POWERING CHANGE: UNDERSTANDING CALIFORNIA'S ELECTRIC RATE CHALLENGE AND AFFORDABILITY SOLUTIONS

EXECUTIVE SUMMARY

Californians have experienced sharp increases in how much they pay for using electricity, or electric rates, in recent years, adding to the financial strain of rising housing, health care, and food costs. This has also reduced the economic incentive to swap out polluting vehicles and appliances for those that run on clean electricity, at a time when this change is *required* to address the burden of air pollution and to meet California's greenhouse gas reduction targets. Current rates also increase the financial burden of installing and running air-conditioning to protect public health as the climate gets hotter. It doesn't have to be this way: California has the tools and resources needed to bring down energy costs and to ensure that ditching polluting fossil fuels remains an affordable solution for all.

It is time to rethink how the state has typically approached regulating electric utilities and what customers are charged for when they use electricity. While there are several factors involved in the recent rate increases, our analysis shows that **the largest contributor to high prices is loading a range of costs—particularly skyrocketing wildfire-related costs—into the per-kilowatt-hour rate for electricity.** Importantly, our analysis also shows that, contrary to claims by the fossil fuel industry, climate policies that require utilities to procure clean energy are *not* a driver of these recent rate increases. In fact, the cost of renewable portfolio standard compliance has come down over time as the cost of renewables has plummeted.

When customers in California pay for electricity, that money goes to many things other than the basics of generating and delivering electricity, including essential activities like vegetation management and grid hardening to prevent wildfires, settlement claims made by wildfire victims, the

nuclear decommissioning fund, assistance to low-income customers, and other programs. These activities benefit the state and its residents immensely, especially as climate change–induced extreme weather leads to more frequent and more destructive wildfires. However, paying for them through utility spending that is passed on directly to the customer through usage rates—the price per kilowatt hour—is neither equitable nor sustainable.

This report examines the electric rates of California's largest utility, Pacific Gas & Electric (PG&E), and recommends solutions to address recent rate increases.[1] PG&E currently serves around 16 million people in central and northern California across a massive territory of 70,000 square miles. In recent years, PG&E customers' electric bills have risen significantly. The average monthly bill for a typical inland customer is now $245 per month, a $70 monthly increase since 2018 after adjusting for inflation.[2] The overall customer bill is determined by electricity rates or the cost per kilowatt hour (kWh) multiplied by the amount used, plus any monthly fixed charges. PG&E's average residential electric rates were approximately $0.27 per kWh (real $) in 2018 and rose to $0.38 per kWh in 2024.[3] **PG&E's residential rates have increased by 40 percent *above inflation* since 2018. Including inflation, rates rose 80 percent over this period.**

These high rates are caused by numerous factors including outdated rate design and the practice of funding policy goals through rates. But the largest contributor to PG&E's skyrocketing rates is the cost of vegetation management and hardening the grid to prevent wildfires. Of the $0.11 per kWh increase above inflation since 2018, about $0.06 per kWh is due to increased wildfire prevention spending, largely found in the "distribution" category of spending shown in figures ES1 and ES2 below.

FIGURE ES1: CALCULATED REVENUE REQUIREMENT AND AVERAGE RATES FOR BUNDLED (SERVED SOLELY BY PG&E) AND UNBUNDLED RESIDENTIAL CUSTOMERS (SERVED BY PG&E AND LOCAL COMMUNITY CHOICE AGGREGATORS (CCAS) IN PG&E SERVICE TERRITORY

NRDC analysis conducted using annual PG&E rate filings to the California Public Utilities Commission (CPUC); payments to customers from cap-and-trade program, or climate credit, not included.

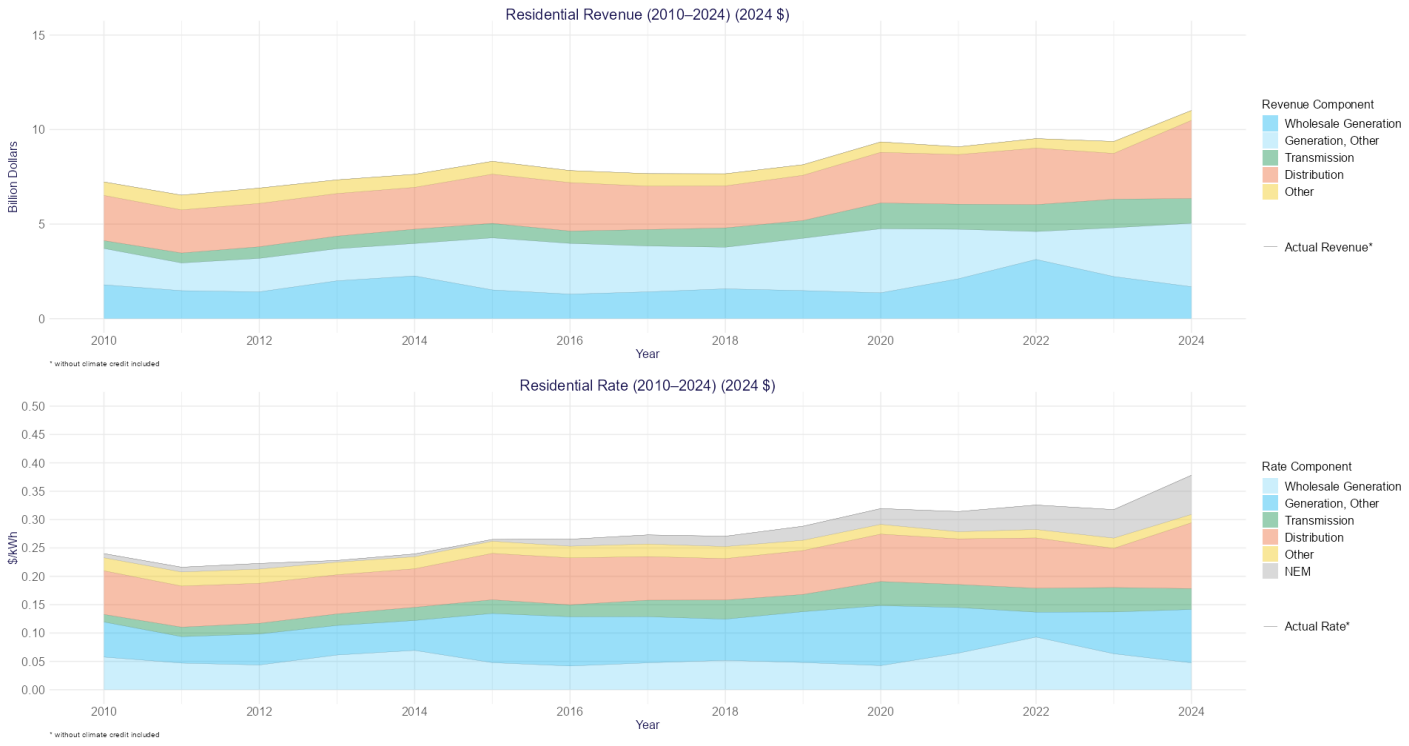
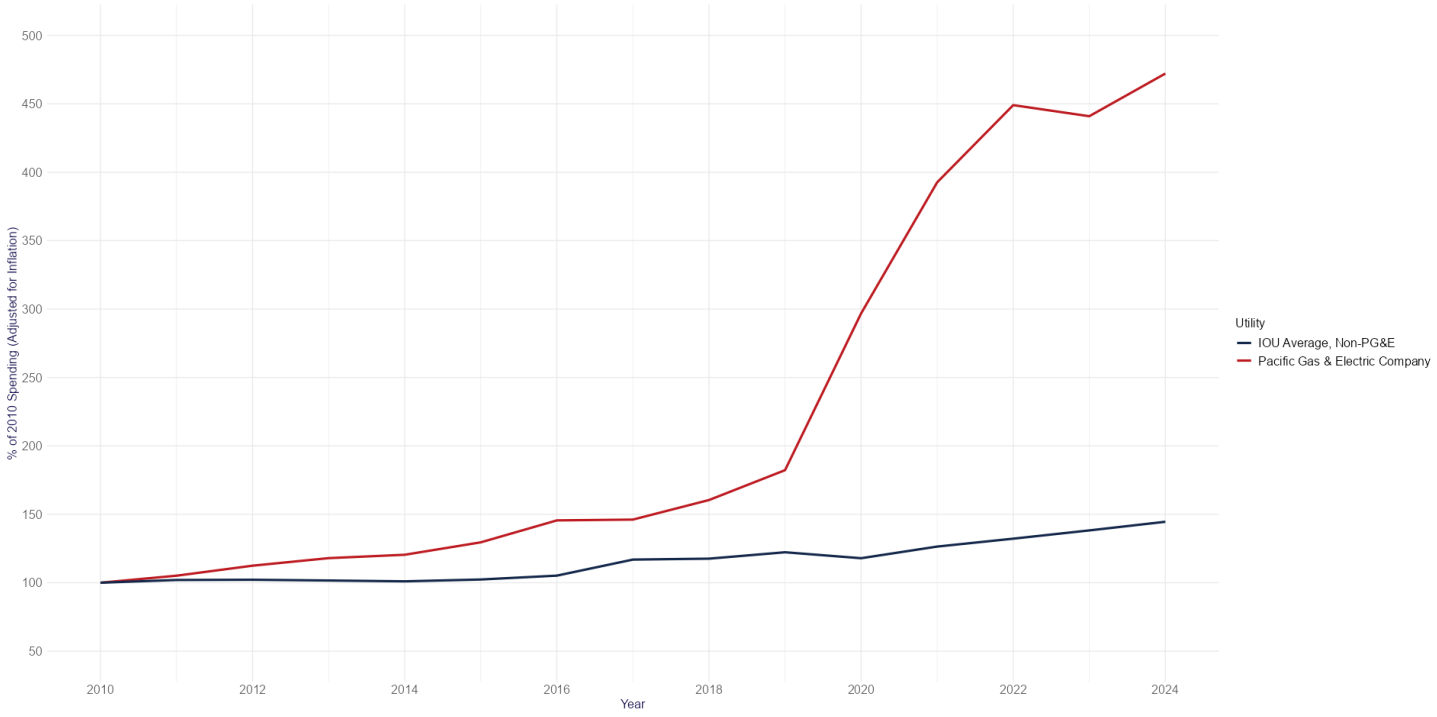


FIGURE ES2: PG&E DISTRIBUTION O&M SPENDING TRENDS COMPARED WITH OTHER LARGE INVESTOR-OWNED UTILITIES (IOUS) IN THE UNITED STATES, THREE-YEAR ROLLING AVERAGES. NRDC ANALYSIS OF FEDERAL ENERGY REGULATORY COMMISSION (FERC) DATA



Climate change–induced extreme weather, including increased heat and extraordinarily high winds, have increased the probability of catastrophic wildfires in California. Such events, including the devastating wildfires in the Los Angeles area this year as well as the many wildfires in past years, have had tragic consequences for families, entire communities, and the economy. Wildfires sparked by utility infrastructure can be especially destructive, as they often occur closer to where people live. But with appropriate funding sources, cost-effective resiliency measures, and thoughtful rate design, Californians can have a wildfire-resilient grid *and* affordable electric rates.

IMMEDIATE SOLUTIONS

In the near term, two solutions would allow policymakers to immediately reduce average residential electricity bills:

- **Move costs outside of electric rates where possible:** For every $1 billion in costs that can be paid for by sources other than residential electricity customers, PG&E's residential rates could be reduced by nearly **$0.04 per kWh, about a 10 percent reduction in rates and total bills.** This direct rate relief is essential, as the costs of wildfire prevention and damages are not going away.
- **Defend and expand sensible fixed charges:** Last year the California Public Utilities Commission (CPUC) approved an average income-based fixed charge of $18 ($6 for low-income, $24 for higher-income households) that will reduce PG&E residential rates about $0.04 per kWh (a 10 percent reduction relative to today's rates). This change will go into effect in late 2025 at the earliest. Increasing the average fixed charge to $36 per month would reduce residential rates by **$0.08 per kWh (a 20 percent reduction relative to today's rates)** while also reducing the burden on low-income customers. Average total bills would remain the same, but the bills of low-income families, those living in hot climates, and customers who switch away from fossil fuel–powered cars and appliances would decrease.

Combined, these two levers can immediately bring average residential usage rates down by 30 percent. But more can and must be done to ensure access to affordable electricity in the longer term.

LONGER-TERM SOLUTIONS

Policymakers should consider a range of other tools and actions to help keep electric rates and bills in check over the longer term, including these:

- **Better balance the cost of wildfire risk reduction with the need for affordable rates:** Making the grid more resilient to wildfires is essential. However, it is impossible to reduce the risk of wildfire to zero. A better balance must be struck between reducing wildfire risk and ensuring that rates stay affordable, such that the state focuses spending on the most effective solutions.

- **Improve regulatory oversight:** Closer scrutiny by the CPUC of investor-owned utilities' (IOUs) return on equity (ROE) and their proposed investments is required. A rightsized ROE means that utility shareholder profits are commensurate to the risk of their investments, which in turn means that Californians don't overpay for utility services.
- **Explore alternative funding and ownership models to lower costs:** For example, transferring ownership and the associated upkeep costs of future transmission lines to public agencies could result in cumulative statewide savings of up to $60 billion over the next 40 years. This provides significant long-term savings, largely due to lower capital costs and lower taxes, though the impact on rates is small in the near term.
- **Co-fund subsidies for rooftop solar from sources other than rates:** Rooftop solar is a valuable resource, but the net energy metering (NEM) program has overcompensated this solar production for the value it provides to the grid. This issue has been greatly compounded by skyrocketing usage rates, which means that the 18 percent of PG&E's customers on NEM are not contributing enough to shared costs, such as wildfire prevention and other programs. Even with recent reforms to the program with NEM 3.0, these costs remain, particularly from legacy installations of rooftop solar.
- **Develop new rates to enable electrification:** Increased electric loads, when managed well, can reduce rates for everyone because the shared system costs are spread over more usage. Policymakers should explore new electrification equipment–only rates, which charge new heat pump and electric vehicle (EV) usage at closer to social marginal cost (which is about $0.16 per kWh).

As a climate leader, California must demonstrate that an economy powered by clean electricity is affordable for all. This goal is being challenged primarily by the need to find ways to fund adaptation and damage driven by climate change. Bold action must be taken to reduce electric rates, now and in the future. While this is far from an easy task, the state has the tools and resources to make this a reality. California cannot let these new circumstances stall progress on reducing air pollution and greenhouse gas emissions.

ENDNOTES

1 In this report, empirical estimates of the efficacy of each solution apply to PG&E only, but the solutions presented are relevant to all three of the California IOUs (PG&E, Southern California Edison, and San Diego Gas & Electric). The major drivers of electricity prices in California are specific to the state; however, other states can learn from California's experience as they continue on their own paths to decarbonization.

2 The CPUC Fixed Charge Tool, available here, estimates that residential customers without NEM in PG&E climate zone S consume 646 kWh per month on average. Using an average rate of $0.38, this amounts to $245 per month; using an average rate of $0.27, this amounts to $174 per month. These estimates are average across customers on low-income bill discounts (CARE) and non-low-income customers.

3 The numbers used in this report are real 2024 dollars (adjusted for inflation). The nominal average residential electric rate for PG&E was $0.21 per kWh in 2018. Thus, in nominal terms, average residential rates increased 80 percent from 2018 to 2024. It is also worth considering how utilities could *beat* inflation—there may be ways to improve performance or find other cost savings. But for the purposes of this analysis, we focused attention on identifying the categories of spending or other factors that drove the recent, sudden rate increases beyond the historical trends, which have largely followed inflation.