BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues.	Rulemaking 12-11-005 (Filed November 8, 2012)

SUPPLEMENTAL REPLY COMMENTS OF THE ALLIANCE FOR SOLAR CHOICE CONCERNING THE ESTABLISHMENT OF A NET ENERGY METERING TRANSITION PERIOD

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The Alliance for Solar Choice ("TASC") submits these supplemental reply comments pursuant to the November 27, 2013 Assigned Commissioner's Ruling and Administrative Law Judge MacDonald's December 5, 2013 e-mail ruling in the above-captioned proceeding.

As TASC has argued, the only reasonable basis for determining the duration of the net metering transition period is the expected lifetime of a net-metered system. This conclusion is strongly underscored by the analyses presented by the IOUs, which show that in sharp contrast to payback period, expected system life is a more straightforward, consistent and objective basis for establishing that transition period.

TASC's comments provided herein are focused primarily on providing a critique of the analyses that underlie the estimates of system payback period, and the implications thereof. However TASC reiterates that from the perspective of preserving customers' reasonable investment expectations, regardless of the accuracy of any payback estimates, the payback period is an inappropriate basis for setting the transition period.

The IOUs' respective analyses demonstrate how estimates of payback are highly variable based on the methodology used to determine the payback period, the utility and tariff under

which a customer takes service, and the vintage of the system deployed. This scenario creates a high level of inaccuracy in the calculation of a payback period for any individual system. In turn, in addition to its inherent limitations in protecting customer investment expectations, using payback as the basis for the transition timeframe will be either unduly complicated to administer or overly blunt. The Commission should avoid this result by relying on expected system life, which, in addition to being more effective in preserving customer investment expectations, provides a far more objective and straightforward basis for setting the transition period.

I. The Estimates Provided Demonstrate the Inherent Variability Associated with Payback Periods and the Practical Superiority of Expected System Life as the Basis for the NEM Transition Period.

The analyses provided in PG&E, SDG&E and SCE's Reply Comments show how relying on the notion of an "expected reasonable payback period" in determining the duration of the transition period poses practical problems in addition to flying in the face of fairness given the customer expectations that motivated substantial investments in customer-side generation. The supplemental information provided shows tremendous variability in payback period estimates, with those estimates differing by customer type, tariff, utility and system vintage.

The figures below show the utilities' payback estimates for residential and commercial systems installed in a particular year. The utilities' approximations for payback are as much as five years apart for residential systems installed in the same year and even greater for commercial systems installed in the same year.

Figure 1: Variability in Estimated Payback Periods for Residential Customers[1]

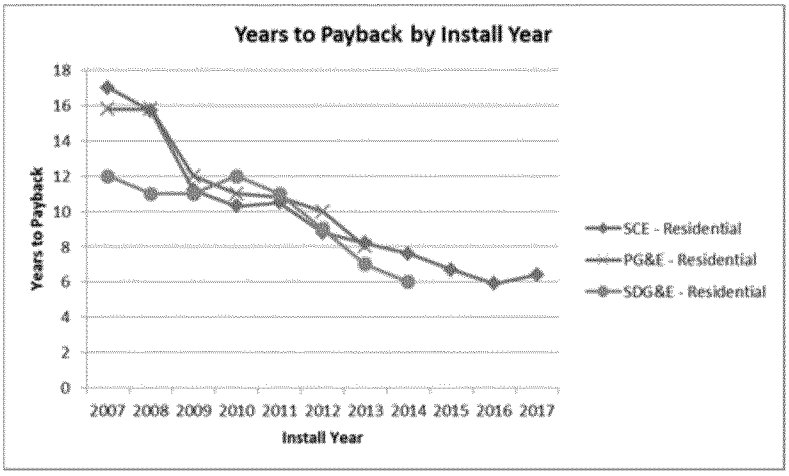
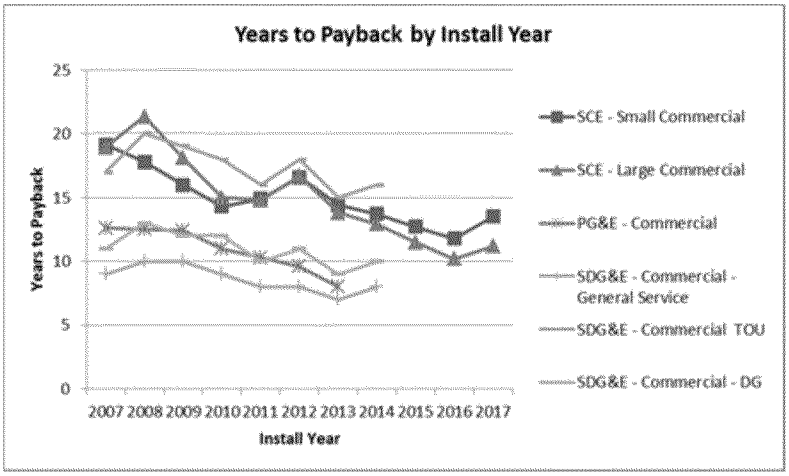


Figure 2: Variability in Estimated Payback Periods for Commercial Customers



It is difficult, absent more time, to determine the degree to which the substantial variability across the payback estimates exhibited above is a function of the methodology employed or the inputs used in the each of the IOUs' respective analyses. This result is not surprising since payback periods are a function of a significant number of variables, which are not necessarily consistent across customer segments or utilities.

[1] These graphs were created using the payback estimatesfrom the IOUs' Reply Comments. In PG&E's case, the data used was estimated based on a chart provided in PG&E's analysis.

In an attempt to cut through this significant variability, the IOUs ultimately base their proposals for a NEM transition period on timeframes that they believe are sufficient to ensure that most customers achieve payback. This approach, as acknowledged by the utilities themselves,[2] makes the rough justice of relying on payback periods to set the NEM transition period even rougher, as it necessarily results in certain customer-generators being taken off of the NEM tariff before they have even broken even on their investments.

A transition period based on the expected life of the system, on the other hand, gives each customer-generator an equal opportunity to realize the benefits of their systems, regardless of their motivations for installing solar. Using the expected life of the system also provides a far more consistent and reliable basis for establishing a transition period because the expected system life depends on the physical properties of the system rather than the utility/customer context within which it is deployed. System life is widely acknowledged to be between 25-30 years for the typical solar energy system, as demonstrated by parties' comments to date. This timeframe holds whether the system is deployed in a commercial or residential context and irrespective of the utility from which a customer takes service. We note that Navigant, the consulting firm that developed the payback analysis that informed PG&E's proposal, used a 30-year life when it conducted a supplementary analysis of the internal rate of return provided by solar energy systems.[3]

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[2] PG&E Reply Comments at 9 (acknowledging that the Navigant analysis shows not every customer will achieve payback under PG&E's proposal); SDG&E Reply Comments at 11-12 (acknowledging that only the least sophisticated customers will achieve payback under SDG&E's proposal); SCE Reply Comments at 11 (acknowledging that the Brattle analysis shows not every customer will achieve payback under SCE's proposal).

[3] PG&E Reply Comments, Appendix A, Page 20.

II. The IOUs' Estimates Fail to Account for Pending Changes to Rates and are Therefore Highly Unreliable.

In addition to the variability that is inherent in any calculation of payback periods, the estimates developed by the IOUs appear to be overly optimistic given that, in general, they appear to ignore the rate design changes that the utilities themselves have proposed. For example, in developing their payback estimates for residential customers, PG&E and SDG&E appear to have excluded changes to residential rates they are advocating for in R.12-06-013. [4] To the degree the IOUs have proposed changes to commercial rates, the analyses presented should also include scenarios that reflect those pending changes to provide a complete, and more conservative, estimate of what paybacks may be. Given the significant changes in rate design the IOUs have proposed in R.12-06-013, as well as other changes to rates the IOUs have or plan on submitting in the future, the analyses presented are likely to provide an inaccurate assessment of payback periods. This fact provides further support for the proposition that expected system life provides a far more consistent and robust basis for establishing the NEM transition period.

III. The Commission Should Base the Transition Period on the Life of Onsite Solar Systems in Accordance with the Expectations the State Set for Customer-Generators.

TURN provides additional documentation in its reply comments asserting "solar customers are motivated by a mix of economic, environmental and social motivations, including both long-term cost savings as well as payback time." [5] TASC agrees that no one factor motivates each investment in solar. Customer-generators may install solar to earn a return on an investment, hedge against price fluctuations, pay an initial investment back in the pursuit of a

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[4] PG&E and SDG&E appear to rely on a combination of historic rates and current ratesto determine the bill savings customers have realized to date and then escalate current rates using an escalation factor to assess bill savings in future years. In describing its approach, SCE indicated that they used their proposed 2014 residential rates.

[5] TURN Reply Comments at 9-10 (citing additional documentation on the motivations of customer-generators to install onsite solar panels).

sustainable lifestyle, or a combination of these and other factors. However, despite the various motivations customers may have, the most conservative approach, and one that is most consistent with basic notions of fairness, would ensure that reasonable expectations regarding the basic framework through which systems provide value is preserved intact, for the life of the systems they deployed. TURN's position is essentially one of "let them eat cake", as it assumes that customers can simply afford to absorb the substantially reduced value and increased electricity bills that a curtailed transition period will almost undoubtedly engender because, in TURN's view, other motivations that may have played a role in deciding to go solar will somehow compensate for the loss of economic value.

California's net metering policy gives a customer-generator the ability to (1) meet onsite energy needs, (2) net excess generation against future utility purchases, and (3) operate free from discriminatory charges.[6] Regardless of whether their motivations were related to payback or returns, each and every customer-generator in California relied on these three net metering fundamentals when deciding to install solar on the State's homes, farms, ranches, government buildings, corporations and small businesses. In the absence of any notice that the three fundamental components of net metering might not be available for the life of a system, customers have been left to form reasonable expectations that the State will allow a customer to continue to take advantage of the net metering tariff for the life of the system. That is, customer-generators have a reasonable expectation that a program the State used to induce long-term investment will remain in place for the life of the investment that the policy induced. Basing the transition period on any timeframe short of the expected life of the system violates these expectations and is fundamentally unfair.

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[6] Cal PU Code §2827(c), (e)(1), (h) (Deering's 2013).

IV. The Commission's Decision Will Have Far-Reaching Impacts on Clean Technology Investment in California.

Parties' opening comments demonstrate the impact the Commission's decision will have on the remarkably diverse set of customer-generators in California. The letter from DBL and other leading venture capital investors, which TASC has attached to these comments, highlights how the Commission's decision will reach beyond customer-generators to impact "leading investors in California's clean tech industry."[7] That letter states:

> The NEM policy has helped leverage billions of dollars in private investment in the installation of solar energy systems across California and saved energy consumers in the state billions of dollars. Most customers have installed solar (whether through a solar lease, power purchase agreement or cash purchase) to achieve electricity bill savings over the long-term, which depends on continuing service under their current NEM tariff. Investors, in turn, have been committing capital to California's rapidly growing rooftop solar industry with the reasonable expectation that NEM rules applicable to a given system would not be changed mid-stream, i.e. a customer can continue service under their current NEM rules for the operational life of their system.[8]

The letter concludes that failing to base the transition period on the life of the system "would quickly curtail expected solar deployment in California by unnecessarily disrupting customer and investor expectations."[9]

V. Conclusion

As demonstrated by the analyses submitted by the IOUs, relying on customer payback is characterized by a high level of variability driven by a variety of factors including the methodological approach used, the date customers deployed their systems, and the utility and tariff under which customers take service. All of these variables, in addition to other system-

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[7] *Letter re Rules for Net Energy Metering Transition Period*, Correspondence File for R.12-11-005 (December 23, 2013).

[8] *Id.*

[9] *Id.*

specific factors (*e.g.,* shading and orientation) ensure that any payback estimate is likely to be wrong for a significant number of customers who would be forced off of the current NEM tariff well before they recover the cost of their investment, much less earn a return. Additionally, the IOUs' analyses fail to provide a realistic appraisal of paybacks by excluding the effects of their own proposed rate design changes.

All of these concerns provide additional support for relying on the expected system life as the basis for establishing the NEM transition period. Coupled with the more basic concerns TASC and other parties have raised, including the reasonableness of using payback periods as the basis for determining when customers would be pushed into a framework that has yet to be develop, and therefore offers unknown value, it is clear the sunset date for each customer-generator should be set 30 years from the date of interconnection and apply to all customer-generators regardless of rate class, facility size or other factors.

Respectfully submitted,

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January 6, 2014

ATTACHMENT

DBL INVESTORS

DOUBLE BOTTOM LINE VENTURE CAPITAL

December 20, 2013

President Michael Peevey
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

RE: Rules for Net Energy Metering Transition Period

Dear President Peevey:

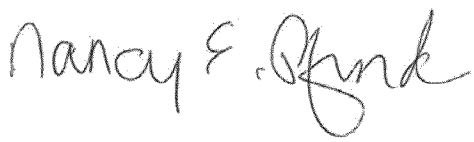
As leading investors in California's clean tech industry we appreciate the leadership the CPUC has demonstrated in making California the nation's largest solar energy market. Today, we write to express the importance of structuring the Net Energy Metering (NEM) transition period in Rulemaking No. 12-11-005 in a manner that ensures NEM customers who invest in renewable energy systems based on the current NEM rules retain the full value of that investment.

The NEM policy has helped leverage billions of dollars in private investment in the installation of solar energy systems across California and saved energy consumers in the state billions of dollars. Most customers have installed solar (whether through a solar lease, power purchase agreement or cash purchase) to achieve electricity bill savings over the long-term, which depends on continuing service under their current NEM tariff. Investors, in turn, have been committing capital to California's rapidly growing rooftop solar industry with the reasonable expectation that NEM rules applicable to a given system would not be changed mid-stream, i.e. a customer can continue service under their current NEM rules for the operational life of their system.

New legislation, AB 327, requires that the Commission develop NEM grandfathering rules on an expedited basis for customers who take service before new NEM rules kick in on or before July 1, 2017. In order to continue significant private investment in California's solar industry, it is critical that the Commission establish a NEM transition period that protects the value of the customer's investment, including the return on investment represented by expected net savings over the life of the project. Failure to do so would quickly curtail expected solar deployment in California by unnecessarily disrupting customer and investor expectations.

We support basing the NEM transition period on the expected life of NEM customers' generating systems, as indicated in the Governor's AB 327 signing message. This would reassure the market of the Commission's commitment to help implement California's clean energy goals and encourage additional private sector investment and job growth in our state's growing clean tech industry.

Sincerely,



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Antonio Gracias
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Commissioner Carla Peterman
Commissioner Mark Ferron
Commissioner Michael Florio
Commissioner Catherine Sandoval
Dana Williamson, Cabinet Secretary
Nicholas Chaset, Special Advisor
Administrative Law Judge Katherine MacDonald
Official Service List for Rulemaking 12-11-005