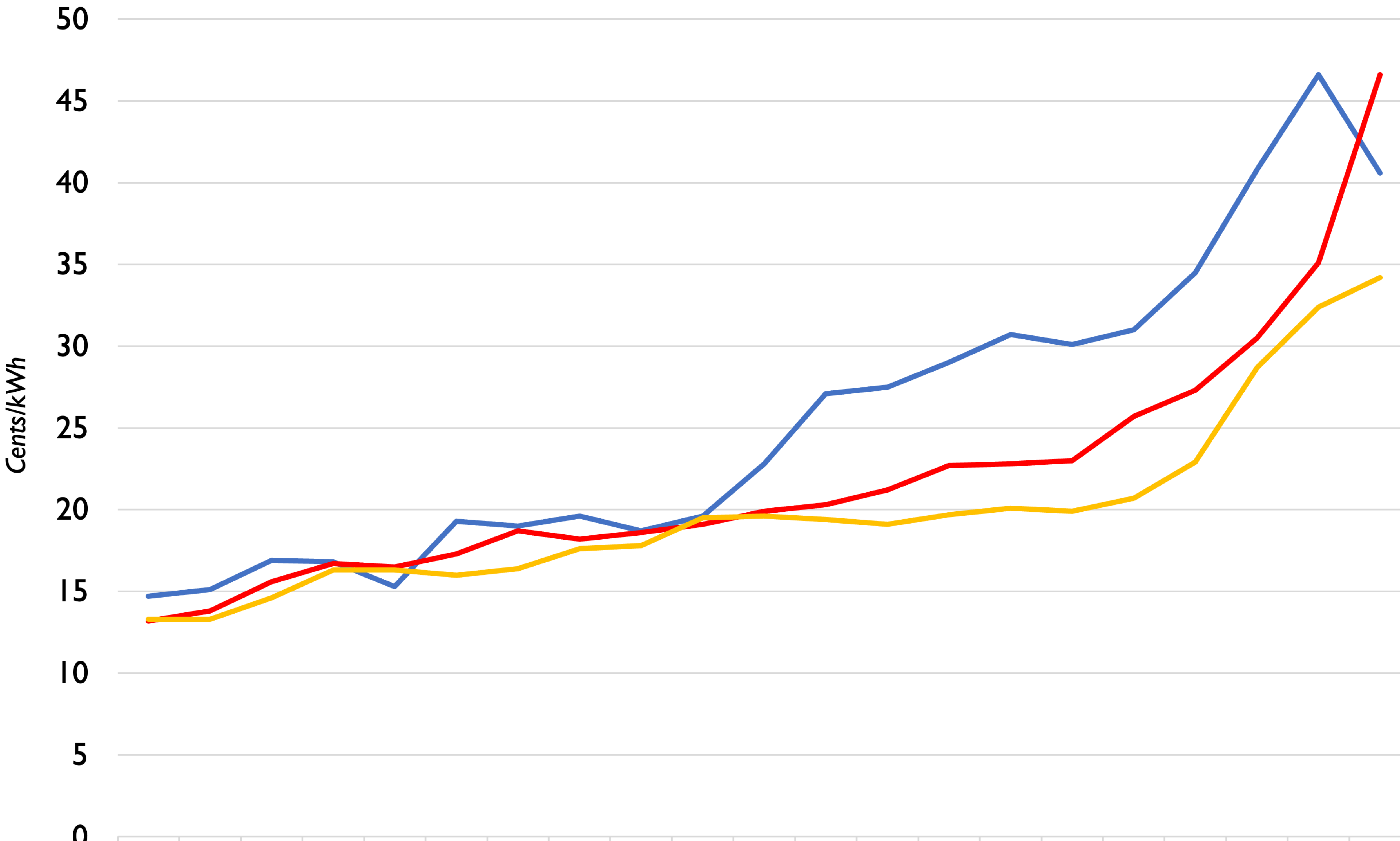
Leader in efforts to promote affordability and equity

- Fought to expand discounts for low income customers
- Highlighted growing customer disconnections and arrearages that led to shutoff restrictions and financial support from state general fund

100% committed to 100% decarbonization of the electricity grid

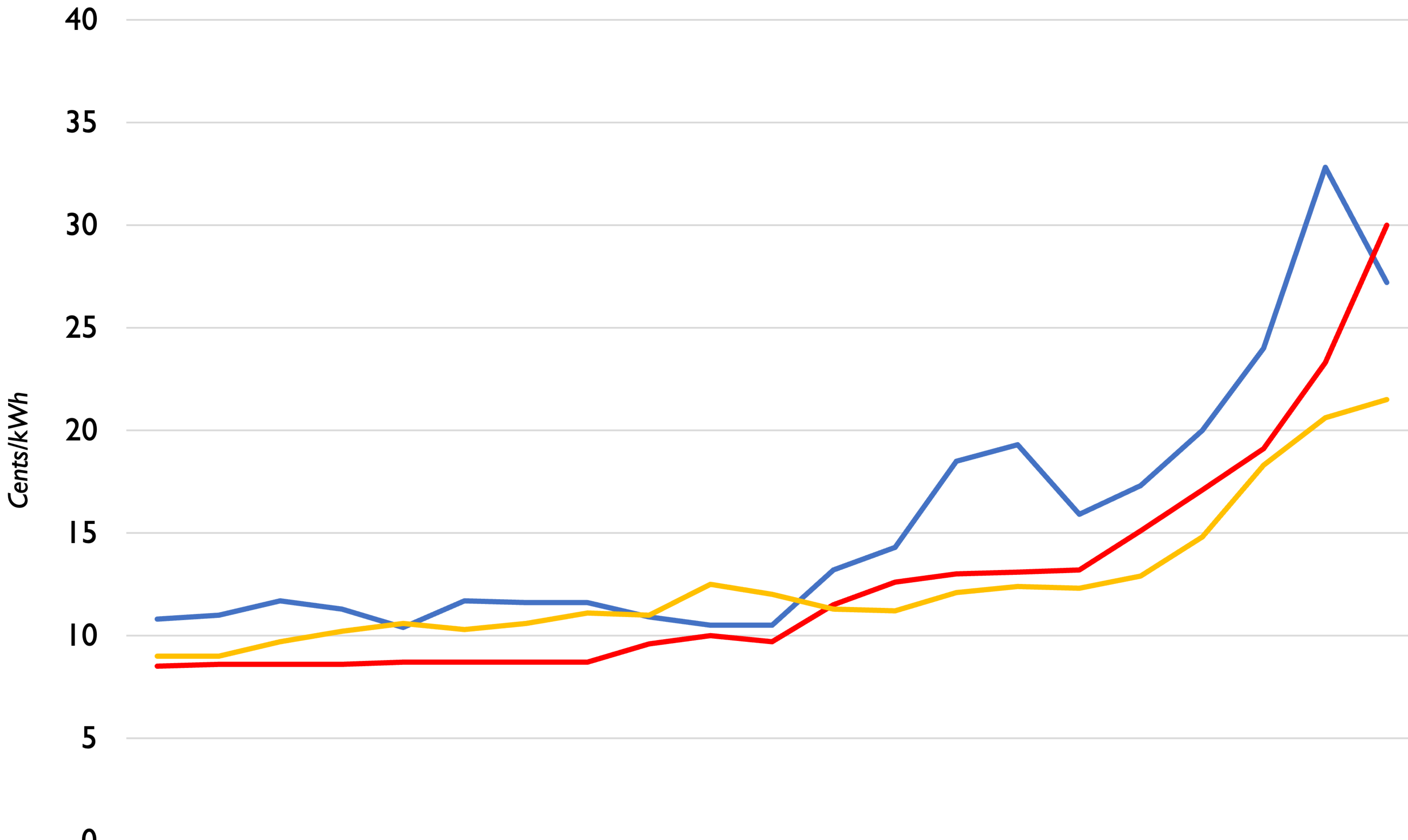
- Sponsored series of legislative efforts to enact, revise and expand the California Renewable Portfolio Standard
- Actively involved in the passage of SB 100 (DeLeón 2018) that established a 100% zero carbon electricity target by 2045 and SB 1020 (Laird 2022) that accelerated the 100% target for state agencies (to 2035) and added interim targets (90% by 2035, 95% by 2040) for the rest of the system.

Bundled Retail Electricity Rates (Residential Non-CARE)

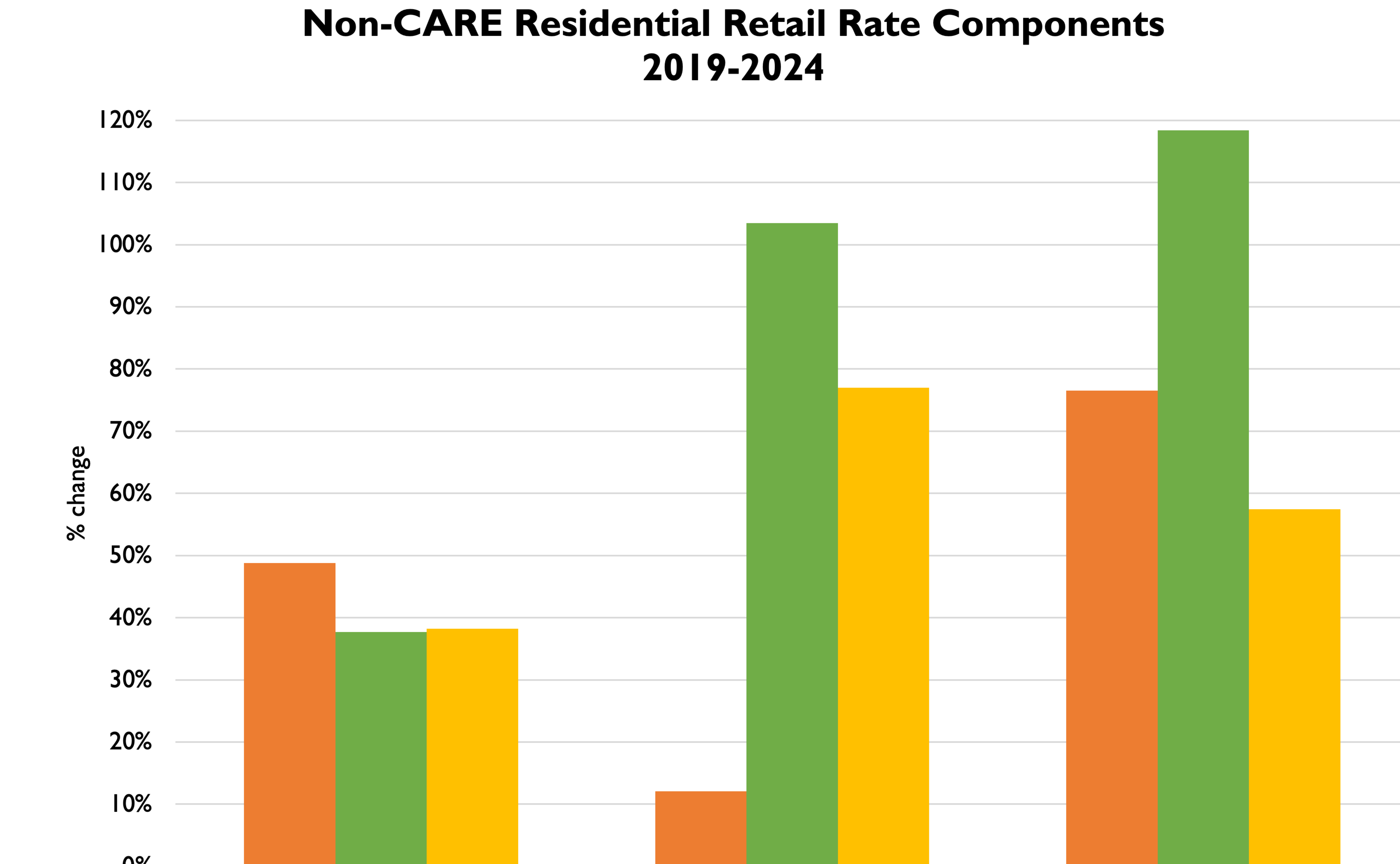


	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SDG&E	14.7	15.1	16.9	16.8	15.3	19.3	19	19.6	18.7	19.6	22.8	27.1	27.5	29	30.7	30.1	31	34.5	40.8	46.6	40.6
PG&E	13.2	13.8	15.6	16.7	16.5	17.3	18.7	18.2	18.6	19.1	19.9	20.3	21.2	22.7	22.8	23.0	25.7	27.3	30.5	35.1	46.6
SCE	13.3	13.3	14.6	16.3	16.3	16	16.4	17.6	17.8	19.5	19.6	19.4	19.1	19.7	20.1	19.9	20.7	22.9	28.7	32.4	34.2

Bundled Retail Rates (Residential CARE)



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SDG&E	10.8	11	11.7	11.3	10.4	11.7	11.6	11.6	10.9	10.5	10.5	13.2	14.3	18.5	19.3	15.9	17.3	20	24	32.8	27.2
PG&E	8.5	8.6	8.6	8.6	8.7	8.7	8.7	8.7	9.6	10.0	9.7	11.5	12.6	13.0	13.1	13.2	15.1	17.1	19.1	23.3	30.0
SCE	9	9	9.7	10.2	10.6	10.3	10.6	11.1	11	12.5	12	11.3	11.2	12.1	12.4	12.3	12.9	14.8	18.3	20.6	21.5



	SDG&E	SCE	PG&E
Transmission	49%	12%	77%
Distribution	38%	103%	118%
Generation	38%	77%	57%

Main electricity rate drivers

	10-Year Change Jan 2014 to Jan 2024	**Primary Statewide Drivers**
PG&E	↑ 127%	
Southern California Edison	↑ 91%	
SDGE	↑ 72%	

1. Wildfire mitigation
2. Transmission and distribution investments
3. Rooftop solar incentives ("net energy metering")

Source: California Public Utilities Commission SB 695 report: Report to the Governor and Legislature on Actions to Limit Utility Cost and Rate Increases... (2023)

The Public Advocates Office

Source: Investor-Owned Utility Advice Letters (California Residential Average Rates)

PROJECTED FUTURE RATES

CPUC 2024 SB 695 REPORT

CPUC projections through 2027 (compared to 2023 Year End)

- PG&E residential rates +10.8% per year
- SCE residential rates +6.5% per year
- SDG&E residential rates +5.6% per year
- Assumes inflation is 2.6% per year

Table 11: PG&E, SCE, and SDG&E Forecasted Bundled Residential Average Rates (nominal $/kWh)

Bundled Residential Average Rate	Year-End				
	2023 Actual	2024	2025	2026	2027
PG&E Nominal Rate	$ 0.322	$ 0.371	$ 0.400	$ 0.435	$ 0.460
SCE Nominal Rate	$ 0.305	$ 0.305	$ 0.344	$ 0.365	$ 0.385
SDG&E Nominal Rate	$ 0.404	$ 0.404	$ 0.432	$ 0.462	$ 0.494

PG&E PROMISES TO REDUCE RATES AND INCREASE CAPITAL SPENDING

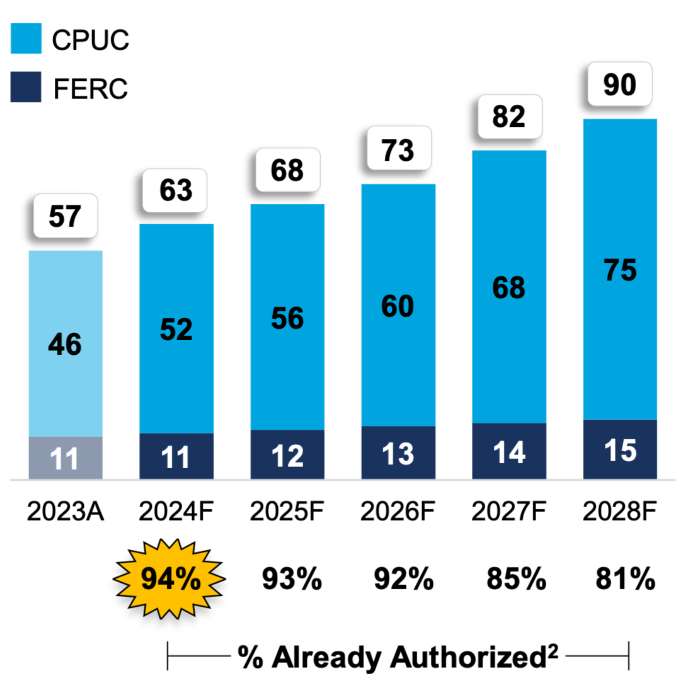
PG&E pledges to hold rate increases to inflation

- “Overall, we expect prices will rise - on average - 3% per year from 2023-2026” (Carla Peterman op-ed, Sacramento Bee, May 22, 2024)
- System average rates already up 19% since 1/1/23, would need to decline by 8% to meet this goal

Five-Year $62B Capital Plan…

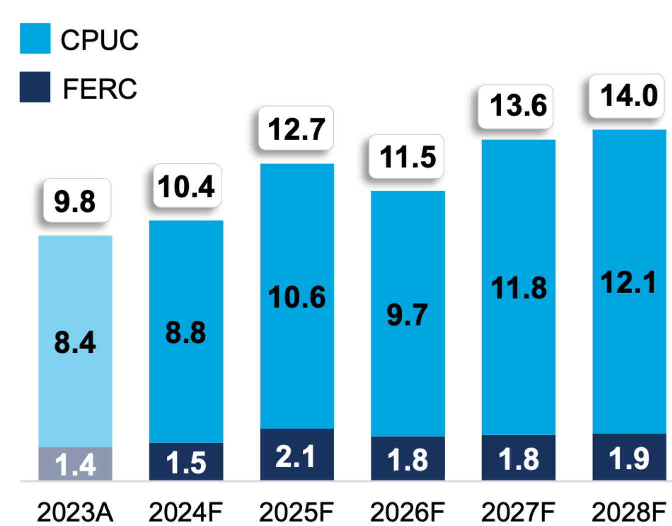
Weighted Average Rate Base ($B)[1]

~9.5% CAGR 2023-2028



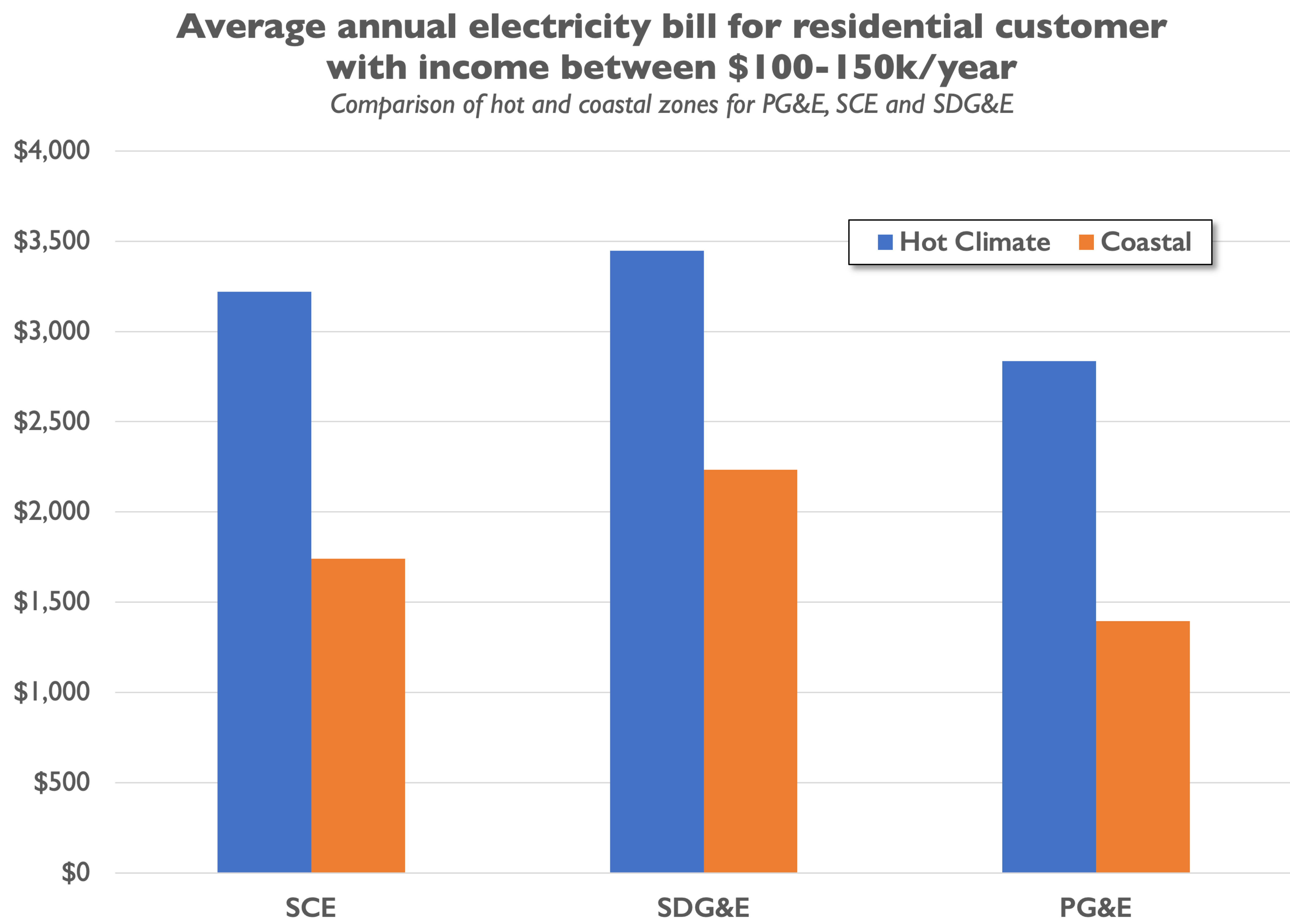
CapEx ($B)[3]

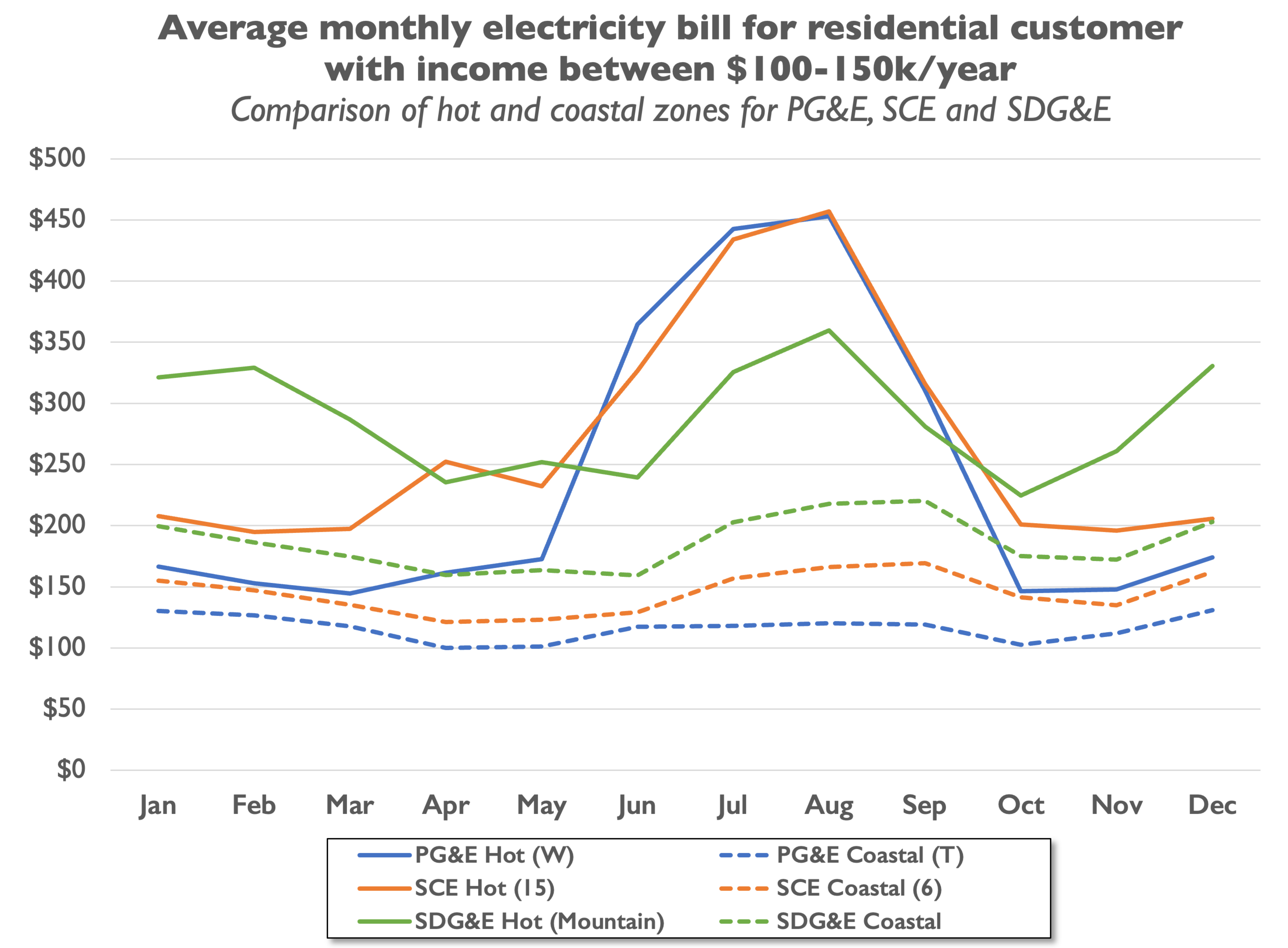
$62B 2024-2028

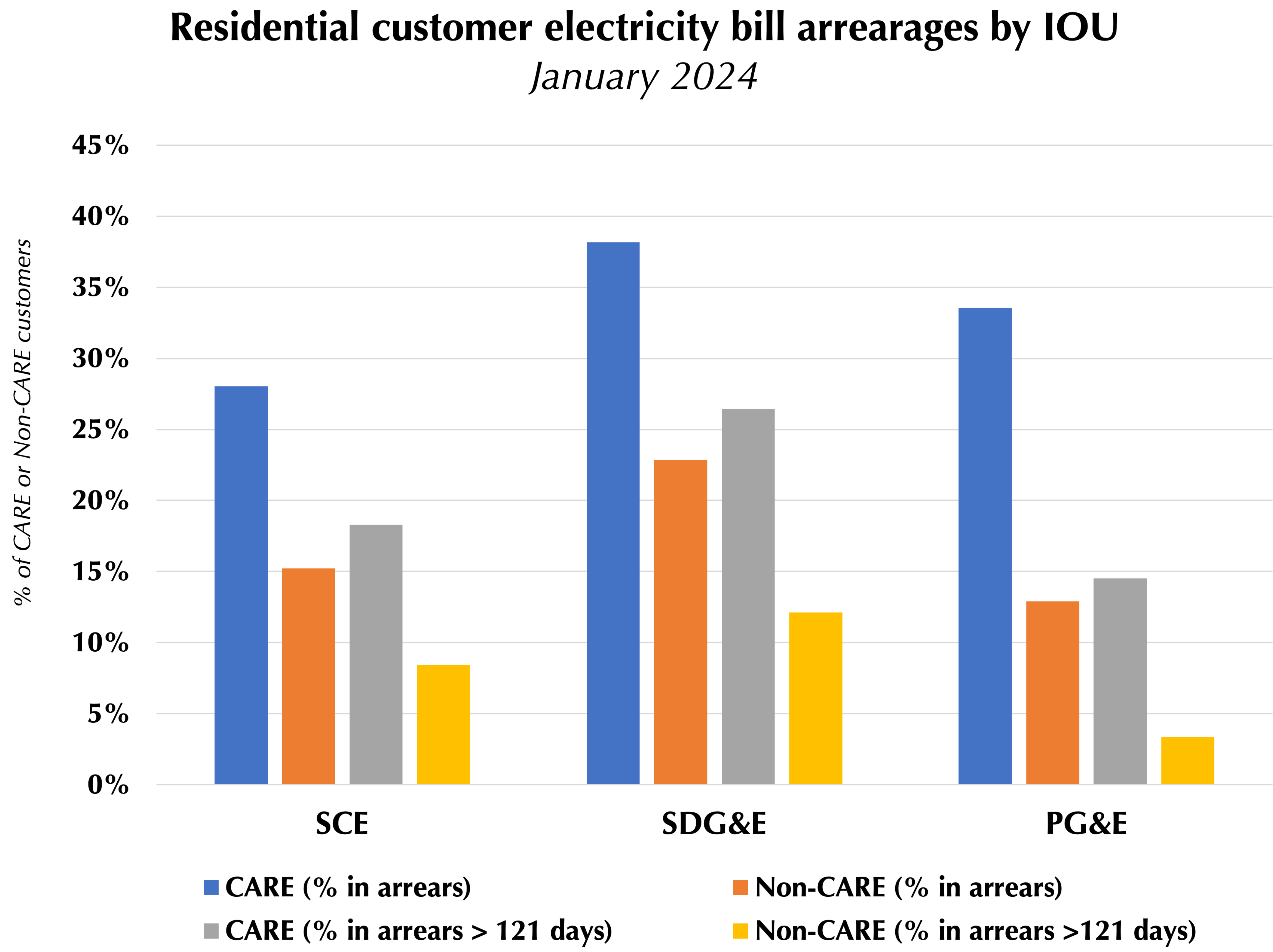


Plus At Least $5B Customer Beneficial Investment Opportunities[4]

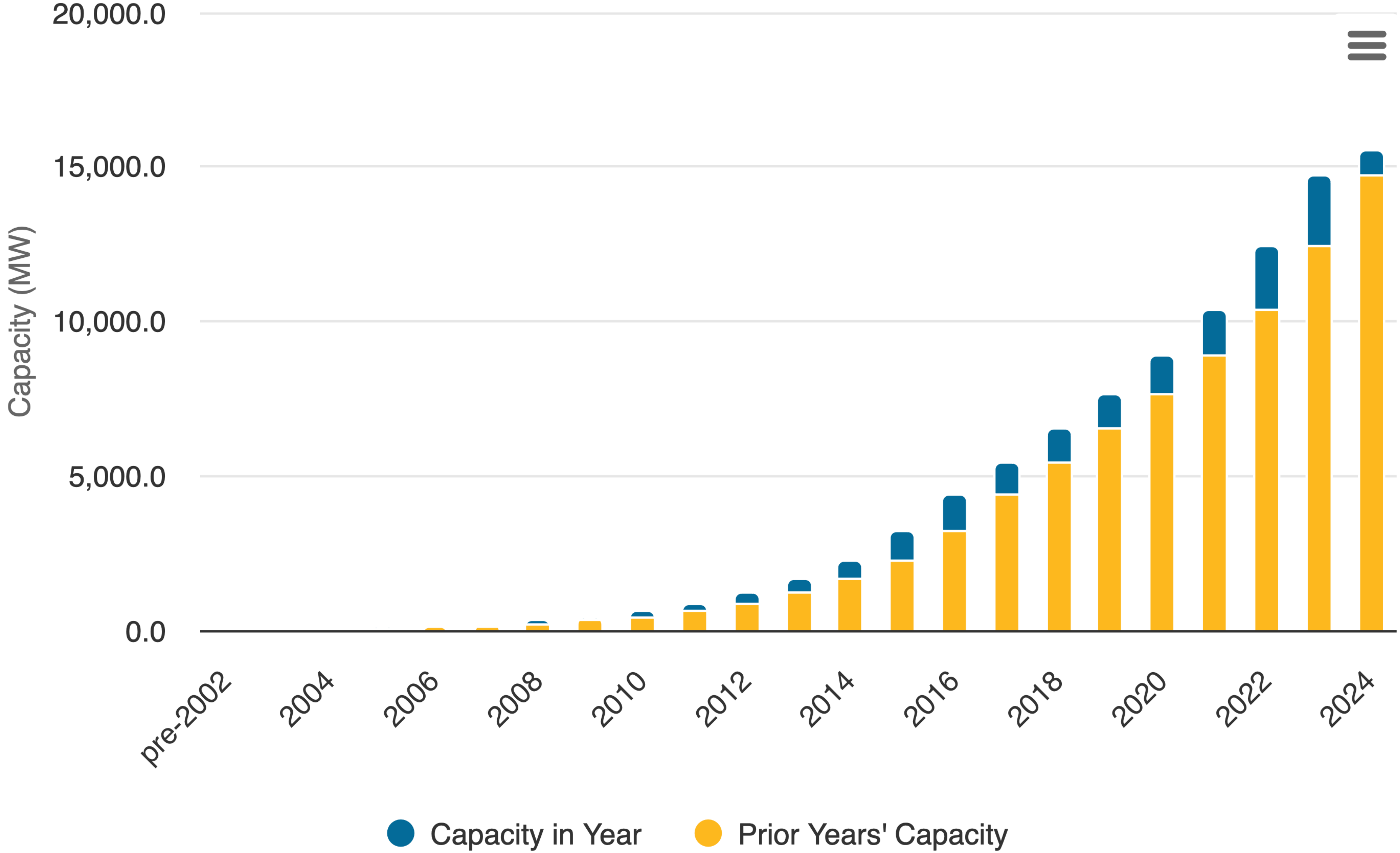
- Transportation Electrification Capacity Investments
- Transmission Upgrades: Data Centers and System Investments
- Incremental New Business Connections
- Hydro and Storage
- IT and Automation


Average annual electricity bill for residential customer with income between $100-150k/year
Comparison of hot and coastal zones for PG&E, SCE and SDG&E
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
Hot Climate
Coastal
SCE
SDG&E
PG&E

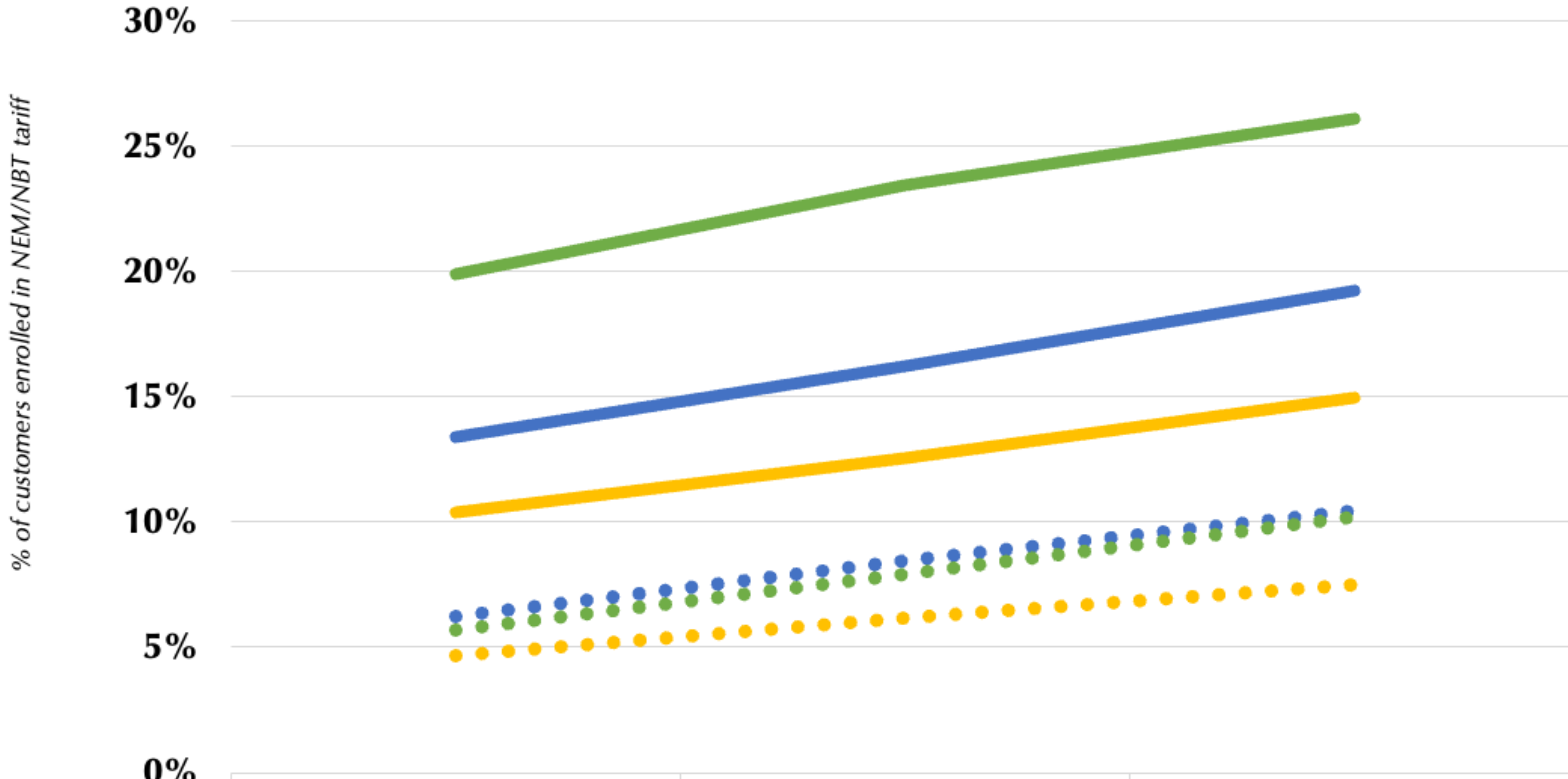

Average monthly electricity bill for residential customer with income between $100-150k/year
Comparison of hot and coastal zones for PG&E, SCE and SDG&E
$500
$450
$400
$350
$300
$250
$200
$150
$100
$50
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
PG&E Hot (W)
PG&E Coastal (T)
SCE Hot (15)
SCE Coastal (6)
SDG&E Hot (Mountain)
SDG&E Coastal


Residential customer electricity bill arrearages by IOU
January 2024
% of CARE or Non-CARE customers
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
SCE
SDG&E
PG&E
CARE (% in arrears)
Non-CARE (% in arrears)
CARE (% in arrears > 121 days)
Non-CARE (% in arrears >121 days)

California installed behind the meter solar Residential + Non-residential (IOUs)



Residential customer enrollment in IOU net energy metering or net billing tariffs 2021-2024



	June 2021	October 2022	January 2024
SDG&E Non-CARE	19.9%	23.4%	26.1%
PG&E Non-CARE	13.4%	16.2%	19.2%
SCE Non-CARE	10.4%	12.6%	15.0%
PG&E CARE	6.2%	8.5%	10.4%
SDG&E CARE	5.7%	7.9%	10.2%
SCE CARE	4.6%	6.2%	7.5%

IMPACT OF NET ENERGY METERING PARTICIPATION ON RATES

NEM impacts on rates adoption results in reductions to retail sales and less revenue collection

- Reductions to retail sales
- Lower revenue collection from residential customers
- Minimal impact on total IOU spending
- IOU revenue requirements are reallocated to other customers

Cost shift has doubled since 2021

- Cost shift was $3.4 billion/year in 2021
- Cost shift has increased to $8.5 billion/year by the end of 2024
- Between 21-27% of average household electricity bill is used to subsidize NEM customers (payments in excess of NEM value)

Future NEM subsidy expected to significantly increase

- Legacy NEM customer subsidy continues to increase as rates rise
- New Net Billing Tariff contains substantial subsidies that will be born by all non-solar customers

TURN'S VIEW ON FIXED CHARGES

HISTORICAL OPPOSITION, CHANGED CIRCUMSTANCES

TURN has a long history of opposing residential fixed charges

- Concerns about adverse impacts on energy efficiency/conservation
- Concerns about adverse impacts on low-income/usage customers

Changed circumstances + AB 205 (2022) justify a new approach

- Rates have skyrocketed in the past decade
- Extraordinarily high rates provide more than adequate incentives for energy efficiency/conservation even with a fixed charge
- Electrification (building/transportation) is a new policy priority
- Greater portion of costs driving rate increases are unrelated to customer demand/usage (grid hardening, wildfire mitigation/liability)
- Dramatic growth in NEM participation shifts recovery of fixed costs to non-participants, has significant impacts on residential customer rates
- Opportunity to income-differentiate fixed charge can protect (and benefit) lower income customers

POTENTIAL BENEFITS OF INCOME-BASED FIXED CHARGES

Promotes equity and limits summer bill spikes

- Bill reductions for low-income customers
- Bill reductions for larger users of electricity in hot climates
- Less seasonal bill volatility driven by variations in usage

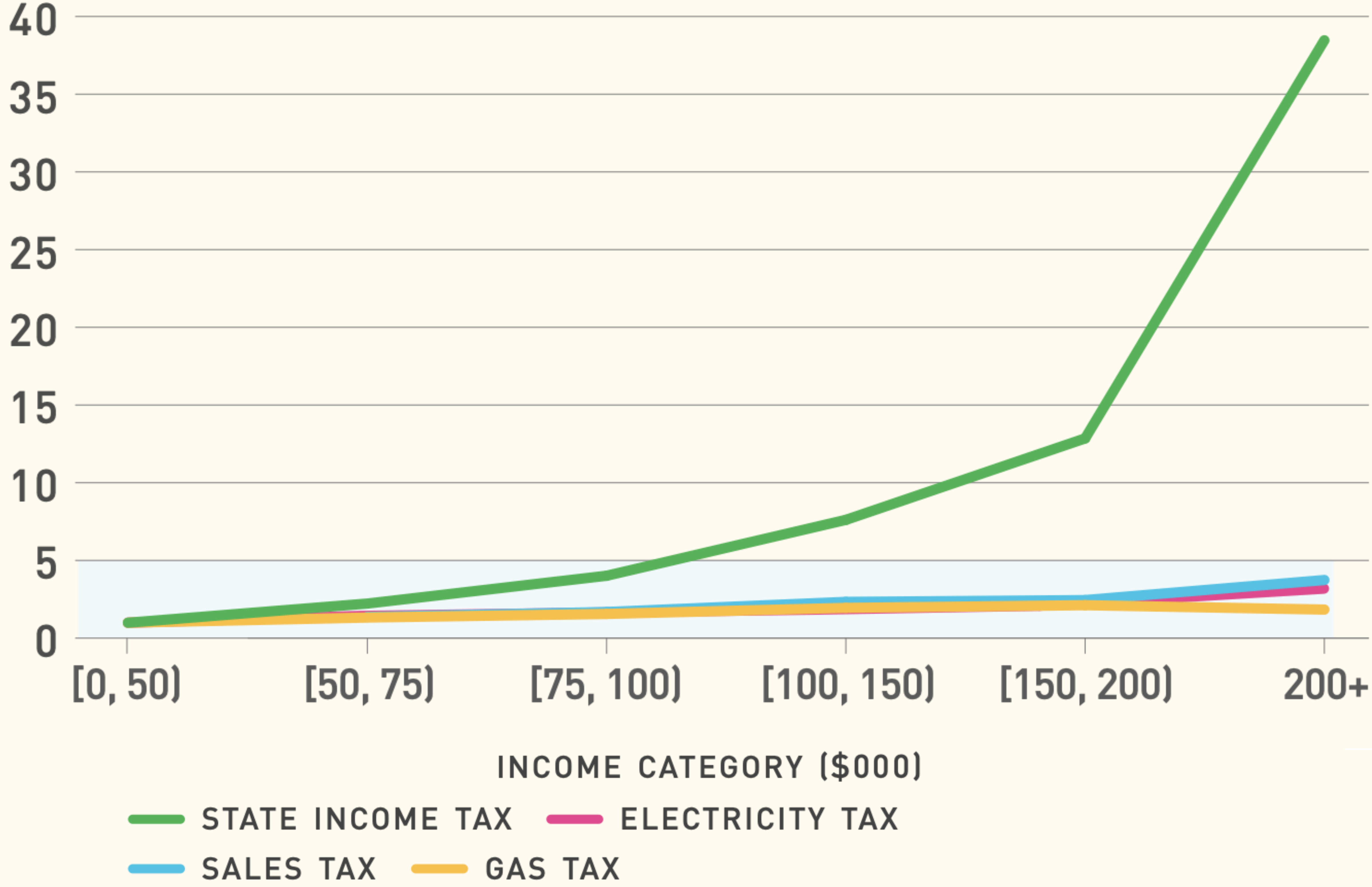
Promotes investments in electrification

- Lower costs of incremental usage caused by operating heat pumps, electric vehicles, other household electric loads.
- Accelerates customer payback period for electrification investments and reduces need for additional ratepayer/taxpayer funded subsidies
- Increased electrification loads will place downward pressure on retail rates

Better aligns usage rates with value

- Pricing more aligned with the costs of incremental consumption under the Avoided Cost Calculator
- Reduction in future cost shifting caused by adoption of distributed energy resources, reduces gap between compensation and value

FIGURE 5 Progressivity of Different Taxes in California (2019)



CPUC ADOPTED FIXED CHARGES

IN DECISION 24-05-028 (ADOPTED MAY 15)

	Fixed charge	**Usage charge**
	$/month	*cents/kWh*
CPUC adopted values		
Tier 1 (CARE)	$6.00	-2.1 to -3.6 cents/kWh
Tier 2 (FERA + Affordable Housing)	$12.00	-3.9 to -5.6 cents/kWh
Tier 3 (All other residential customers)	$24.15	-4.7 to -6.8 cents/kWh
TURN/NRDC proposal		
CARE	$5.00	-3.1 to -4.2 cents/kWh
FERA + Affordable Housing	$5.00	-4.8 to -6.3 cents/kWh
All other residential customers	$30.64	-5.8 to -7.6 cents/kWh

FIXED CHARGES

LEVELS NEEDED TO RECOVER VARIOUS COSTS FOR PG&E, SCE AND SDG&E

	$/month
Customer connection costs only	$9-13
+ Public Purpose Programs	$22-24
+ 25% of fixed distribution costs (includes some Wildfire Hardening/Mitigation costs)	$35-36
+ 50% of fixed distribution costs (includes some Wildfire Hardening/Mitigation costs)	$45-47

Notes:

- Relies on CPUC Fixed Charge Tool in R.22-07-005
- Values are from 2022 and do not reflect subsequent cost increases
- Values show fixed charge level for non-CARE residential customer needed to recover defined cost categories
- Assumes CARE fixed charge is capped at $5/month

CPUC ADOPTED FIXED CHARGES

IN DECISION 24-05-028 (ADOPTED MAY 15)

Average Monthly Bill Impacts for NEM and Non-NEM Customers					
		Inland		Coastal	
		NEM	Non-NEM	NEM	Non-NEM
PG&E	Tier 1 (CARE)	-$1.05	-$7.06	$1.18	-$0.66
	Tier 2 (FERA)	-$4.78	-$17.46	$0.40	-$3.04
	Tier 3 (all others)	$7.11	-$5.57	$12.28	$8.85
SCE	Tier 1 (CARE)	-$4.38	-$10.43	-$0.33	-$1.65
	Tier 2 (FERA)	-$11.61	-$21.25	-$1.72	-$5.96
	Tier 3 (all others)	$0.46	-$9.18	$10.35	$6.12
SDG&E	Tier 1 (CARE)	-$2.38	-$6.90	-$0.23	-$3.90
	Tier 2 (FERA)	-$2.34	-$14.35	-$2.70	-$10.79
	Tier 3 (all others)	$9.73	-$2.28	$9.38	$1.29

PUBLICLY OWNED UTILITIES

CURRENT RESIDENTIAL FIXED CHARGES

Utility	Fixed Charge
Imperial Irrigation District (IID)	$9.60/per month
Merced Irrigation District (MID)	$30/per month
Pasadena Water and Power	$13.46/per month
Lassen Municipal	$30.00/per month
Trinity Public Utilities District	$34.50/per month (2024) $38.00/per month (2025)
City of Azusa	$5.80/per month
City of Riverside Public Utilities Department	$24.55 – $85.22 per/month
Alameda Municipal Power (AMP)	$19.99 per month
Redding Electric Utility	$25.00 per meter/ per month
Silicon Valley Power (SVP)	$4.50/per month
Truckee Donner Public Utilities District (TDPUD)	$24.53/per month
Modesto Irrigation District	$30.00/per month
City of Roseville	$30.00/per month
Turlock Irrigation District (TID)	$17/per month
SMUD	$23.50/per month
LADWP	$12.00/per month

2024 LEGISLATIVE SESSION OUTCOMES

AB 3263 (Calderon)

- Allows IOUs to apply up to $10 billion in securitization to wildfire expenses (O&M)
- IOUs want to use these funds to pay for 1-year reductions in O&M (with 15 year repayment)

AB 3264 (Petrie-Norris)

- Requires CPUC to establish a methodology for tracking total energy costs paid by residential households.
- Calls for "scenarios of actions" that may lead to 5/10/15% reductions in total costs by 2035.
- Directs the CPUC to apply this framework to evaluation of IOU spending proposals.
- Requires IOUs to publish a "visual representation" of the costs included in electricity rates on their website.
- Directs CPUC to submit a report on costs and benefits of demand-side management programs.
- Directs CPUC/CEC/CAISO/I-bank to conduct a study on the potential benefits of public financing/ownership of transmission projects.

TURN AFFORDABILITY PROPOSALS

Limiting rate increases (Ratepayer Relief Act)

- Direct CPUC to place greater reliance on cost-effectiveness measures, increased shareholder responsibility for overspending and affordability benchmarks.
- Limit annual rate increases to Social Security COLA

Use of external funding sources to reduce rates

- Climate Equity Trust
- Sources include state income taxes, Cap-and-Trade revenues, federal IIJA and IRA funds

Alternative financing/ownership options

- Securitization of IOU distribution capital spending
- Low cost financing for new transmission and clean generation
- Public ownership of Transmission through POUs and/or State Infrastructure authority

Providing low-income customer bill relief

- Income graduated fixed charge
- Increase CARE gas discount to match electric bills (30-35%)

OTHER IDEAS FOR IMPROVING AFFORDABILITY?