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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Revisit Net
Energy Metering Tariffs Pursuant to Decision 16-
01-044, And to Address Other Issues Related to
Net Energy Metering

Rulemaking 20-08-020
(August 27, 2020)

**OPENING COMMENTS OF THE NATURAL RESOURCES DEFENSE
COUNCIL ON THE PROPOSED DECISION REVISING NET ENERGY
METERING TARIFF AND SUBTARIFFS**

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Pursuant to Rule 14.3 of the California Public Utilities Commission’s Rules of Practice and Procedure,¹ the Natural Resources Defense Council (“NRDC”) respectfully submits these comments on The Proposed Decision Revising Net Energy Metering Tariff and Subtariffs (“PD”).

NRDC is a non-profit membership organization with more than 95,000 California members who have an interest in receiving affordable energy services while reducing their environmental impact and combatting climate change.

NRDC has been an ardent supporter of distributed solar for decades and continues to support net metering policies to further rooftop solar to fight climate change where appropriate. These comments are germane to the specific situation in California.

I. INTRODUCTION

This proceeding poses a unique challenge to the Commission and the PD correctly addresses it. The reform of the NEM policy asks for a Successor Tariff that ensures distributed

¹ And according to the Assistant Chief Administrative Law Judge S. Pat Tsen's for Administrative Law Judge Kelly A. Hymes' Ruling Re Partially Granting the Coalition for Community Solar Access' Requests for an Extension of Time to File Comments and for an Increase in Page Limits for Opening and Reply Comments.

generation continues to grow sustainably, balances the costs and benefits of distributed generation among all utility customers, supports distributed generation in disadvantaged communities, aligns with California's changing grid needs, and complies with our broader decarbonization goals. The PD achieves the right balance between the competing statutory and policy objectives.

Specifically, the net billing tariff (NBT) designed by the PD will provide effective market and policy signals to encourage clean energy export and consumption in the evening time when the grid is constrained, contains an equity fund to ensure that low-income Californians can access and own distributed generation, and strikes the right balance between providing incentive for solar and storage adoption while limiting adverse rate impacts on non-solar customers.

NRDC has the following recommendations to further strengthen the PD:

- The Commission should adopt a broader definition of low-income customers to also include deed-restricted housing.
- The Commission should provide the Market Transition Credit as an up-front incentive for low-income customers.
- The Market Transition Credit should be reviewed sooner than five years, preferably after two.
- The Commission should develop a community solar offering through this proceeding.
- The Commission must ensure that the installation costs assumed for rooftop solar are reasonable.

After providing more detailed comments on these recommendations, NRDC offers comments that support the PD reliance on the Lookback Study, affirm the policy goals adopted by the PD to guide the design of the new policy, and reinforce that the structure chosen by the PD for the new policy is appropriate.

II. DISCUSSION

A. RECOMMENDATIONS

i. **The Definition of Low-Income Customers Should Include All Deed-Restricted Affordable Housing**

The PD currently defines low-income customers as “residential customers eligible for CARE or FERA, resident-owners of single-family homes in disadvantaged communities (as defined in D.18-06-027), or residential customers who live in California Indian Country (as defined in D.20-12-003) and take service on either the standard net energy metering or aggregated net energy metering tariff.”² NRDC suggests an expansion of this definition: The PD should include deed-restricted affordable housing in the definition of low-income customers. This would then include those customers served by the Solar on Multifamily Affordable Housing (SOMAH) program (because deed restricted housing is one of the requirements for SOMAH program participants). Deed-restricted housing is likely to have not only CARE customers, but also residents who are low-income and do not qualify for the CARE program. Identifying this category of housing as qualifying for exemptions granted to low-income customers is an efficient and sensible means of protecting housing that is developed to serve low-income households.

ii. **The Market Transition Credit Should be Available as an Up-Front Incentive for Low-Income Customers**

The Commission should provide the Market Transition Credit as an up-front incentive for low-income customers – rather than to provide it in the tariff over five years. This is crucial to support solar systems ownership among those customers who have the higher barriers for adoption and less ability to fund the upfront cost of solar.³

² Proposed Decision, at 132.

³ NRDC and TURN explain that the MTC will provide the Commission with necessary flexibility to ensure sustainability and to achieve equity goals as defined by Public Utilities Code Section 2827.1(b)(1). See [Post Hearing Brief of Natural Resources Defense Council](#), August 2021, at 5-12, and TRN-01, at 52.

iii. The Market Transition Credit Should be Reviewed Sooner than Five Years, Preferably After Two Years of Implementation

The Commission should review the Market Transition Credit sooner than the current proposal – to evaluate the MTC after five years.⁴ The Commission should specifically review whether the MTC, as planned, achieves the desired target of a ten-year payback for the average non-CARE residential customer.

iv. The Commission Should Develop a Community Solar Offering Through This Proceeding

The record of the proceeding shows⁵ that community solar is a much more cost-effective alternative to meet Title 24 residential new construction requirements than rooftop solar. Moreover, community solar can be applied to provide whole communities and residents of multifamily buildings with benefits of local solar and could be a possible avenue for the equity fund to explore. The premise of a community solar tariff based on avoided costs is strong; distributed generation accrues these benefits and should be compensated accordingly. This is also aligned with the PD's proposal to compensate distributed generation exports at avoided costs. As a starting point to further developing community solar, NRDC agrees with TURN's concerns and proposed modifications outlined in its opening brief.⁶

Therefore, a community solar crediting option should be further developed. The PD declines to adopt a tariff for community solar and recommends that this be considered in future utility applications.⁷ For the reasons provided above, the Commission should either further develop a community solar tariff through this proceeding or provide more specific direction for a community solar tariff based on avoided costs to be included in the future utility applications referenced in the PD.

⁴ Proposed Decision, at 116.

⁵ [*Opening Brief of The Coalition for Community Solar Access Supporting The Establishment of a Net Value Billing Tariff*](#), August 2021, at 10-12.

⁶ [*Opening Brief of The Utility Reform Network Regarding a Successor to The Current Net Energy Metering Tariff*](#), August 2021, at 123-128.

⁷ Proposed Decision, at 144.

v. Accurate Installation Costs are Necessary to Ensure Intended Payback

To balance the competing legally mandated objectives for the successor tariff of ensuring that distributed generation continues to grow sustainably and to more evenly distribute costs and benefits for all utility customers, the Commission has designed a NBT that limits impacts on non-participant while aiming to provide an average payback of ten years for a non-CARE residential solar and storage customer. This payback period is a fraction of the system’s expected lifetime. This provides the industry with a viable product to market. As the PD correctly states, “10 years to payback for a paired storage system in combination with the monthly bill savings presents a balanced approach to promoting the continued adoption of solar. The increased number of years to payback, in addition to the other elements of the adopted successor tariff, will work towards alleviating a future cost shift, as was experienced in both NEM 1.0 and NEM 2.0.”⁸

For this intended objective to be achieved, and to set the appropriate market transition credit, the Commission must ensure that the installation costs assumed for rooftop solar are reasonable.

B. The PD Correctly Relies on the Lookback Study to Determine the Shortcomings of NEM 2.0

The Lookback Study establishes the foundation for creating the successor tariff. It includes both a cost-effectiveness analysis consistent with the Commission’s Standard Practice Manual and D.19-05-019,⁹ and a cost-of-service analysis that compares the cost to serve NEM 2.0 customers against their total bill payments.

The PD finds that the following Lookback Study conclusions should be considered findings of fact in this proceeding and used in the analysis of proposals and adoption of a successor to the existing net energy metering tariff: (i) NEM 2.0 has negatively impacted non-participants; (ii) NEM 2.0 is not cost-effective; (iii) NEM 2.0 disproportionately harms low-income customers not participating in the net energy metering tariff.

⁸ Proposed Decision, at 67.

⁹ CPUC, [*Decision Adopting Cost-Effectiveness Analysis Framework Policies for all Distributed Energy Resources*](#).

While NRDC agrees that these are three important conclusions drawn by the Lookback Study, we suggest an additional and equally important conclusion from the study that should be considered a finding of fact: (iv) NEM 2.0 disproportionately benefits higher income participants. In sum, the Lookback Study finds that solar adopters have disproportionately higher annual income, more solar systems are installed in neighborhoods with higher rates of home ownership, and the median value of homes where 99% of solar systems are installed is greater than \$250,000. The Study shows similar results for distributed storage adoption demographics.^{10,11}

It is noteworthy that other studies corroborate that conclusion. For example, research by the Lawrence Berkeley National Laboratory also shows that installation of solar systems disproportionately benefits wealthier households (while the bottom 40% of earners in California comprise approximately 13% of solar adopters, the top 20% earners comprise 43% of solar adopters – see NRDC-01, at 5).¹² Similar conclusions are drawn by analysis performed by the CalAdvocates (PAO-01, at 2-30 to 2-36).

Most important, the Lookback Study tells the Commission that, to the extent that the successor tariff functionally resembles the existing NEM 2.0 tariff, it will perpetuate inequities and continue to be not cost-effective for non-participants. The Lookback Study provides valuable information that should inform the Commission’s development of the successor tariff. Therefore, Commission should reaffirm the conclusions to be considered from the Lookback Study and add the conclusion NRDC proposes herein.

C. The PD is aligned with California’s Clean Energy Policy, Cost-effectiveness, and Equity Goals, and Electric Grid Needs

The NBT will promote equity and inclusion, electrification, and help transition the solar market to a solar paired with storage market, thereby promoting grid reliability and decreasing

¹⁰ Verdant Associates, *Net-Energy Metering 2.0 Lookback Study*, January 2021, at 34-39.

¹¹ For more detailed comments on that, see: *Comments of The Natural Resources Defense Council on The Email Ruling Presenting Final Verdant Study and Instructing Parties To Respond*, February 2021, at 4-6; *Opening Testimony Of Mohit Chhabra Sponsored By The Natural Resources Defense Council On The Net Energy Metering Successor Tariff Proposal*, June 2021, at 21 (NRD-01); and *Post Hearing Brief of Natural Resources Defense Council*, August 2021, at 5-12.

¹² LBNL Solar Demographic Tool: <https://emp.lbl.gov/solar-demographics-tool>.

dependence on fossil fueled resources. These goals are also aligned with the Guiding Principles adopted in D.21-02-007 to assist the development of the successor tariff.

NEM policy is an important part of the clean energy transition, and this transition should be equitable and affordable of all. The Commission is legally mandated to develop a tariff that shall “include specific alternatives designed for growth among residential customers in disadvantaged communities” and “ensure that the total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to the total costs.”¹³ As shown by the Lookback Study, NEM 2.0 is inconsistent with these statutory requirements because it disproportionately benefits wealthier solar adopters at the expense of non-solar customers and does not adequately address the barriers low-income customers face to adopt solar systems. People who live in disadvantaged communities have largely missed out on the benefits of rooftop solar, but still pay excess costs through undue rate increases. The PD correctly adopts goals for a successor tariff to promote equity and inclusion by (1) limiting the cost-shift from NEM customers to non-NEM customers and (2) including a specific mechanism to promote distributed generation in disadvantaged communities.

Electrification of buildings and transportation is critical to California’s economywide decarbonization goals. To get there, electricity must be affordable and cheaper than alternative fuels; otherwise, customers won’t have the right incentives to move away from fossil fuel powered cars and buildings to ones powered by clean electricity. The Lookback Study demonstrates that NEM 2.0 participants only pay a small fraction of their cost of service and, therefore, non-participants are required to subsidize most of the cost of service to NEM 2.0 customers. As a result, NEM 2.0 contributes to more expensive retail rates and therefore discourages electrification. As the PD states, “net energy metering cost shift alone is not responsible for the entirety of high rates in California. But a cost shift exists, and continuation of the cost shift feeds into higher electricity rates, which discourages electrification.” (PD, at 79)

The PD accomplishes the goal of encouraging electrification by (1) limiting undue increases in rates from the successor tariff, (2) encouraging distributed generation customers to use electricity in alignment with grid needs through highly differentiated time of use (TOU)

¹³ Public Utilities Code Section 2827.1(b)(1) and (4).

rates, and (3) allowing new participants to oversize their solar systems in anticipation of these customers electrifying their buildings and cars.

The PD correctly incentivizes solar and storage pairing by (1) providing distributed generation customers the right signal to consume more during times when renewable energy is plentiful via TOU rates, (2) encouraging distributed generation customers to export electricity during evening time by setting exports equal to avoided costs, and (3) providing incentives for existing NEM customers to adopt storage. Solar-plus-storage systems will reduce California's dependency upon carbon emitting resources, provide clean electricity to the grid when it's constrained, and help decrease the need for costly electric infrastructure expansion.

Finally, the PD correctly recognizes that the industry needs time to adjust to the new policy and provides a glidepath through the market transition credit.

Therefore, the PD is aligned with California's electricity sector and economywide decarbonization mandates, as well as with reliability, equity and affordability goals. In doing so, the PD adequately addresses NEM 2.0's negative impacts identified in the Lookback Study.

D. The Components of the Updated NBT Proposed by the PD are Appropriate

The various components of the proposed NBT are necessary to achieve the policy goals described in Section II.B., comply with the guiding principles for the successor tariff adopted in D.21-02-007, and overcome the negative impacts of NEM 2.0 identified by the Lookback Study. NRDC's Opening Brief explains this in detail.¹⁴ Here, we summarize the importance of each component of this policy and reiterate the need to maintain this tariff structure proposed by the PD.

- Net billing tariff: To appropriately pay for distributed generation exports at avoided costs, encourage consumption through TOU rates in line with grid needs, and fairly recover transmission, distribution, and non-by passable charges, a net billing tariff that the PD adopts is necessary.¹⁵
- Basing export compensation on avoided costs: setting the export compensation at the avoided cost calculator is the right move to avoid negative impacts on non-

¹⁴ *Post Hearing Brief of Natural Resources Defense Council*, August 2021, at 16.

¹⁵ *Ibid.* at 26.

participants and promote electrification. Pricing distributed generation exports based on the avoided cost calculator (ACC) provides an accurate value for export compensation. The ACC is the Commission-adopted value for benefits of marginal change in energy consumption and distributed generation. It provides the most accurate available estimate of the value of distributed generation including a valuation of distributed clean energy's contribution to California's decarbonization goals.¹⁶

- The grid participation charge is necessary to fairly recover transmission, distribution, and non-bypassable charges that would otherwise not be collected from the portion of distributed generation that is consumed on-site. The PD correctly notes that the grid participation charge will “enable the Commission to create a successor tariff that ensures equity among customers and is accurately based on the generator’s costs and benefits to the system as a whole.”¹⁷
- The market transition credit is important to help the industry adapt to a new tariff. The market transition credit in the NBT is designed to provide a payback of ten years for paired solar and storage systems. Ten years is a fraction of the life of these systems and provides adequate reason to invest in distributed generation. NRDC agrees with the PD conclusion that “the Market Transition Credit provides the best approach to the glide path”¹⁸ to help the market adjust to the new NBT. Moreover, as NRDC explained in our Opening Brief, the market transition credit provides the Commission with a transparent and flexible tool to set incentives for distributed generation adoption in response to market conditions and electric system needs.¹⁹
- The Equity Fund will be crucial to support low-income customers and improve their access to distributed clean energy programs. The PD correctly explains that “in addition to the Market Transition Credit, an equity fund focused on promoting storage for low-income customers could assist the Commission in meeting the requirement of

¹⁶ For more details, see [Post Hearing Brief of Natural Resources Defense Council](#), August 2021, at 26.

¹⁷ Proposed Decision, at 100.

¹⁸ Proposed Decision, at 104.

¹⁹ [Post Hearing Brief of Natural Resources Defense Council](#), August 2021, at 5-12.

Public Utilities Code Section 2827.1(b)(1) to ensure the tariff includes specific alternatives designed for growth among residential customers in disadvantaged communities.”²⁰

III. CONCLUSION

For the foregoing reasons, NRDC respectfully asks that the Commission adopt the recommendations proposed herein.

Respectfully submitted,

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²⁰ Proposed Decision, at 138.