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Sent: 12/10/2013 3:55:41 PM
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Cc:
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Subject: forthcoming ACR on storage and safety

Parties to service list 12-11-005:

On October 17, 2013, Pres. Peevey issued an assigned commissioner's ruling (ACR) asking parties to submit comments on a proposal to give renewable-paired energy storage devices the same benefits available to generating facilities under net energy metering (NEM), the contents and timing of interconnection cost reports, safety considerations, and system sizing and metering requirements.

Several parties submitted comments and reply comments in response to the ACR. Although the comments received generally addressed the scope of questions in the ACR, discussion of the safety considerations specific to energy storage was limited and lacked sufficient detail. In order to build a more comprehensive record on safety, a forthcoming ACR will ask parties to address specific safety considerations related to energy storage. Comments are due January 6, and reply comments are not requested.

In the interest of providing parties with adequate time to respond, this email includes the questions to be posed in the forthcoming ACR. We do not anticipate any changes, but the questions in the formal ACR may differ slightly from the questions below. Attached for reference is a summary of the existing protections under Rule 21, provided by Energy Division staff, and a summary of current safety requirements in place for customer sited energy storage systems provided by the California Energy Storage Alliance (CESA) in response to an informal data request.

Conceptually, the questions fall into two categories:

- 1) Safety and reliability impacts on the utility distribution system,
- 2) Safety impacts on customer premises.

The first category pertains to the interaction of the storage device with the electric grid, both during times when the local distribution grid is operating normally and when the grid is experiencing an outage. Although all of the utilities noted in their

comments that an accurate assessment of the potential impacts of energy storage on the electrical grid depends upon a greater understanding of the technical capabilities of the energy storage device itself, these issues appear well within the scope and process of the Commission's Rule 21 proceeding.

Safety concerns on the customer premises pertain to the interaction of the storage device within the home/business environment and include issues such as adequate fire and grounding protections, proper installation, and clear labeling and accessible manual disconnects for emergency responders. While many of these concerns are addressed through the certification standards required under Rule 21, most installations also fall under the jurisdiction of a local governmental authority overseeing home/building construction codes.

Safety and Reliability Impacts to the Utility Distribution System

- 1) Are there any safety or reliability concerns associated with the interaction of customer-side energy storage with the utility grid that are *not* currently being addressed through Rule 21?
- 2) If certified equipment is used, should any other protections be required that would prevent a customer from tampering with the equipment, potentially compromising the anti-islanding or other safety features installed on the device?

Safety Impacts on the Customer Premises

- 3) There appear to be three types of safety concerns related to the interaction of the energy storage device within the home/business environment: a) fire hazards, due to overheating or exposure to open flames, b) electric shock hazards to emergency responders, and c) containment of hazardous materials in the event of fire or other disasters. To what extent does Rule 21, and the equipment certifications required therein, address these safety concerns?
- 4) As part of the Rule 21 interconnection application process NEM applicants are required to provide evidence of the final electric inspection clearance from the governmental authority having jurisdiction over the generating facility. Does this provision typically involve every relevant regulatory and permitting authority that needs to be notified of the installation, such as local fire districts?
- 5) Are there different safety requirements currently in place for solar PV that are not required for energy storage and that could be easily modified for application to storage projects? Examples may include clear labeling and accessible manual

disconnects for emergency responders.

6) If the existing rules and procedures do not adequately address the safety impacts of energy storage, what are the appropriate roles of the CPUC, utilities, local government agencies or other state agencies to develop and implement improved safety standards? How can the CPUC help improve the coordination among the various agencies and permitting authorities involved to increase procedural efficiency?

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