



California Public Utilities Commission Fact Sheet

Modernizing California's Net Energy Metering Program to Meet our Clean Energy Goals

December 13, 2021

Proposed Decision for Proceeding R.20-08-020 | www.cpuc.ca.gov/nemrevisit

Rooftop Solar's Changing Role in California's Energy Transition

- For more than 20 years, California has aggressively supported the rooftop solar market through its Net Energy Metering (NEM) program in Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric Company (SDG&E) territories.
- NEM has driven record deployment of distributed generation as a result.¹
 - NEM has enabled 1.3 million customers to install roughly 10,000 megawatts of customer-sited renewable generation, almost all of which is rooftop solar.
 - NEM systems reduce the demand on the electric grid by as much as 25 percent during midday when the sun is shining.
- NEM has helped California make significant progress toward meeting its climate goals, but now that California has nearly 25 gigawatts (GW) of solar on our grid, needs have shifted. It is now essential to address grid reliability shortfalls during “net peak”² hours in the early evening when the sun is down and we rely on fossil fuels to meet demand.
- Transforming NEM will ensure household solar+storage adopters are a part of the solution to meeting California's urgent climate goals by reducing load and/or exporting energy during net peak.
- By modernizing NEM, California can incentivize distributed storage and promote electrification, which will provide more value to the electric grid and help California meet its ambitious climate goals even faster.

California Law and the Need to Modernize NEM

- Assembly Bill 327 (Perea, 2013) required the CPUC to reform its existing NEM program, as well as conduct rate reform and distribution planning activities. The CPUC revised the NEM program in 2016 and created “NEM 2.0.” The CPUC initiated its current reform of NEM 2.0 in August 2020.
- The CPUC is ensuring the NEM program complies with statutory requirements including:
 - Ensuring that customer-sited renewable distributed generation continues to grow sustainably;
 - Including alternatives designed for growth in disadvantaged communities;
 - Basing the tariff on the costs and benefits of eligible renewable electrical generation facilities; and,
 - Ensuring the tariff's benefits to all customers and the electrical system approximately equal its costs.
- There is a clean energy shortfall in the evening hours when the sun is down, which forces California to rely on fossil fuels to meet evening demand. One solution to the problem is distributed storage, but the current NEM

¹ For California solar installation data, see the CPUC's [California Solar Initiative webpage](#) and [California Distributed Generation Statistics](#).

² For an introduction to “net peak,” see www.caiso.com/documents/gross-and-net-load-peak-fact-sheet.pdf.



program lacks the price signals necessary to incent storage adoption, thus less than 10 percent of existing NEM customers have paired storage with their solar systems.

- All ratepayers pay as much as 10 times more for exported NEM energy than for other sources of renewable energy.³ Californians today spend more than \$3 billion a year to support NEM programs.
- An independent third-party evaluation of NEM 2.0 found that its costs substantially exceed its benefits as residential NEM 2.0 participants only pay 9 to 18 percent of what it costs their utilities to serve them, even considering the value of the energy produced by their NEM systems.
- Under NEM 2.0, the typical solar customer pays for the solar energy system through energy bill savings in 3-5.5 years depending on utility⁴, and then receives substantial bill savings for the remainder of the current 20-year tariff.
- Ratepayers without NEM systems, who are disproportionately low-income, pay significantly higher electricity rates due to NEM. The Public Advocates Office at the CPUC estimates that low-income households without NEM systems pay \$67 to \$128 more per year, depending on the utility, due to the costs of the NEM 1.0 and NEM 2.0 programs.⁵ The Public Advocates Office at the CPUC estimates that non-low-income households without NEM systems pay \$100 to \$234 more per year, depending on utility. Without NEM reform, these amounts will increase substantially by 2030.
- While the Proposed Decision does not recommend this, as a reference point for current NEM costs, this amount would be sufficient to achieve 90-96 percent decarbonized electricity for all Californians by 2045 if it were redirected toward a portfolio with a greater emphasis on large-scale clean energy projects.

Overview of the Proposed Net Billing Tariff

The proposed new Net Billing Tariff has four key components:

- 1) Pays Net Billing customers for the electricity they export to the grid based on its value, determined by the avoided cost to the utility of buying clean energy elsewhere.
- 2) Charges Net Billing customers for the electricity they receive from the grid based on high differential time-of-use tariffs, creating more benefit for customers who install storage and incentivizing them to store solar energy and shift exports later in the day.
- 3) Creates a Grid Participation Charge based on the size of the solar system to ensure that Net Billing customers are paying the same fixed costs of the electric grid as non-Net Billing customers.
- 4) Provides a Market Transition Credit so that customers can pay back the cost of a new solar plus storage energy system in less than 10 years, ensuring that the solar industry in California continues to grow and rooftop solar remains economic. The credit will phase out for new customers over four years.

How the Net Billing Tariff Incentivizes Storage Adoption to Support Net Peak Reliability Needs

- Creates a Net Billing Tariff that sends more accurate price signals based on avoided costs that will incent storage and provide value to the grid when it is most needed during net peak.

³ www.cpuc.ca.gov/nem2evaluation

⁴ Cost Effectiveness of NEM Successor Rate Proposals under Rulemaking 20-08-020, at <https://willdan.app.box.com/s/3ipscul3lbt0f5erie7f4bkqkk96uahp>

⁵ [R2008020 Public Advocates Office Prepared Testimony on NEM](#)



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- Requires Net Billing customers to take service on rates with high differentials between peak and off-peak prices. Higher on-peak prices incent storage usage, while lower off-peak prices make using electric vehicles and appliances more affordable.
- Transitions residential NEM 1.0 and NEM 2.0 customers (except low-income customers) to the new Net Billing Tariff after 15 years of being interconnected to the electric grid, which will incent storage adoption and reduce costs paid by other ratepayers by billions of dollars.
- Provides storage rebates to NEM 2.0 customers if they switch to the Net Billing Tariff over a four-year period through the Storage Evolution Fund, so they can help California displace fossil fuel use at peak hours and become more resilient to natural disasters and wildfires.
- Allows solar systems to be sized to cover 150 percent of a customer’s historical load in order to enable future electrification.

How the New Net Billing Tariff Promotes Equity

- Establishes an Equity Fund with up to \$600 million to support clean energy and storage programs for low-income Californians, with allocation details to be determined following stakeholder feedback.
- The fund could enhance and expand existing low-income storage and community solar programs that have strong consumer protections (e.g., Disadvantaged Communities-Green Tariff and Self-Generation Incentive Program Equity) or support new low-income programs that improve access to clean energy.
- Exempts low-income customers, customers living in a disadvantaged community, and tribal households from paying the Grid Participation Charge.

How the New Net Billing Tariff Supports the Sustainable Growth of Customer-Sited Renewable Energy

- Supports installation of new customer-sited renewable energy by providing substantial annual bill savings and a 10-year payback period for solar plus storage energy systems.
- Establishes a monthly residential Grid Participation Charge of \$8/kilowatt (kW), so that future solar and storage adopters pay fairly for access to the electric grid (see table below). An average customer who does *not* have NEM solar or storage pays roughly \$100 per month for their access to the grid.
- Provides a glide path for the industry through a monthly Market Transition Credit of up to \$5.25/kW for residential customers for both storage plus solar adopters and solar-only adopters (see table below). During the four-year glide path, the credit will step down 25 percent a year for prospective customers.
- Provides stability and predictable bill savings by locking in the Market Transition Credit amount and tariff structure for each customer for 10 years and export compensation amount for a customer’s first 5 years.

**2023 Effective Monthly Fixed Charges per Kilowatt (kW)
(Grid Participation Charge minus Market Transition Credit)**

Customer Segment	PG&E	SDG&E	SCE
Residential	\$6.38/kW	\$8.00/kW	\$4.41/kW
Low-Income	-\$4.36/kW	\$0.00 /kW	-\$5.25/kW

2023 Effective Monthly Fixed Charges for 5 kW Solar System

Protecting California since 1911

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies.



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Customer Segment	PG&E	SDG&E	SCE
Residential	\$31.90	\$40.00	\$22.05
Low-Income	-\$21.80	\$0.00	-\$26.25

Remaining Steps in this Proceeding

- Parties may file comments on the Proposed Decision within 20 days, and replies to comments are due 5 days thereafter, following Rule 14.3 of the Rules of Practice and Procedure.⁶
- The Proposed Decision may be heard, at the earliest, at the CPUC’s January 27, 2022 Voting Meeting. To confirm when it will be heard, see the agenda and hold list, which is posted on the CPUC website.⁷
- If adopted, the Proposed Decision would implement a sunset on the NEM 2.0 tariff four months after issuance of the final decision.
- If the Proposed Decision is adopted, the next phase of the NEM proceeding will include workshops to consider community project tariffs, which will be coordinated with other related proceedings.
- The next phase would also include a workshop by April 30, 2022 to solicit stakeholder feedback on the allocation of the Equity Fund, and a Ruling to seek stakeholder input on the five-year evaluation of the Net Billing Tariff, with a focus on affordability and equity metrics.

⁶ www.cpuc.ca.gov/-/media/cpuc-website/divisions/administrative-law-judge-division/documents/rules-of-practice-and-procedure-may-2021.pdf

⁷ www.cpuc.ca.gov/events-and-meetings