

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE:**

**Reactive Power Requirements and Financial Compensation, Issue Paper**

Submitted by	Company	Date Submitted
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The California Energy Storage Alliance (CESA)<sup>1</sup> offers these comments on the Reactive Power Requirements and Financial Compensation Issue Paper.<sup>2</sup> The general ideas and approaches raised in the issue paper seem appropriate for the initiative. CESA recommends several additions and adjustments to the initiative’s scope.

First, the CAISO should clarify that the provision-payments discussed in the initiative include not only opportunity-costs of foregone energy and ancillary services sales but also “make-whole” payments for resources providing reactive power when not otherwise providing real-power, i.e. when there is no market opportunity cost per se yet when resource “fuel” is used. This functionality is likely relevant for energy storage-based market participants and potentially for other inverter-based technologies. Relatedly, considerations for the construction of Default Energy Bids (DEBs) for energy storage resources, the usefulness of a “spread-bid” for storage and/or DEB purposes, and a broader discussion of payment or market methodologies for Reactive Power should be discussed in this initiative or concurrently in other initiatives.

Second, the CAISO should expand its considerations of where to measure reactive power from asynchronous resources. This expanded consideration should include the option to measure reactive power at the point of interconnection, but additional options may be needed. The options for measuring at the generator’s terminal and also at the inverter terminal (as is allowed in PJM) need further consideration and potentially should be allowed. The process for selecting or using one methodology or another also needs clarification. Assignments for the need for resources to resolve “hunting” issues can also be clarified. CESA understands that there is a need to eliminate hunting but requests further discussion regarding where this issue is identified and who traditionally bears the costs for resolving it. CESA appreciates that the CAISO seeks to provide a metering methodology, like the POI metering, that offers an option for resources to avoid the excessive cost burden of installing reactive power meters on many small generating

<sup>1</sup> 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>)

<sup>2</sup> “[Reactive Power Requirements and Financial Compensation Issue Paper](#)”, CAISO, May 12, 2015

sources. With distance and other factors influencing how much reactive power would be needed to satisfy the requirements at the POI, however, CESA recommends further consideration of alternative arrangements.

Third, CESA requests CAISO clarify that the new requirements do not apply to uprates. Uprates generally include resource changes that involve no physical change to the generator and, therefore, should not trigger application of a new reactive power requirement. The main point here is that modest upgrades should not subject resources to major new requirements, within reason.

Fourth, the CAISO should remove rules that inappropriately limit inverter oversizing. Within reason, oversized inverters can provide benefits to the CAISO and should be the generators' prerogative. While 10% oversizing cap is generally enough, limitations on energy delivery are addressed through the interconnection process. Inverter limitations likely relate more to contracting processes (with utilities) which should generally not involve an independent entity like the CAISO, so long as reliability criteria and other interconnection and participation requirements are met.

Finally, as mentioned in previous CESA comments<sup>3</sup>, the CAISO should elaborate on this initiative's potential effects on interconnection study costs and on linkages between reactive power requirements for asynchronous generators and cost-avoidance of future transmission upgrades.

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<sup>3</sup> [“CESA's Comments”](#), March 20, 2015, pgs. 1-2