CESA
CALIFORNIA ENERGY STORAGE ALLIANCE

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Original copy to:

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 11-RPS-01 and Docket No. 02-REN-1038
RPS Proceeding
1516 Ninth Street
Sacramento, California 95814-5512

Re: **Comments of the California Energy Storage Alliance on Proposed Changes to the Renewables Portfolio Standard Eligibility Guidebook**

Dear Commissioners:

The California Energy Storage Alliance ("CESA") applauds the Energy Commission and its staff for explicitly addressing the subject of energy storage in its *Proposed Changes to the Renewables Portfolio Standard Guidebook* ("Guidebook"). CESA strongly supports the policy concepts reflected in the new energy storage section that that the Energy Commission proposes to add to the Guidebook (Section III, G, pp. 64-65)). CESA submits these comments in order to assist the Energy Commission in assuring that the energy storage-related language to be included in the next revision of the Guidebook meets California's pressing need to encourage deployment of energy storage integrated with RPS-eligible generating facilities as fully as possible, while avoiding use of unduly proscriptive terminology that may defeat the intended purpose.

CESA recommends that the current draft Guidebook language should be modified to capture several critical policy concepts related to energy storage, as defined at California Public Resources Code Section 2835(a):

1. State that energy storage, when *integrated* (not "co-located") with an RPS-eligible generating facility, is an "addition or enhancement" within the meaning of Public Resources Code Section 25741, to that generating facility.

2. State that eligible energy storage may be *electrically* interconnected (*i.e.*, "integrated") with one or more RPS-eligible generating facilities without regard to physical adjacency or geographical location.

3. Specify the generating facility size threshold below which an RPS-eligible generating facility integrated with energy storage may be considered eligible for the least burdensome metering requirements allowable for purposes of net metering ("NEM").

4. Specify virtual net metering ("VNEM") must be considered an extension of NEM for the purpose of metering requirements.

5. Eliminate any requirement that may be interpreted as discriminating against any particular ownership arrangements or configurations of energy storage integrated with RPS-eligible generating facilities.

A copy of the current draft language marked to reflect CESA's recommended changes to the energy storage section of the draft Guidebook is enclosed with these comments.

I. Energy Storage Should be as Considered "Additions or Enhancements" to RPS-Eligible Generating Facilities Within the Meaning of Public Resources Code Section 25741.

Public Utilities Code Section 2827 establishes requirements related to NEM, including eligibility requirements to participate in NEM as a customer generator, as well as specific requirements intended to ensure that customer generators are not subject to costs or fees that they would not otherwise face absent their decision to invest in customer-sited RPS-eligible generation facilities. Under Section 2827, one of the eligibility requirements for customer generators participating in NEM is that they use a "renewable electrical generation facility", which is in turn defined by Public Resources Code 25741(a)(1) This section defines a "renewable electrical generation facility" as a facility that uses a renewable fuel and, expressly includes "additions or enhancements" to that facility.

II. Energy Storage should be Electrically Integrated with RPS Eligible Generating Facilities without Regard to Physical Adjacency or Geographical Location.

Community energy storage ("CES") describes one or more distributed energy storage systems, each providing active and reactive power and energy, connected to secondary transformers serving a group of residential, commercial, or industrial customers is a representative example of the reason that physical equipment connection of propinquity would by unduly restrictive. Each CES-based RPS-eligible generation "fleet" offers multiple megawatts and multiple megawatt hours of energy storage controlled and coordinated by a single CES control hub. There is no legitimate policy reason to discourage RPS-eligible facilities configured in this manner

CES facilities, when aggregated, can be operated to produce many of the same grid-level benefits achieved by larger bulk energy storage technologies. Those benefits include load leveling, VAR support, and various ancillary services. Many of these grid-level applications can

also provide transmission function benefits, resolving reliability concerns by mitigating transmission overload, addressing transmission line trips, and reacting to voltage fluctuations.

III. A Size Threshold Below Which RPS-Eligible Generating Facilities May be Eligible for the Least Burdensome Metering Requirements Allowable Should be Specified.

The current proposed language in the draft Guidebook states, "the applicant may propose to treat only the energy leaving the facility in excess of the imported grid electricity as RPS eligible." The Guidebook should specifically define what is meant by "small systems" and adopt a cut-off of 30 kW. This is consistent with the approach taken in the context of the California Solar initiative ("CSI") and Self Generation Incentive Program ("SGIP") program requirements for metering and data collection. RPS-eligible generating facilities sized at or below this threshold should be subject to the least burdensome metering requirements allowable.

Small RPS-eligible generation facilities should be allowed to use lower cost, device internal metering consistent with the accuracy and data collection requirements in the CSI Handbook. The CSI Handbook provides a standard for +/- 5% accuracy internal measurement for generating facilities sized at less than 30 kW. The CSI Handbook also defines requirements for data collection and validation under Performance Monitoring and Reporting Service and Performance Data Provider requirements. The same standard for internal measurement accuracy of a generating system and data collection requirements should be applied for determining the RPS eligibility of energy discharged from a generating facility in both the CSI program and the SGIP. This would mean using internal generating facility meters. Post measurement adjustments could also be considered, rather than requiring unduly expensive metering arrangements or configurations.

IV. Net Metering Should Specify as an Extension of NEM for Purposes of Metering Interconnections.

A virtual net metering ("VNEM") installation should be a one-way generation meter to which an RPS-eligible generating facility is attached. In the case of energy storage integrated with a VNEM configuration there are several possible use cases that need to be taken into account. VNEM-eligible standalone energy storage may be used in conjunction with onsite measurement and controls to enable load-leveling benefits to be applied to multiple recipient accounts. Leveling is economically beneficial and GHG redesigning in that it reduces inefficient ramping needs for grid regulation. Energy storage may also be integrated with RPS-eligible generation. This effects that the ability of energy storage to be charged from an RPS-eligible generating facility and only discharge energy to the grid. Since no customer premise load is allowed on a NEMV this could inadvertently prevent possible uses of energy storage in the context of VNEM if such uses are not specifically identified as RPS-eligible.

V. Eliminate any Requirement that may Discriminate Against Particular Ownership Arrangements or Configurations of Energy Storage Integrated with RPS-Eligible Generating Facilities.

The Guidebook includes among the conditions it establishes for determining whether a storage system may be considered as part of the electrical generation facility to requirement that the storage system be owned by the same entity as the renewable generation facility. This requirement should be removed as it is unnecessary and counterproductive to the extent it discriminates against certain ownership arrangements even if, from an operational standpoint, the role, functionality and benefits of the storage system are the same as under an ownership arrangement where both the storage system and renewable generation facility are the same.

CESA looks forward to continuing to work with the Energy Commission and stakeholders in this important Guidebook revision process, and thanks the Energy Commission for its consideration of these comments.

Very truly yours,

Janice Lin, Executive Director

cc: katezocchetti@energy.ca.gov
Enclosure

G. Energy Storage

There are a wide variety of energy storage technologies. None of these technologies are inherently renewable as they may~~are~~ not be dependent on the use of a renewable energy resource. However, energy storage technologies can be used to store energy from a renewable energy resource to produce electricity at a later time. In such cases the resulting electricity may be eligible to produce RECs. It is not necessary that such technology be co-located with the renewable generation facility.

Methods of storing energy from a renewable energy resource that are integrated into and located with the electrical generation facility as part of the generation process, such as thermal energy storage at a solar or other thermal electric facility or a customer site, are considered part of the electrical generation facility and not a separate, independent storage facility for the purpose of RPS eligibility. These methods generally store an energy potential created by the renewable energy resource, or a mix of renewable and nonrenewable energy resources, before the generation of electricity occurs. If the storage device stores energy after the electrical generation facility produces electricity, as in the case of batteries, for example, then the storage device must only be capable of storing energy coming from the renewable generator. If a mix of renewable and nonrenewable energy resources are used to generate electricity the output of the storage device will be a mix of renewable and nonrenewable energy, regardless of the fuel used at the time energy is stored in the device, for information on facilities using multiple energy resources see Section III.B: Renewable Facilities Using Multiple Energy Resources.

Energy storage devices not electrically integrated into the operations of an electrical generation facility having a direct connection to the output of an RPS eligible facility can receive energy inputs from other sources, but may nevertheless still be RPS eligible in certain cases. If these storage devices are operated as part of the RPS eligible electrical generation facility, without regard to physical adjacency or geographic location ~~are located and metered as the same facility, and are owned by the same entity~~, the storage device may be considered as part of the electrical generation facility. All energy inputs to the facility, the renewable generator and the energy storage system, would be considered in the fuel measurement methodology, see Section III.B. The resulting percentage of renewable fuel used to generate electricity would be applied to the generation output of the facility. Alternatively, for small systems where the necessary metering could be cost prohibitive, such as residential systems, the applicant may propose to treat only the energy leaving the facility in excess of the imported grid electricity as RPS eligible, if it can be shown that this approach will underestimate the renewable portion of the stored and exported electricity in all possible cases.

Energy storage devices or facilities not falling into one of the above categories are not eligible for the RPS as a generation facility and may not receive RPS certification or precertification as they do not generate electricity from a renewable resource or directly store energy from a renewable resource for delivery of electricity as a later time, but rather store electricity as part of the electric transmission system.

Energy storage systems using pumped storage hydroelectric must meet the eligibility requirements for small hydroelectric facilities.