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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
(Filed August 27, 2020)

**NOTICE OF EX PARTE COMMUNICATION BY AHMAD FARUQUI ON THE PROPOSED
DECISION REVISING NET ENERGY METERING TARIFF AND SUBTARIFFS**

Ahmad Faruqui
Principal
29 Tyson Court
Danville, CA 94526-5044

Telephone: 925-408-0149
Email: AhmadFaruqui@gmail.com

Date: January 7, 2022

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OF THE STATE OF CALIFORNIA**

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I. Introduction

On January 7, 2022 at approximately 10:15am, Ahmad Faruqui sent an email to Commissioners and the service list with these comments on the Proposed Decision (PD) Revising Net Energy Metering Tariff and Sub-tariffs. Accordingly, this is being filed as an ex parte communication.

II. Discussion

I have testified nearly 70 times in utility rate cases across North America and several times on net energy metering cases in Arizona, Kansas, Idaho, Montana, Nevada, and South Carolina. In all of these cases, I have appeared on behalf of electric utilities. I have also spoken on the topic at a webinar sponsored by Rutgers University.

I have never seen a Proposed Decision (PD) that is as regressive and out-of-touch with reality as this one. Below are the top 10 reasons why the CPUC should reject the PD:

1. Rooftop solar panels provide customers with low-cost energy that is clean and, when paired with a battery, can help customers cope with power outages and share power with their neighbors and the grid. If customers will not install rooftop solar panels because they have a very long payback period, they will not install a battery either. The market is moving towards more batteries, but supply is currently tight and we are still high on the cost curve. Over time, when supply increases and costs decline more of these batteries can be aggregated to provide massive value to the grid and the customer. Why kill that chance now?

2. Under current rules, NEM 2.0, the payback period is between 7 to 9 years for most customers, not 3 to 4 years. The PD will increase that payback period to over 20 years and make rooftop solar panels unaffordable for just about all customers. Four decades of experience with energy efficiency programs shows that consumers have high implied discount rates, meaning they require a very short payback period to be attracted to a cost-saving investment. Now that the PD is out, there should be a serious review of the actual costs to install rooftop solar in California. The PD's conclusion that solar can be installed for \$2.38/w is not supported by the interconnection data collected by the investor-owned utilities (IOUs) or the Berkeley Lab (LBNL). Actual costs are much closer to \$4/w.
3. In many ways, this case has morphed away from a NEM case (arguing over the value of NEM exports) and turned into a case of imposing discriminatory fixed charges on customers with rooftop solar panels. Recent research shows that such discriminatory charges are extremely rare in IOU service territories across the US.

An analysis of existing fees found that *less than 2%* of IOUs (3 out of 172) across the U.S. impose monthly fixed charges that are paid only by solar customers.

- There have been at least 27 instances of IOUs *proposing* a solar-specific charge on residential customers since November 2012.
- Nearly every IOU proposal to impose a solar-specific fee on residential customers over the past decade has been rejected, withdrawn by the utility, or subsequently overridden through legislative or judicial action.
- Most recently, the Arizona Corporation Commission struck down Arizona Public Service's \$0.93/kW (less than \$6 solar specific fee per month for an average sized system) solar capacity charge at an October 2021 hearing in the utility's rate case.
- Even when fixed charges specific to solar customers have been imposed, they have not been imposed retroactively on existing solar customers. The PD proposes to impose these charges retroactively on existing NEM customers 15 years after they were given permission to operate. This is without precedent and crosses the boundaries of reasonableness.

4. The cost shift argument, which undergirds the PD, is nothing but a red herring.

- The PD takes a "holier than thou" stance on cost shifts. As someone who has practiced rate design for four decades, I can say with confidence that the kind of rate design we have in California – volumetric recovery of all costs – is riven with cost shifts. Let me illustrate that point through a simple example.

- For a moment, let us ignore the question of how exports from NEM customers should be compensated. Let us focus on how imports should be priced. They are the consumption side of the equation. Let's consider four customers, A, B, C and D.
- A is the average customer who pays \$100 a month. In the example, A pays just the right amount of revenue to pay for the fixed cost of being served by the grid. All other customers who are being served by the grid are paying either less or more for their fixed costs.
- Customer B pays \$50 a month and underpays for the fixed cost. Customer C pays \$150 a month and overpays for the fixed cost. Essentially, there is a cost shift from B to C.
- Now consider D, a solar customer who pays \$50 a month. He pays the same amount of fixed cost as B.
- Should we just call out D for creating a cost shift and not call out B for doing just the same? Would that be a fair definition of equity?
- It turns out that D used to be like C, and paid \$150 a month for decades. D overpaid the fixed costs. Did anyone complain about D's cost-shift?
- There are several other cost shifts in California's rates. There is a cost shift between rural and urban customers, between customers whose load shape is peakier than average and those whose load shape is less peaky than average, between apartments and single-family homes. There is a cost shift between customers who invest in energy efficiency and those who do not. There is a cost shift from non-CARE to CARE customers. We have accepted these cost shifts for decades.
- The PD is singling out just the cost shift that's created when solar customers import less power from the grid, ignoring all other cost shifts. If low use is a concern for utilities, it should be addressed by changing the rate design for all customers, not just for solar customers.
- The only issue that is unique for solar customers is the compensation for exports. This can be resolved by allowing different prices to be applied for imports and exports. The export compensation should recognize the value of solar and the market

price of power and it may or it may not be the same as the retail rate.

5. The point has been made that large scale solar costs 3 cents/kWh and should be pursued instead of local scale solar. This of course does not include the cost of transmitting that power or the risk that distributional power outages will impede access to it. Moreover, large scale solar has done little to lower the average price of electricity, which is around 25 cents/kWh. By installing rooftop solar panels, customers can lower the effective price to a third of that amount.
6. California has made a strong commitment to decarbonization via SB 100 and other state policies such as California Energy Commission's Title 24 standards. This will require large-scale electrification of buildings and transportation. Rooftop solar panels will assist in fulfilling that commitment. We are a national leader in solar energy, with 1.3 million houses with rooftop solar panels. If the CPUC adopts the PD, California will slump to the bottom of the pile. The state is home to Silicon Valley and the Bay Area is the digital capital of the world. The nation's largest state is known for pushing the envelope on innovation, not for smothering innovation. The Golden State is the flag bearer for envisioning and creating the future. The PD, despite its talk of modernization, is a throwback in time.
7. Energy efficiency should be the first step that customers take to reduce their bills and promote clean energy. The cleanest kWh of electricity is the one not consumed. The state spends \$1.5 billion annually on energy efficiency and that is a good thing. However, energy efficiency alone will not make as big a dent in either customer bills or decarbonization unless it is accompanied by rooftop solar panels. Just like reduced energy use from EE is considered a benefit— not a cost shift— investment in solar that reduces demand from our overstressed grid should also be encouraged, not penalized. After all, we do not impose onerous fixed charges on customers who lower their consumption through energy efficiency.
8. California has mandated solar roofs on new homes for a reason. It wants to set the pace for the nation on the decarbonization of energy. The PD is totally at odds with that goal. It does not even provide a market transition benefit for new homeowners with mandated solar panels. California is also a leader in the world of electric vehicles (EV's), with more than 40% of the national market, but this PD could erode that status as well. EV's and rooftop solar (and increasingly rooftop solar plus storage) are seen as gateways to one another. Because California has some of the highest electric rates in the country, customers find it unattractive to install heat pumps and drive electric cars. Once a customer has installed rooftop solar panels, these investments become affordable.

a. The Rooftop Solar, Battery, and EV Shared Customer Base:

- Solar and battery customers are EV customers. Solar sales and installations are expected to be a primary driver of EV charger installations, and even more so when it comes to those with bi-directional capabilities. Punitive fees are bad business for the #1 solar, battery storage, and EV market in the country.

- According to research from UC Berkeley Haas School of Business, 1 in 5 EV owners have rooftop solar - and that trend is [increasing](#). A [survey by the California Vehicle Rebate Program](#) (CVRP) found that 40% of EV owners have solar or intend to install solar on their property. This [survey](#) confirms homeowners with solar installed on their homes are more interested in purchasing EVs, and consumers interested in purchasing EVs are very interested in [also procuring solar for their homes](#).
 - Right now, PG&E customers can save approximately 50% by moving from utility-supplied power and internal combustion vehicles to solar power and battery-powered EVs. Making it wildly more expensive to go solar could also cannibalize EV sales and make vehicle-to-grid integration impossible.
 - As California gears up to meet its ambitious GHG reduction goals and to meet the Governor's [Executive Order](#) to require all new vehicle sales to be EV by 2035, Californians' appetite for solar and EVs will increase. Further, actions by the California Energy Commission and the California Air Resources Board will require electrification of all new construction in California and eventually the entire built environment. This will drive demand for increased solar and fully integrated electric homes and businesses across the State— unless the economics of solar is pummeled by this PD.
9. The rate structures and fees proposed in the current PD are so complex that an average customer in California will have difficulty assessing the economics of rooftop solar and storage. Complexity is a deterrent that will undermine California's policy goals. Not only does the PD add a \$57 per month fixed charge for the average residential system, but it provides for a tiny credit of \$15 per month for ten years that only partially offsets the fee, while also slashing export credits by about 80 percent. Furthermore, it imposes these charges on existing solar customers after fifteen years. On the last point, I am not aware of any state where they have retroactively imposed penalties on solar customers.
 10. Some 120,000 concerned Californians have written to Governor Newsom to preserve a future for the current incentives for rooftop solar, even before the PD was released. Three of the major newspapers in California have written editorials making the same point. Customers have written countless letters to the editor and editorials in support of maintaining the current incentives. The public has spoken on the side of preserving a distributed energy future in the state. In a functioning democracy, the government has to pay heed to the voice of the people.

III. Conclusion

Ahmad Faruqi respectfully encourages the Commission to reject the PD for the reasons noted above. If the PD is approved by CPUC, customer-sited solar will cease to be an economic investment for

customers. The state will pay the price for adopting a strategically myopic policy that is orthogonal to its stated intent of decarbonizing the energy sector by electrifying the consumption of energy.

The CPUC needs to reject the PD and start all over again. It needs to come up with an alternative PD, looking at real options to solve the problems the CPUC says it wants to solve. Based on my analysis, I am making the following four recommendations for the CPUC:

1. Review the Sierra Club proposal with peak TOU periods to encourage storage and electrification but not absurdly high discriminatory fees on future solar plus battery customers.
2. Study the South Carolina solution that involves the institution of a minimum bill and TOU rates for solar customers. (If the panel size is above 15 kW, a grid access charge is instituted.) It goes one step further. If a customer installs a smart thermostat and agrees to let the utility control them on critical days when critical-peak pricing rates apply, the customer earns a rebate based on the size of the panels since the customer will create long term benefits for the electric grid by reducing supply-side costs.
3. Focus on creating a pathway to a future world that is rich in distributed energy resources and which creates value simultaneously for customers and the grid.
4. Stay customer focused and make sure the final rate design for solar customers can be easily understood by customers. Otherwise they will not make an investment involving thousands of dollars in clean energy. The PD is too complex and won't be understood by customers. It violates the Commission's consumer protection mandate. The CPUC must also put cost shifts in perspective, as shown above in the fourth reason for rejecting the PD.

Respectfully Submitted,

/s/ Ahmad Faruqui

Ahmad Faruqui, Ph. D.
Economist-at-large

29 Tyson Court
Danville, CA 94526
925-408-0149

Email: ahmad.faruqui@gmail.com

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