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

OPENING COMMENTS ON THE PROPOSED DECISION REGARDING NET ENERGY METERING INTERCONNECTION ELIGIBLITY FOR STORAGE DEVICES PAIRED WITH NET ENERGY METERING GENERATION FACILITIES

Charles Hewitt
770 La Buena Tierra
Santa Barbara, CA 93111
Phone: 805-964-1759
email: charles93111@gmail.com

May 3, 2014

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

OPENING COMMENTS ON THE PROPOSED DECISION REGARDING NET ENERGY METERING INTERCONNECTION ELIGIBLITY FOR STORAGE DEVICES PAIRED WITH NET ENERGY METERING GENERATION FACILITIES

Pursuant to Rule 14.3(a) of the California Public Utilities Commission's (CPUC's) Rules of Practice and Procedure, Charles Hewitt submits Opening Comments on the Proposed Decision Regarding Net Energy Metering Interconnection Eligibility for Storage Devices Paired with Net Energy Metering Generation Facilities (PD).

I. Introduction

I appreciate the CPUC's clarification that integrated or directly connected energy storage is not a generator and support CPUC's proposal that Net Energy Metering (NEM)-eligible generation facilities (GF) with storage are exempt from application and review fees. I agree with the goal of preserving NEM integrity and that the investor-owned utilities (IOUs) should have taken a more collaborative approach rather than obstructionist.[1]

[1] PD 4.2, page 10-11

II. Metering Requirements

The October 17, 2013 Assigned Commissioner Ruling (ACR) states that non-time-varying electricity rates offer no financial incentive to export energy from storage for NEM credit,[2] and the PD metering and de-rate factor required for small NEM-eligible generating facilities with storage will remove imported energy from annual NEM credits. The proposed metering does not consider time-varying electricity rates. Time-varying rates still offer a hypothetical financial incentive to export energy from storage during high-value time periods despite the proposed de-rate factor.

The proposed metering requirements for small NEM-eligible generating facilities with storage rely on the facility's data acquisition system (DAS). What are the specifications for this DAS? What organization will define the specifications and determine which equipment meets the specifications? A de-rate factor is calculated from the DAS measurements. The inconsistent calculations defined in the 6.2.3 Discussion[3] and the Proposed Order[4] must be resolved. These technical questions cannot be left to the IOUs.

A few other considerations for the proposed metering requirement:

1. At night on the typical grid-tied battery backup photovoltaic (PV) generating facility, electricity flows from the grid, through the inverter to a critical loads backup electrical panel. This critical loads panel usually supplies critical onsite loads, like a refrigerator. The inverter provides uninterrupted power to these critical loads by automatically switching to directly connected storage if grid power is interrupted. The critical loads

[2] Commissioner Michael Peevey Assigned Commissioner Ruling on October 17, 2013, page 7
[3] PD 6.2.3, page 19
[4] PD, page 35

panel and the NEM paired storage device share the same connection to the grid. Grid electricity to the critical loads panel cannot be separated from imports to the storage device. While the grid is operating, the proposed DAS meter will reduce the de-rate factor by electricity delivered to the critical loads panel every night.

2. The Proposed Decision defines a de-rate factor for a small NEM-eligible generating facility with storage and a single inverter. What about small systems with more than one inverter? For example, two 120 VAC inverters are often paired in a small PV system to produce 220 VAC with one grid connection.
3. The proposed internet-connected DAS must meet the data integrity standards that the IOUs demand. How can energy import/export data be guaranteed accurate for an acceptable metering cost to the customer? The Proposed Decision imposes the metering requirement on all small NEM-paired storage systems including those currently connected.[5] Many existing systems will require a new separate internet-connected DAS to continuously monitor energy imports and exports. The cost of installing a DAS and maintaining its internet connection will exceed the total revenue from many small residential PV systems.

III. Conclusion

The Proposed Decision leaves too many unanswered questions; questions that will allow the IOUs to delay and obstruct and lead to more CPUC proceedings. The CPUC must develop a simpler solution than requiring every NEM-eligible generating facility with storage to install an additional internet connected meter with several deficiencies.

[5] Proposed Decision 6.2.3, page 21

Rather than trying to specify an adequate data acquisition system to meter small generating facilities, the CPUC could learn about the inverters and storage used in renewable generating facilities and identify equipment that meets the NEM requirement. The California Energy Commission maintains a long list of eligible inverters. Almost all of these inverters are not capable of connecting with energy storage, directly or integrated. Currently only three manufacturers make inverters compatible with storage: OutBack Power Systems, Schneider Electric, and SMA America. I encourage the CPUC to talk directly with these manufacturers, learn about the equipment, and develop a simple small system decision to preserve NEM integrity. Small PV generating facilities with storage – especially those on non-time-varying rates – are not a threat to NEM integrity and should not be required to have an additional meter continuously monitoring energy imports and exports.

In closing, I ask the CPUC to consider an interim decision allowing NEM eligibility and grid interconnection of installed generating facilities with storage on non-time-varying rates without fees. I have been waiting for an interconnection agreement for more than a year while my small expensive PV system with battery backup sits underutilized.

Dated: May 3, 2014

Respectfully submitted,

/s/ Charles Hewitt

Charles Hewitt
770 La Buena Tierra
Santa Barbara, CA 93111
email: charles93111@gmail.com