

**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)

**CLEAN COALITION REPLY COMMENTS ON PROPOSED DECISION ADOPTING
NET ENERGY METERING BILL CREDIT ESTIMATION METHODOLOGY FOR
GENERATING FACILITIES PAIRED WITH SMALL STORAGE DEVICES**

Brian Korpics
Staff Attorney

Kenneth Sahm White
Economics & Policy Analysis Director

Clean Coalition
16 Palm Ct
Menlo Park, CA 94025
(708) 704-4598
brian@clean-coalition.org

March 29, 2016

**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)

**CLEAN COALITION REPLY COMMENTS ON PROPOSED DECISION ADOPTING
NET ENERGY METERING BILL CREDIT ESTIMATION METHODOLOGY FOR
GENERATING FACILITIES PAIRED WITH SMALL STORAGE DEVICES**

I. INTRODUCTION

Pursuant to Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Clean Coalition respectfully submits this reply to party comments on the *Proposed Decision Adopting Net Energy Metering Bill Credit Estimation Methodology for Generating Facilities Paired with Small Storage Devices* (“PD”), dated March 4, 2016. The Clean Coalition strongly supports the Commission’s proposed decision to adopt a methodology that provides the greatest system benefits and preserves flexibility for customers.

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of distributed energy resources (“DER”)—such as local renewables, advanced inverters, demand response, and energy storage—and we establish market mechanisms that realize the full potential of integrating these solutions. The Clean Coalition also collaborates with utilities and municipalities to create near-term deployment opportunities that prove the technical and financial viability of local renewables and other DER.

II. REPLY COMMENTS

All non-utility parties, including the Office of Ratepayer Advocates, support the PD's selection of Method 2. The combination of TOU rates and storage provides the correct signal to customers to assist in both reducing and meeting peak system capacity demands. The PD properly acknowledges this fact, while recognizing that a workshop is warranted to further explore certain issues.

- a. *SCE's claim that Method 2 is inconsistent with D.14-05-033 and represents a departure from the net energy metering ("NEM") structure depends on an overly restrictive interpretation of Public Utilities Code Section 2827(h)(2)(B) that would frustrate the purpose of the PD.*

Southern California Edison ("SCE") claims that NEM is only designed to provide credit when it is produced, not when exported to the grid, which requires an overly restrictive reading of the governing statute.¹ Solar + storage systems are fundamentally different than solar-only systems because the addition of storage allows NEM systems to store excess energy for use or export at a later time. SCE's interpretation of the statute would create an onerous and complicated process that would require installation of the costly metering equipment the PD was designed to prevent. SCE's proposal would require close tracking of electrons within the storage system because their value would depend on when they were generated and received by the battery, rather than when they were exported to the grid. The more reasonable reading of "produced" in Public Utilities Code Section 2827(h)(2)(B) is that the undefined word means "exported" when applied to both solar and solar + storage systems under NEM. Using a more restrictive definition for solar + storage systems would add complexity to the process and would not take into account the unique ability of these systems to save energy that was generated at one time and use/export it at another time when it is more valuable to the customer or the grid.

SCE also claims that its interpretation of the statute is supported by the PD's description of the NEM program. SCE states that "[t]he PD itself describes the NEM program as 'an electricity tariff billing mechanism designed to facilitate the installation of renewable distributed generation (DG) by offering utility customers with customer-sited generation facilities retail-rate

¹ *Southern California Edison Company's (U 338-E) Opening Comments on Proposed Decision Adopting Net Energy Metering Bill Credit Estimation Methodology for Generating Facilities Paired with Small Storage Devices* at 4 (Mar. 24, 2016).

billing credits for energy exported to the grid *at times when onsite generation exceeds onsite demand.*”² SCE’s simplistic reading of the PD fails to account for the unique operating characteristics of solar + storage systems. Onsite generation does not exceed onsite demand during times when the battery is being charged with excess generation because the battery is creating additional demand. The times when onsite generation exceeds onsite demand are the times at which the system is exporting energy to the grid for both solar and solar + storage systems. The purpose of combining storage with NEM generation is not to avoid exporting energy to the grid by storing all onsite generation for later onsite use. NEM already effectively provides this service to the customer through the grid. Instead, storage performs as both load and generation, and the addition of storage is specifically designed to allow load and generation profiles to shift. Time-of-use (“TOU”) rate structures then encourage these profiles to shift in order to provide the most value to the grid.

- b. The Commission should allow all parties to provide input on the selection of a successor estimation tool at the workshop.*

SCE appropriately raises the issue of how estimation should be performed following the conclusion of the California Solar Initiative and the associated EPBB calculator. The Clean Coalition agrees that this question should be addressed in the final decision. The EPBB calculator is an established standard and use of this approach should not be abandoned without review. It is important to maintain consistency and predictability for future results that may be jeopardized by a change in methodology, but the Commission should also remain open to alternatives that improve accuracy, simplicity, and cost effectiveness. Any change in estimation tools or methods should be subject to review by parties and Commission approval—in addition to being consistent across utilities.

- c. Pacific Gas and Electric’s (“PG&E’s”) concerns with “gaming” are overstated and can be easily remedied.*

PG&E argues that Method 2 allows customers to utilize storage systems to buy energy at lower TOU rates and then receive NEM export credits for that energy at higher TOU rates. While this is theoretically possible, PG&E’s analysis fails to fully account for the customer costs

² *Id.* (emphasis added by SCE).

that would discourage such activity, including: 1) energy storage systems realize 20-30% round trip efficiency losses, 2) battery life is reduced from increase charge and discharge cycles, which results in higher capital costs with more frequent replacement, and 3) the Federal Investment Tax Credit would be unavailable to customers if they were to use more than a quarter of their installed storage capacity in the manner PG&E suggests.³

PG&E can also investigate whether its concern is warranted by analyzing consumption data from solar + storage systems. Advanced metering infrastructure produces highly granular load profile data, and the utilities can easily use this data to track consumption from the limited set of solar + storage customers and investigate whether consumption increased at night after the addition of storage to the system. SolarCity and IREC had also proposed that the utilities provide customers with access to smart meter or comparable data to track total exports, with no more than a twenty-four-hour delay,⁴ and the PD stated the Commission's intent to look into the feasibility of this proposal through a subsequent workshop. As part of this information gathering process, the utilities should present information on any evidence of "gaming" at the workshop and explore potential solutions with the parties.

d. The Commission should consider SolarCity's request to require greater transparency regarding the costs of "complex" metering solutions and consider the development of a cost cap.

SolarCity raises important concerns regarding the cost of metering that is not deemed subject to the \$600 cost cap for "simple" metering. Their comments providing evidence of charges being \$3,000 to \$6,000, with the utilities providing little detail as to the magnitude and variability of these costs. This is a legitimate concern, and the Clean Coalition supports the recommendation that the details of uncapped costs be provided to applicants. The Clean Coalition further recommends that the utilities report these costs to the Commission, presented the information at the workshop, and included the costs in the interconnection cost guides.

³ See *Opening Comments of SolarCity Corporation on the Proposed Decision Adopting an Estimation Methodology for Net Energy Metering Paired Storage Devices Pursuant to Ordering Paragraph 6 of Decision 14-05-003* at 8 (Mar. 24, 2016); *Comments of the California Solar Energy Industries Association on the Proposed Decision Adopting a Net Energy Metering Bill Credit Estimation Methodology* at 1-2 (Mar. 24, 2016).

⁴ PD at 24.

- e. *The Commission should consider SolarCity’s request to exempt some storage + solar systems from the NEM credit estimation regime to the degree the storage device only charges from the associated solar system.*

The Clean Coalition supports SolarCity’s proposal that the Commission direct Energy Division and the utilities to work with project developers to identify inverter or other operational settings or conditions that would provide sufficient assurance to the Commission that the storage device will charge exclusively from the paired renewable generation. Should these conditions be met, systems should be exempted from the requirements established in the PD and in D.14-05-033, which were specifically designed to address the NEM gaming issue. The Clean Coalition supports this and related efforts to establish configuration or software standards to reduce unnecessary costs or burdens wherever appropriate.

- f. *Method 2 is preferable because it provides the most value to the grid.*

The utilities continue to favor of Method 1 as preferable to Method 2, arguing that customers can and should utilize stored energy to meet their own needs rather than supplying that energy to the grid under NEM compensation. However, the value of energy to the grid is clearly correlated with TOU rates applied to NEM tariffs, and energy exported to the grid during peak demand periods is more valuable to the grid at that time—both in offsetting peak energy costs and in deferring or avoiding peak capacity costs for generation and transmission. However, each customer’s load is individual, and while customers will clearly serve their own loads first, their load profiles may not provide the opportunity to utilize stored energy during peak system periods. The Commission will soon require NEM customers to take service under TOU tariffs because this structure will better reflect system costs and value, and it benefits the system to encourage these customers to provide energy to the grid in alignment with grid load profiles rather than their own individual needs.

III. CONCLUSION

The Clean Coalition appreciates this opportunity to reply to comments on the PD and supports the Commission’s work to promote NEM systems coupled with storage that provide the greatest overall benefits to the grid.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian Korpics". The signature is fluid and cursive, with a prominent initial "B" and a long, sweeping underline.

Brian Korpics
Staff Attorney
Clean Coalition
16 Palm Ct
Menlo Park, CA 94025

Dated: March 29, 2016