CALIFORNIA SOLAR ENERGY INDUSTRIES ASSOCIATION

May 30, 2014

CPUC Energy Division
505 Van Ness Ave.
San Francisco, CA 94102

RE: Comments on NEM Successor Tariff or Contract

In response to your Request for Informal Comments on the successor NEM tariff mandated by AB 327, the California Solar Energy Industries Association (CALSEIA) offers these comments.

1. Guiding Principles

A. Greenhouse Gas Reduction Imperative

Expansion of customer-sited renewable energy is necessary because it is an important component of the state's imperative to reduce greenhouse gas emissions. That is the biggest reason this whole discussion is taking place, so it would be an error not to mention greenhouse gas emissions in the guiding principles. The updated NEM rules must ensure expansion of clean distributed generation that is commensurate with the scale of necessary greenhouse gas emission reductions.

California Health and Safety Code § 38551 (b) directs that that the statewide greenhouse gas emissions limit "maintain and continue reductions in emissions of greenhouse gas emissions beyond 2020."[1] The recently adopted First Update to the California Climate Change Scoping Plan includes a commitment to "Develop a comprehensive and enforceable GHG emission reduction program for the State's electric and energy facilities for emission reductions beyond 2020."[2] CPUC is one of the lead agencies that will implement the program.

That action should start now. As the Commission develops a framework that is intended to last far beyond 2020 encouraging the expansion of distributed generation, it must be guided by the long-term emission reduction targets of the State.

[1] California Air Resources Board, "First Update to the Climate Change Scoping Plan: Building on the Framework," approved May 22, 2014.
[2] California Air Resources Board, "Quarterly Auction 7: Summary Results Report," May 2014.
[3] Interagency Working Group on Social Cost of Carbon, "Technical Update of the Social Cost of Carbon

A simple way to accomplish this is to amend Guiding Principle #6 as stated in the Request for Informal Comments to read as follows.

"The successor tariff or contract should be consistent with statewide greenhouse gas emission reduction targets and other PUC policies and goals..."

B. Right to Self-Generation

The updated NEM rules should not impede the ability of customers to generate their own power.

Customers have a fundamental right to generate their own electricity. Utilities do not have the right to charge customers for electricity that they produce and consume on-site.

This can be accomplished by amending Guiding Principle #7 as follows.

"The future tariff or contract should include customer privacy protections and preserve the right of customers to generate their own electricity."

C. Updated Data

Due to the elimination of lower tier rate caps by residential AB 327, rate structure is going to change in the coming years. The successor tariff must be based on the new residential rate structure and the most recent electricity system data.

This can be accomplished by amending Guiding Principle #1 as follows.

"The successor tariff or contract should be based on updated and relevant rate structure and data and be consistent with, and balance, the legislative goals identified in AB 327."

If a decision on the new rate structure is delayed from the current March 2015 target and does not come in time to form the basis of the successor tariff that is due by December 2015, the Commission must adopt an interim successor tariff that can be in place only until the Commission is able to issue a decision based on the new rate structure.

D. Societal Benefits

AB 327 requires the successor tariff or contract to be "based on the costs and benefits of the renewable electrical generation facility," and that "the total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to the total costs." It is impossible to determine the total benefits without including social, environmental, and long-term stability benefits that have historically been left out of the ratemaking equation. Economic

development and reduced environmental impacts are real benefits of increased clean DG to all customers and must be valued.

Not all of the carbon reduction benefits of clean DG are captured in California's greenhouse gas cap and trade program. This is evidenced by the fact that carbon allowances are now trading for $11.50 per ton,[2] while the U.S. EPA has calculated the Social Cost of Carbon at $37 per ton,[3] and independent studies place it much higher.[4] The Commission cannot exclude carbon reduction benefits under the assumption that the state's cap and trade program is incorporating the impacts of pollution and the benefits of pollution-free electricity generation.

Including true costs and benefits would be best accomplished by expanding Guiding Principle #1 as follows:

"The successor tariff or contract should be based on updated and relevant rate structure and data and be consistent with, and balance, the legislative goals identified in AB 327:

a) Ensure sustainable growth in the DG industry
b) Include specific alternatives designed for growth among residential customers in disadvantaged communities.
c) Ensure that the total benefits of the tariff to all customers and the electrical system are approximately equal to the total costs, including non-energy costs and benefits."

Also, single-year "snapshot" analyses such as the 2020 estimate that formed the main conclusion of the E3 net metering cost-benefit report do not accurately capture the benefits of generating facilities that will produce clean power for at least 25 years. The cost-benefit analysis used to develop the successor tariff must be a life-cycle cost-benefit analysis.

This can be accomplished by further amending subparagraph (c) in Guiding Principle #1:

c) Ensure that the total benefits of the tariff to all customers and the electrical system are approximately equal to the total costs over the lifetimes of renewable energy systems, including non-energy costs and benefits."

A good summary of the types of benefits that should be quantified is included in an October 2013 publication of the Interstate Renewable Energy Council, titled, "A

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[2] California Air Resources Board, "Quarterly Auction 7: Summary Results Report," May 2014.
[3] Interagency Working Group on Social Cost of Carbon, "Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis," May 2013. $37 per ton is the 2015 value using a 3% discount rate.
[4] See Laurie Johnson and Chris Hope, *Journal of Environmental Studies and Sciences*, "The Social Cost of Carbon in U.S. Regulatory Impact Analyses: An Introduction and Critique," September 2012.

Regulator's Guidebook: Calculating the Benefits and Costs of Distributed Solar Generation."

2. Sustainable Growth

AB 327 requires that the successor tariff or contract ensures "that customer-sited renewable distributed generation continues to grow sustainably."

It is important to consider the words "continues to" in that sentence. The Legislature approves of the fact that the DG market has been growing sustainably and wants it to continue to grow at a rate at least as high as it has been growing.

The annual Solar Market Insights report found that 39% more distributed solar capacity was installed in 2013 than in 2012.[5] Similarly, according to California Solar Statistics, the growth rates of annual distributed solar installations from 2011 to 2012 and from 2012 to 2013 for each utility ranged from 11% to 57%.[6] To meet our state greenhouse gas reduction targets, annual growth rates at the upper end of that range are needed for at least the next several years.

We acknowledge that what is necessary in the short term may not be possible for the long term. Carried out ad infinitum, growth in annual installations would eventually cause installed capacity to exceed total system demand. But we should not allow the extreme endpoint to limit the initial stages.

Physical restraints will emerge as distributed generation grows, and utilities should work to ease those restraints by sharing data and recommending infrastructure upgrades. At some point, the Commission may need to conduct another review of the NEM rules if growth in distributed generation meets structural limitations of the grid despite the constructive efforts of utilities to address barriers.

CALSEIA therefore makes two recommendations with regard to sustainable growth:

1. The Commission should design the successor tariff or contract to achieve a growth rate of clean distributed generation at least as high as the growth rates of the past two years.
2. The Commission should establish a process for program review and modification triggered by a Commission determination that the amount of distributed generation is beginning to overwhelm the ability of utilities to address structural limitations of the grid.

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[5] GTM Research and Solar Energy Industries Association, "U.S. Solar Market Insight Report: 2013 Year-in-Review," 2014. Combined residential and non-residential installations (not including utility scale) were 505 MW in 2012 and 704 MW in 2013.

[6] Go Solar California, "Monthly, Quarterly and Annual Statistics," available at www.californiasolarstatistics.ca.gov/reports/monthly_stats/. PG&E 2013 data is incomplete and is not included in this range. Year over year growth rates are by MW capacity.

3. Program Elements

We recommend one clarification in the list of program elements. Bill credit sharing to date has been limited to accounts that are in the same physical location, either past a point of common coupling with virtual net metering or on adjacent or contiguous parcels with NEM aggregation. This should be expanded to include the opportunity to link accounts that are not in the same place. One customer may have accounts at different locations, such as a home and an office, or community members may choose to link their bills to a common renewable generator.

The wording in the Program Element Options of the Request for Informal Comments seems to indicate that the Commission is contemplating such an expansion, in addition to reauthorizing existing forms of meter aggregation. If that is not the case, the language should be modified to include this consideration.

4. Location-Specific Components

The Request for Informal Comments suggests that the Commission is interested in considering varying price signals depending on the specific location of a distributed generation facility. CALSEIA is greatly concerned that such a mechanism will overly complicate the process for customers to decide whether to go solar and that it will be used only as a negative influence and not a positive influence.

The question that is being addressed by this concept appears to be: Where is distributed generation needed most? Right now, the answer to that question is: Nearly everywhere.

In the absence of publicly available data, it is difficult to judge how many circuits in the state are overpowered by distributed generation, but the burden of proof must be on the utilities to demonstrate how widespread the problem is. If the Commission chooses to adopt a location-specific adjuster, it should include a positive price signal for distributed generation on circuits that is not approaching its limits.

5. Disadvantaged Communities

CALSEIA is strongly in support of the CleanCARE concept. The concept could be implemented in two separate ways simultaneously: 1) Use ratepayer funds to pay for the installation of community solar systems in low-income communities, hiring non-profit organizations to maintain them; 2) Require utilities to sign PPAs for the installation of community solar systems, relying on the PPA provider to maintain the systems. In both cases, the utility would allocate kWh credits to low-income customers instead of rate reductions.

It would be best if the first of those strategies were paid for by savings within the CARE program. There appears to be a general expectation that the total cost of t

CARE program will be reduced somewhat due to lower subsidy level mandated by AB 327 and increased enforcement of eligibility requirements. Using a portion of that savings for CleanCARE would essentially amount to front-paying for part of the state assistance program, which would provide benefits for many years to come.

6. Public Tool

The Commission is contracting for the development of a NEM Alternatives Public Tool that will help parties run scenarios and determine the impacts of various proposals for the successor tariff. One impact that must be included is cost of service.

The October 2013 E3 analysis of the costs and benefits of net metering included important information on whether NEM customers were paying what it costs the utility to serve them. It found that residential NEM customers are paying only 81% of the cost of service, on average, and non-residential customers are paying 112% of the cost of service.

A successor tariff that is fair and equitable cannot be developed without measuring the resulting cost of service. The E3 study is not useful since it used a rate structure that will not be in place when the successor tariff goes into effect. It is essential that the NEM Alternatives Public Tool include cost of service as one of its outputs.

Thank you for the opportunity to provide these comments. We look forward to working with the Commission in developing a fair and effective successor tariff.

Respectfully,

/s/ Brad Heavner

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