

**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 INTERSTATE  
RENEWABLE ENERGY COUNCIL, INC. ON THE ESTABLISHMENT  
OF A NET ENERGY METERING TRANSITION PERIOD**

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January 6, 2014

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Pursuant Administrative Law Judge Katherine MacDonald’s December 5, 2013 email ruling allowing parties the opportunity to respond through supplemental reply comments to address the data or analysis filed by the investor-owned utilities (“IOUs”) as attachments to reply comments addressing the net energy metering (“NEM”) transition period, the Interstate Renewable Energy Council, Inc. (“IREC”) respectfully submits this supplemental reply.

In opening and reply comments, IREC suggested that although the Commission must consider what constitutes a reasonable expected payback period to comply with AB 327, the Commission is not constrained by that single factor in setting an appropriate transition period that minimizes market uncertainty.<sup>1</sup> IREC noted that it would be reasonable to base the transition period on the expected life of a solar photovoltaic (“PV”) system (approximately 30 years) since customers typically consider the benefits they will receive over the life of a system determine whether it is worth it to invest in a NEM facility. In reply, IREC also directly addressed the erroneous factual assertions by

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<sup>1</sup> IREC Opening Comments at p. 11; IREC Reply Comments at p. 5.

some parties that NEM will constitute a subsidy in the future and that the transition period should be designed to mitigate that purported cost shift. While the opportunity to submit supplemental reply is limited to addressing the data and analyses attached to the IOUs' reply comments, IREC's reply to those analyses echoes the theme of our earlier comments: (1) the third-party consultant reports submitted by Pacific Gas & Electric Company ("PG&E") and Southern California Edison Company ("SCE") should come with the caveat that they rest on outdated assumptions about the value that residential NEM customers realize through the existing rate design structure;<sup>2</sup> and (2) the Commission should ignore San Diego Gas & Electric Company's ("SDG&E") "back of the napkin" analysis that large NEM cost shifts will exist after full implementation of AB 327 because those figures are suspect and tainted by substantial methodological flaws.

**I. The IOUs' Analyses of Payback Period for Solar NEM Customers Rests on Outdated Residential Rate Design Assumptions.**

As IREC explained in its reply comments, the future rate design for residential NEM customers is going to look far different than it does today. The expected impact of imposing customer charges and flattening the tier structure is that the size of the NEM subsidy postulated by E3 in its 2013 report<sup>3</sup> would be drastically reduced.<sup>4</sup> With certain change coming to residential rates for customers of the IOUs—and the strong likelihood

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<sup>2</sup> See IREC Opening Comments at p. 11 ("Any reliance on reasonable expected payback period as the basis for a transition period should account for the likely changes to residential rates, including the IOUs' interim rate design proposals currently being considered in Phase 2 of R.12-06-013."); IREC Reply at p. 9 (noting that IREC's analysis of rate design proposals in R.12-06-013, which generally flatten rate tiers and lower the upper-tier rate, reveals a significant loss in bill savings for residential NEM customers).

<sup>3</sup> California Net Energy Ratepayer Impacts Evaluation (E3 Report) (October 2013), available at [http://www.cpuc.ca.gov/PUC/energy/Solar/nem\\_cost\\_effectiveness\\_evaluation.htm](http://www.cpuc.ca.gov/PUC/energy/Solar/nem_cost_effectiveness_evaluation.htm).

<sup>4</sup> IREC Reply Comments at p. 17.

that these changes (e.g., tier flattening and fixed customer charges) will reduce the value proposition of NEM to existing and prospective customers—IREC discourages the Commission from relying heavily on analyses that draw conclusions on expected payback periods based on the current rate design structure.

In regard to the analyses attached to reply comments of SCE and PG&E, IREC simply points out that the assumptions of “value” of NEM to residential customers (i.e., bill savings) appear to be based solely on the current rate structure, escalating over time at differing rates under the separate analysis of SCE and PG&E. While IREC appreciates the complicated nature of preparing an analysis that incorporates yet to be determined rate designs, it would be possible, as SDG&E attempted, to model the maximum of what AB 327 allows (i.e., a monthly customer charge of \$10 and a flat rate structure). Estimating NEM customers’ future bill savings based on current rate design likely overestimates the real value that residential NEM customers will receive as rate design changes are implemented. As such, it is likely that these analyses underestimate the ultimate “mathematical” breakeven point for solar NEM customers. Accordingly, IREC suggests that it is reasonable to err on the side of caution and assume that the mathematical payoff periods will tend to be toward the longer range of those figures provided by SCE’s and PG&E’s consultants.

**II. SDG&E’s Attempt to Pencil-out the Potential Cost Shift Associated with NEM in Future Years under an AB 327 Residential Rate Structure Suffers from Substantial Flaws and Results in Gross Overestimation.**

In opening and reply comments, IREC noted that AB 327 rate design changes are likely to significantly reduce the purported cost shift associated with NEM in E3’s 2013 report. In its reply comments, and attached as a supporting analysis, SDG&E attempts to provide a rough estimate of what impact residential rate design reform, pursuant to

AB 327, will have on the purported cost shift associated with NEM.<sup>5</sup> SDG&E assumes that all residential customers will pay a monthly customer charge of \$10—the maximum allowed by AB 327—and that residential rates will be a single tier (i.e., flat with no rate tiers varying by usage). SDG&E assumes current full subscription of NEM in its service territory, with a total of 441 MW of NEM in the residential class as of 2013. SDG&E then estimates the total generation from this 441 MW of residential NEM customers and adjusts the gross generation each year into the future by applying a 1% degradation factor to those systems. SDG&E estimates the NEM “cost shift” by taking the difference between the E3 avoided cost value and the AB 327 flat residential rate and multiplying that difference (approximately 8 cents/kWh) by the gross generation each year, with the flat residential rate escalating each year by 2.61%. In year one (2013), SDG&E shows a cost shift of approximately \$63 million, a number which would grow to \$100 million in 2023 by virtue of the fact that rates increase and avoided costs remain constant.

This analysis is wholly inadequate to give the Commission an informed basis to limit the length of the transition period based on a purported cost shift. At the outset, the analysis is flawed because it frames the cost shift as the difference between retail rates and the avoided cost values determined by E3 for all NEM system output. The E3 report estimated that on average approximately 50% of residential NEM generation was exported (i.e., not instantaneously consumed onsite). SDG&E’s claim of cost shift should be immediately discounted by 50% to treat behind the meter consumption as a demand-

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<sup>5</sup> All references in this section to “SDG&E’s analysis” are to the first table of Appendix A titled “Residential Cost Shift Per Year Based on Flat Residential Rate With A \$10 Basic Service Fee”.

side reduction and to treat the value of exported kWhs as the “costs” associated with NEM.<sup>6</sup>

Second, SDG&E assumes a \$10/month customer charge—the maximum allowed under the law—but fails to count the revenue collected from NEM customers through this charge against its purported cost shift. As IREC pointed out previously, AB 327 presents a “double whammy” to NEM value by (1) imposing a fixed charge that cannot be avoided by onsite generation and collecting revenue that would otherwise go uncollected and (2) suppressing the strength of the upper-tier rate signal by moving revenue collection out of the volumetric rate. Under the E3 ratepayer impact framework, it is essentially NEM customer bill savings—achieved through bill credits for exported kWhs—that represents the “costs” to non-participating ratepayers (e.g., E3’s “export-only” analysis conducted in 2013 and 2010). If a fixed charge is imposed, then this reduces the NEM customer’s bill savings and, thus, reduces the size of any cost shift. To be methodologically sound, SDG&E should include any revenue collected from NEM customers through the hypothetical \$10/month customer charge and subtract that amount from the total “cost shift.”

To calculate the total revenue collected from a customer charge, SDG&E would need to quantify the number of residential NEM customers it expects to have when it is at full NEM subscription. According to the E3 report, in 2011 SDG&E had 17, 288

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<sup>6</sup> The customer’s ability to avoid purchases from the utility by installing onsite generation is not unique to NEM and should not be assigned as a cost-shift associated with NEM. A customer has the right to install and utilize onsite generation under the Public Utilities Regulatory Policies Act of 1978 (“PURPA”), though any exports would be valued at avoided cost under that approach.

residential solar NEM customers, representing 61 MW of capacity.<sup>7</sup> Assuming that average system size remains constant, this would mean that SDG&E could expect to have approximately 125,000 residential NEM customers at full subscription. Based on more recent data and an overall trend toward larger system sizes, however, IREC suggests that a more reasonable assumption is that average system size for residential NEM customers will be closer to 5 kW, amounting to a total of approximately 88,200 residential NEM customers.<sup>8</sup> If each residential customer contributes \$120/year through these fixed customer charges, then SDG&E would be collecting a total of \$10.6 million/year from residential NEM customers under its hypothetical rate design. This amount should be used to reduce the size of the purported cost shift for all years in SDG&E’s analysis.

Without considering the wisdom of a fixed customer charge of \$10 as a ratemaking matter, such a charge would appear to substantially satisfy SDG&E’s concern that NEM customers do not contribute the full amount of fixed costs necessary to provide grid services to those customers. In its reply, SDG&E states that the large size of the purported NEM cost shift—even with AB 327 reforms—“highlights the fact that the subsidy provided by NEM today is in large part due to avoidance of fixed grid costs in the variable rate.”<sup>9</sup> In SDG&E’s most recent general rate case, SDG&E noted that a \$3 customer charge would only collect a portion of its fixed costs of serving customers, but that it would be a step forward in meeting its estimated \$15.75/month per customer

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<sup>7</sup> E3 Report at p. 25.

<sup>8</sup> Using the most recently available data from [www.gosolarcalifornia.org](http://www.gosolarcalifornia.org), SDG&E’s CSI administrator shows that 71.1 MW residential solar has been “installed” from 14,327 applications received from 2006 to 2013. For the sake of simplicity, IREC assumes an average residential NEM solar system size of 5 kW, which is larger than the average system size of 3.5 kW derived from the 2011 data featured at p. 25 of the E3 Report.

<sup>9</sup> SDG&E Reply Comments at p. 14.

distribution costs.<sup>10</sup> Based on SDG&E's figures, a \$10 customer charge would have covered nearly two-thirds of the purported cost shift under the old residential rate design, and might cover even a greater portion under future rate designs, with the possibility of over-collection at \$10.

Even without a \$10 customer charge, E3's cost-of-service study highlights that residential NEM customers are paying most of the cost of service under the status quo.<sup>11</sup> This suggests that the bulk of the cost shift is not due to failure to collect the costs of providing grid service, but is a symptom of a steeply tiered rate structure. With tier rate reductions and the imposition of a significant customer charge, as presented in SDG&E's analysis, it is wholly conceivable that SDG&E's residential NEM customers would be covering their full cost of service and then some.

Adjusting SDG&E's analysis to account for the fact that at least 50% of residential NEM generation is consumed instantaneously onsite and that collection of revenue from a fixed customer charge will decrease the size any cost shift, IREC suggests that SDG&E's numbers are far less provocative and show *de minimus* impacts. Making these adjustments and keeping all of SDG&E's other assumptions constant, the cost shift in 2013 in SDG&E's AB 327 analysis should be reduced from \$63 million to about \$21 million. In 2023, the cost shift SDG&E reports should be closer to \$39 million than \$100 million. Without a thorough cost-benefit analysis using the actual rate structure and

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<sup>10</sup> See SDG&E Testimony in A.11-10-002, *Revised Prepared Direct Testimony of Cynthia Fang*, Chapter 2, at CF-8 (re-filed February 2012).

<sup>11</sup> E3 Report at p. 101 (showing that residential customers for PG&E and SCE are paying close to 90% of the cost of service, with SDG&E customers paying just 54% of the cost of service). IREC suggested in its comments on the Draft E3 Report that this disparity in results between SDG&E and the other IOUs was likely due to SDG&E's approach to determining distribution demand costs as 100% based on non-coincident demand.



updated inputs into the avoided cost calculation, however, it is premature to conclude that a cost shift will exist at all.

In sum, SDG&E's analysis sheds little light on whether a NEM cost shift will occur once AB 327 is fully implemented.

### **III. CONCLUSION**

IREC appreciates the opportunity to submit supplemental reply comments and reiterates its opposition to basing a transition period on a simple payback period for solar NEM customers, especially in light of certain residential rate design changes. SDG&E's flawed analysis of NEM cost shifts under AB 327 should be disregarded.

Respectfully submitted at San Francisco, California on January 6, 2014,

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