

**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)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
ON THE DECISION ADOPTING NET ENERGY METERING BILL CREDIT  
ESTIMATION METHODOLOGY FOR GENERATING FACILITIES  
PAIRED WITH SMALL STORAGE DEVICES**

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In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)<sup>1</sup> hereby submits these comments on the *Decision Adopting Net Energy Metering Bill Credit Estimation Methodology for Generating Facilities Paired with Small Storage Devices*, issued by Commissioner Michael Picker on March 4, 2016 (“Proposed Decision”).

**I. INTRODUCTION.**

CESA thanks the Commission for considering a Net Energy Metering (“NEM”) billing credit estimation methodology that allows NEM-eligible generators paired with small energy

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<sup>1</sup> 1 Energy Systems Inc., Advanced Microgrid Solutions, AES Energy Storage, Aquion Energy, Brookfield, California Environmental Associates, Consolidated Edison Development, Inc., Cumulus Energy Storage, Customized Energy Solutions, Demand Energy, Dynapower Company, LLC, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, ELSYS Inc., Energy Storage Systems, Inc., Enphase Energy, EV Grid, GE Energy Storage, Gordon & Rees, Green Charge Networks, Greensmith Energy, Gridtential Energy, Inc., Hitachi Chemical Co., Ice Energy, IMERGY Power Systems, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Invenergy LLC, K&L Gates, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Mitsubishi Corporation (Americas), NEC Energy Solutions, Inc., NextEra Energy Resources, NRG Solar LLC, OutBack Power Technologies, Panasonic, Parker Hannifin Corporation, Powertree Services Inc., Primus Power Corporation, Princeton Power Systems, Recurrent Energy, RES Americas Inc., Saft America Inc., Sharp Electronics Corporation, Skylar Capital Management, SolarCity, Sovereign Energy, Stem, SunEdison, SunPower, Toshiba International Corporation, Trimark Associates, Inc., Trina Energy Storage, Tri-Technic, UniEnergy Technologies, Wellhead Electric, Younicos. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. (<http://storagealliance.org>).

storage devices to avoid costly additional metering requirements. Importantly, CESA applauds the Commission for adopting Method 2 in this Proposed Decision that establishes a monthly maximum allowable output limit, which is more flexible, more compatible with NEM-plus-storage use cases, and prevents NEM credit forfeiture for inaccurate hourly estimates (as proposed in Method 1). In these comments, CESA focuses primarily on the future consideration of extending the Method 2 estimation methodology to NEM paired with energy storage systems larger than 10 kW, and on improvements to the estimation methodology to be more technology specific. Furthermore, CESA requests that the Commission pivot toward a re-consideration of the sizing limitations of energy storage paired with NEM-eligible generators, which, in the same spirit as the Proposed Decision, would go a long way toward improving the viability of solar-plus-storage applications.

**II. ORDERING PARAGRAPH NUMBER 1 SHOULD BE MODIFIED TO ENSURE THAT THE ESTIMATION METHODOLOGY IS APPLICABLE TO STORAGE SYSTEMS SIZED 10 KW OR LESS.**

D.14-05-033, Ordering Paragraph 6, indicated that the Commission would develop an estimation methodology to address circumstances where storage systems sized at “10 kW alternating current or less” are paired with NEM generation.<sup>2</sup> The Proposed Decision appears to apply an estimation methodology to systems that are less than 10 kW in size, not inclusive of systems that are exactly 10 kW in size. This appears to be in error, and, while relatively minor, should be corrected in the final decision to ensure the estimation methodology is available to systems up to and including those sized at exactly 10 kW.

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<sup>2</sup> *Decision Regarding Net Energy Metering Interconnection Eligibility for Storage Devices Paired with Net Energy Metering Generation Facilities*, issued May 23, 2014, D.14-05-033. p. 39.

**III. THE METHOD 2 ESTIMATION METHODOLOGY SHOULD BE EXTENDED TO LARGER ENERGY STORAGE SYSTEMS AND BE CUSTOMIZED TO MATCH WITH THE CHARACTERISTICS OF THE NEM-ELIGIBLE GENERATOR.**

The Proposed Decision’s rationale for adopting Method 2 with some modifications is sound and reasonable. The Proposed Decision agrees with many of CESA’s comments<sup>3</sup> made on November 24, 2014 in response to the Assigned Commissioner’s Ruling (“ACR”), including how monthly limits may be simpler for NEM customers to understand than hourly limits, how monthly irradiance estimates are more accurate than hourly estimates, and how monthly limits allow for exports during peak hours when energy is most valuable to the grid.<sup>4</sup> The Proposed Decision also incorporates CESA’s recommendation that NEM customers have an option to opt out of the estimation methodology to follow NEM Multiple Tariff (“NEM-MT”) metering requirements.<sup>5</sup> Furthermore, CESA finds the Proposed Decision reasonable in avoiding concerns about prorated estimates by using the calendar month in which the customer’s billing period begins to determine monthly limits. Overall, CESA is strongly supportive of the Proposed Decision and requests that the Method 2 estimation methodology be immediately adopted.

As CESA recommended in its 2014 comments, Method 2 should be used for estimating system output and potential use for systems larger than 10 kW as well because the estimation methodology is transparent and directly addresses any concerns regarding the integrity of NEM billing credits for energy exports to the grid from energy storage devices.<sup>6</sup> The same costly metering requirements apply for energy storage devices larger than 10 kW that are paired with a

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<sup>3</sup> *Comments of the California Energy Storage Alliance on Assigned Commissioner’s Ruling Regarding the Development of an Estimation Methodology for Net Energy Metering Paired Storage Devices Pursuant to Ordering Paragraph 6 of Decision 14-05-003*, filed November 24, 2014.

<sup>4</sup> *Proposed Decision*, pp. 18-19.

<sup>5</sup> *Proposed Decision*, p. 22.

<sup>6</sup> *CESA’s Comments*, p. 3.

NEM-eligible generator, and therefore the rationale for using a billing credit estimation methodology for these larger paired storage systems should also apply. As long as energy storage systems paired with NEM-eligible generators export energy up to the NEM generator's maximum output level, then the size of the paired energy storage device should not pose any problems or risks to the distribution grid.

Consistent with the object of limiting cost, CESA also notes that to the degree energy storage systems are charged exclusively from NEM-eligible generation, the concern the framework and requirements established by the Commission through the Proposed Decision and D.14-05-033 seeks to address is rendered moot. CESA encourages the Commission, working with stakeholders, to identify means of determining and ensuring that energy storage systems are charged exclusively by NEM-eligible generation, with the goal of exempting systems that will only charge from the NEM-eligible generation from the framework and requirements.

Finally, CESA also reiterates its request in its 2014 comments that the NEM billing credit estimation methodology be enhanced to allow developers and technology providers to apply technology-specific loss factors to account for higher efficiency NEM-eligible generators.<sup>7</sup> CESA is encouraged to see that the Proposed Decision recommends hosting a workshop to discuss options for more accurate, technology-specific modeling of photovoltaic production.

**IV. THE COMMISSION SHOULD REVISIT THE SIZING LIMITATIONS FOR NEM-ELIGIBLE GENERATION PAIRED WITH ENERGY STORAGE AS ESTABLISHED IN D.14-05-033.**

In addition to requesting that the NEM billing credit estimation methodology be extended to energy storage systems larger than 10 kW, CESA is concerned about the broader issue of

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<sup>7</sup> *CESA's Comments*, p. 4.

arbitrary sizing limits on energy storage systems paired with NEM-eligible generation, as established in D.14-05-033:<sup>8</sup>

*For Net Energy Metering (NEM)-paired storage systems with storage devices larger than 10 kilowatts alternating current shall have a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.*

As the Proposed Decision aims to improve the cost effectiveness of solar-plus-storage use cases, the 150% sizing limitation unduly precludes a number of other viable solar-plus-storage use cases. Limiting the storage power rating to that of the NEM-eligible generator limits the value for high-power, modest-duration use cases such as demand charge reduction, electric vehicle charging, demand response, and ancillary services. The sizing limitation also fails to account for baseline assumptions for roundtrip efficiency losses, which can range between 20% and 35% of AC-based energy. However, if the Commission retains the current 150% sizing limitation, then CESA recommends that the Commission at least increase this sizing limitation apply to energy storage systems larger than 30 kW, rather than applying it to energy storage systems larger than 10 kW as the requirement stands today. This would ensure a level playing field for NEM customers who use high-efficiency solar panels that are more likely to install larger energy storage devices as a result. Furthermore, the 30 kW limit would at least be consistent with the California Solar Initiative (“CSI”) program, which set a 30 kW threshold for solar PV systems for its performance based incentives.

While this issue is not being directly considered in the Proposed Decision, CESA recommends that the sizing limitation issue be re-visited in the future in this proceeding to support all viable solar-plus- energy storage use cases.

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<sup>8</sup> *Decision Regarding Net Energy Metering Interconnection Eligibility for Storage Devices Paired with Net Energy Metering Generation Facilities*, issued May 23, 2014, D.14-05-033. p. 39.

V. **CONCLUSION.**

CESA appreciates the opportunity to submit these comments on the Proposed Decision and looks forward to working with the Commission, and parties in improving the estimation methodology.

Respectfully submitted,



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