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

COMMENTS ON THE ASSIGNED COMMISSIONER RULING REGARDING THE INTERCONNECTION OF ENERGY STORAGE SYSTEMS PAIRED WITH RENEWABLE GENERATORS ELIGIBLE FOR NET ENERGY METERING

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OPENING COMMENTS ON THE ASSIGNED COMMISSIONER RULING REGARDING THE INTERCONNECTION OF ENERGY STORAGE SYSTEMS PAIRED WITH RENEWABLE GENERATORS ELIGIBLE FOR NET ENERGY METERING

I. Introduction

I appreciate the opportunity to comment on the *Assigned Commissioner Ruling Regarding The Interconnection Of Energy Storage Systems Paired With Renewable Generators Eligible For Net Energy Metering* (ACR) and look forward to a timely decision. I am a homeowner with a small 3.5kW grid tied battery backup photovoltaic (PV) system. I am employed as an engineer not by any PV installer, equipment manufacturer, utility, or government entity. I am a customer.

II. Why I Chose a Battery Backup System

During electric grid interruptions, I do not want to look at thousands of dollars of inoperable PV equipment while food in my refrigerator rots. I selected an Outback inverter with battery backup that has been on the California Energy Commission (CEC) eligible equipment list for years. This inverter model has not changed in years. Many of these inverters are installed in California and are currently exporting to the grid with standard Net Energy Metering (NEM) interconnection agreements. This inverter cannot export battery power to the grid, and this

inverter cannot operate without batteries. The purpose of the batteries is to backup onsite loads. In March 2013, I contracted a licensed installer to install a PV system with this inverter with 14kWh of battery backup in my home. Imagine my disappointment when Southern California Edison (SCE) refused to approve my NEM application, claiming backup batteries are non-NEM generators that could export to the grid. SCE demanded additional fees and meters that are incompatible with the inverter design as prerequisites to an interconnection agreement. SCE changed the rules in the middle of my installation. I, my PV installer, and the inverter manufacturer appealed to SCE and the California Public Utilities Commission for months and finally learned that my PV system is not eligible for any NEM agreement with SCE. The SCE engineers appear to have limited understanding of the PV equipment for which SCE has interconnection authority. This frustrating experience and recent news articles demonstrate the obstacles that publicly regulated utilities are throwing at distributed generation. Meanwhile, my expensive PV system sits idle for more than five sunny months, and I continue to pay electric bills. Why must I pay the cost of the "confusion" cited in the ACR?

III. Small Systems Should Be Fast Tracked

Why is a small PV system subjected to the same fees and extensive review by a utility as a large Multiple Tariff Generating Facility? As stated in the ACR, small storage systems are a minimal risk to NEM integrity. Therefore, small grid tied battery backup PV systems that are on the CEC eligible equipment list should receive fast track review and standard NEM interconnection agreements from utilities with no additional fees or meters. In response to ACR question 2, a small PV system of 10 kW or less with storage of 50 kWh or less will meet the needs of the typical home or business and not affect NEM integrity. Small systems of 10kW or less should be

exempt from the Self Generation Incentive Program (SGIP) Handbook storage limit so storage can be sized to backup onsite loads for a period of days. In any case, the storage system sizing limits outlined in the SGIP Handbook require clarification as to how the PV system AC output power in kilowatts can limit the storage capacity energy in kilowatt-hours. Also, small systems should not be required to have time of use (TOU) metering to record data for a utility's lost revenue study.

Regarding ACR question 3, Net Generation Output Metering (NGOM) should not be required for customers on non time-varying rates. However, small system configurations that do not allow NGOM should not be relegated to the potentially costly non time-varying rates. Small systems should be eligible for time-varying rates for electricity received from the grid. Regarding ACR question 1, only customers on time-varying rates for electricity exported to the grid should be limited by estimated NEM generation during peak periods.

Lastly, batteries are not generators and must be treated as a distinct component in a renewable energy (RE) system as the solar modules, aka solar panels, are treated. Conventional battery storage cannot discharge more than 50% without reducing the lifetime cycles of the batteries. So, 50 kWh of battery storage can only supply 25 kWh or less without damage to the batteries. Batteries are very expensive and of limited life. Their purpose is to backup critical onsite loads during grid interruption.

IV. Conclusion

Small renewable generators that are on the California Energy Commission eligible equipment list should receive NEM interconnection agreements without additional fees or metering. The CEC has reviewed the eligible equipment and enforced safety requirements. The public relies upon this list to make renewable energy decisions. If the utilities have concerns about eligible equipment, their concerns should be resolved with the CPUC and CEC before customers are denied NEM interconnection agreements.

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Respectfully submitted,

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