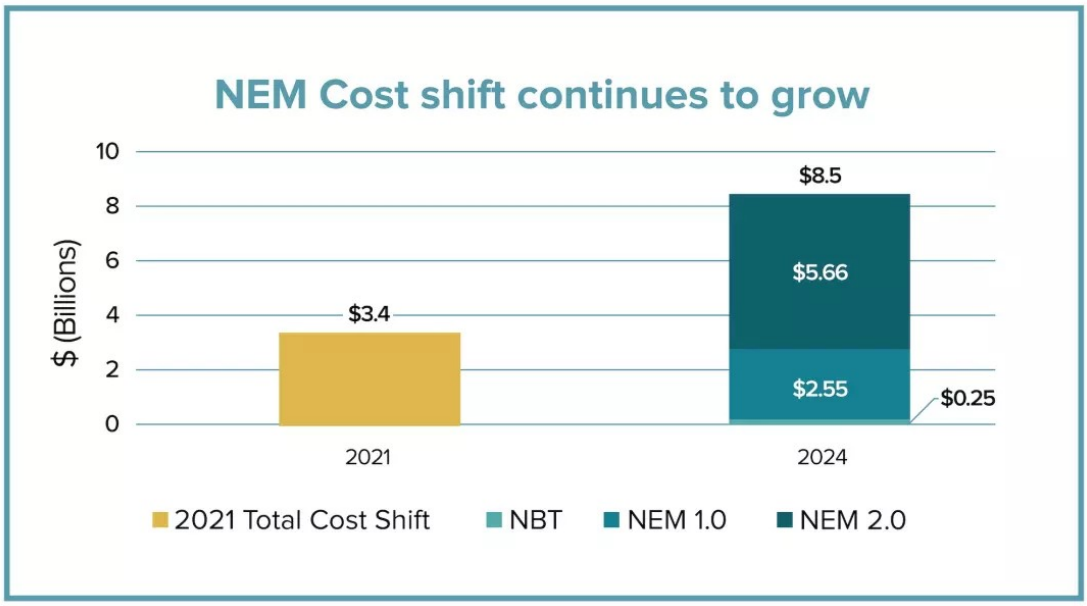
Aug. 12, 2025 6:35 AM PT

PAID PROGRAM

Californians pay the second-highest electricity rates in the nation. A growing body of evidence has concluded that the No. 1 driver of higher bills is a decades-old policy that forces customers to pay for their neighbors' rooftop solar systems.

The program, known as **Net Energy Metering (NEM)**, was created in the 1990s to jumpstart rooftop solar adoption by allowing homeowners to sell excess solar power back to the grid at **full retail rates**. Back then, the incentives were a powerful tool to promote clean energy. But today, that same policy is driving up electricity bills for the 10 million Californians who don't have rooftop solar – especially lower-income renters and inland households.



Source: CA Public Advocates Office

According to the California Public Advocates Office, this cost shift was $8.5 billion in 2024 alone, up from $3.4 billion just three years ago.

Households without solar now pay as much as 27% more on their electricity bills to cover the subsidies provided to about 1.6 million solar-equipped homes.

How the Cost Shift Works

The core issue lies in how rooftop solar users are compensated.

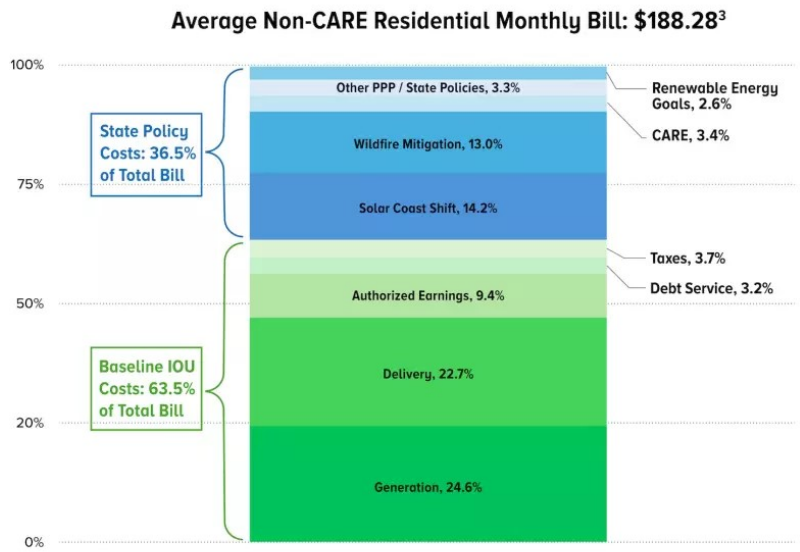
Most rooftop solar customers receive bill credits at or near the full retail price for every kilowatt-hour they export — despite the fact that the **actual value of that power to the grid is far lower**. While utilities might pay around **5 to 6 cents per kilowatt-hour** to buy electricity elsewhere, they're paying solar users **30 to 40 cents**, even during times of day when that energy is least needed.

"The rub is that these payments are regulated to be way beyond the market price for power, akin to being forced to buy gasoline at $20 a gallon. Lowering these rooftop solar power payments would lower the costs to the utilities, and in turns, the bills to ratepayers."

— Tom Philp, columnist at the Sacramento Bee

(source)

And it's not just about what they export. Solar customers also use less electricity from the grid, which means they contribute less to fixed infrastructure costs even though those fixed costs do not change with electricity usage – like transmission lines, wildfire safety work and low-income subsidies – that all users rely on. That shortfall is made up by charging everyone else more.



Source: Blue Sky Consulting Group

A recent analysis found that the solar cost shift now accounts for 14.2% of the average residential electric bill for customers of PG&E, SCE, and SDG&E – more than the share of wildfire mitigation or renewable energy requirements.

A Growing & Expensive Problem

Part of what's making the problem worse is that rooftop solar has become far more common and affordable.

Solar adoption among homeowners has skyrocketed, especially in higher-income, coastal, and suburban communities. From 2014 to 2024, rooftop solar capacity more than quadrupled. At the same time, the payback period for new solar systems has shrunk to just **4 to 5 years**, yet the subsidies last for **up to 20 years**.

This means rooftop solar customers are essentially making a profit for 15 years that their neighbors are paying for in higher electricity bills.

Impacting Lower-Income Californians

The cost shift is not only an affordability crisis – it's also an equity and climate issue.

Research shows that **solar households tend to be disproportionately wealthier and whiter**, while those who pay the most under the current system are more likely to be renters, seniors, and low-income families. In inland regions like the Central Valley and the High Desert, some households now spend 10% or more of their income on electricity.

By the Numbers

Estimated cost shift from rooftop solar to non-solar customers in 2024	**$8.5 billion**
Portion of an average electricity bill due to the solar cost shift	**14.2%**
Time it now takes for most rooftop solar systems to pay for themselves	**4 to 5 years**
Length of time legacy solar customers receive full subsidies	**20 years**



"In California, households installing solar are disproportionately wealthy (as well as disproportionately white), so the result is clear: Net energy metering shifts costs onto the poor."

— Severin Borenstein, professor at UC Berkeley's Haas School of Business and faculty director of the Energy Institute at Haas

(source)

Higher rates also undermine California's climate strategy.

Electrification – switching from gas to electric vehicles, heat pumps, and stoves – is a cornerstone of the state's decarbonization plan. But as electricity prices rise, it becomes **less economically feasible** for households to make that switch.

"The evidence is clear that currently NEM has a large impact on rates that is mostly borne by renters, lower-income customers, and inland customers"

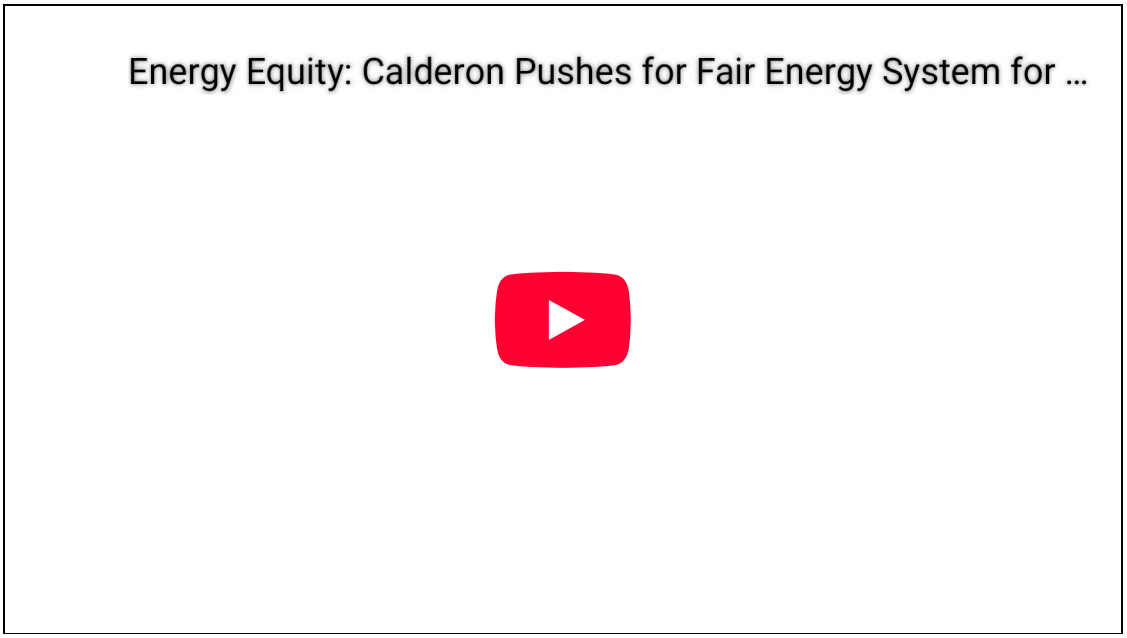
— Natural Resources Defense Council (NRDC)

(report)

Legislative Efforts

In Sacramento, there have been efforts to fix this outdated system and provide millions of Californians with relief. And it comes at a time when the legislature has prioritized California's affordability crisis.

Assemblymember Lisa Calderon, who represents communities in Los Angeles County, introduced AB 942 to update the NEM system. In her district, an estimated 92% of constituents don't have rooftop solar and pay to subsidize others' systems.



The bill would ensure that rooftop solar users continue receiving substantial subsidies – between 76% to 82% of what they're receiving now – while providing some relief to the 10 million non-rooftop solar customers who keep paying more.

The reaction from the solar industry was swift, levying false attacks that this legislation would break contracts – the NEM tariff is a rate structure established by the CPUC, not a contract between customers and the state or their utility companies. The industry also claimed that this would profit utility companies, which is also untrue because it's customers who would see the savings.

"Vilifying utilities is a clever strategy, but the loudest calls for ending the current net energy metering system are coming from the leading consumer advocate organizations: The Utility Reform Network and the CPUC's Public Advocates Office ... The Natural Resources Defense Council is also on board, in large part because of the equity issues."

— Severin Borenstein, professor at UC Berkeley's Haas School of Business and faculty director of the Energy Institute at Haas

(source)

But the true reason for their opposition is more obvious – fixing this system would hit their bottom line by reducing the extra costs that non-rooftop solar customers pay to

subsidize this program.

What's Next?

In 2022, the California Public Utilities Commission (CPUC) updated the rules for **new solar customers** under a program called the Net Billing Tariff, which ties compensation more closely to the actual value of the energy provided. But those changes don't affect the **1.6 million households still enrolled under NEM 1.0 and 2.0**, who will continue receiving premium subsidies for up to two decades.

The result: the cost shift will continue growing for years to come unless further policy changes are made.

Critics argue that reform is overdue – not to punish solar adopters, but to **modernize outdated incentives** in a way that's fair to all Californians.