

COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE:

Reactive Power Requirements and Financial Compensation, Straw Proposal

| Submitted by | Company | Date Submitted |
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The California Energy Storage Alliance (CESA)¹ offers these comments on the Reactive Power Requirements and Financial Compensation Straw Proposal.²

1. CESA supports the CAISO’s standards-based approach to ensuring sufficient Reactive Power capabilities at this time.

CESA recognizes the need for Reactive Power capability and, in this case, understands the CAISO’s proposed use of standards and requirements as a means to ensure sufficient reactive power capabilities on its systems. While the use of market-based solutions can generally promote or yield more efficient outcomes when compared to standards and requirements, CESA recognizes that market-based solutions may work imperfectly at this time for Reactive Power, given the highly locational nature of Reactive Power needs and solutions.

CESA recommends further study on the expected needs of reactive power so that excessive amounts are not developed. As CESA understands it, Exceptional Dispatch provision-type payments for Reactive Power are rare, potentially implying that the capability bands are overly large. Overly large standards for Reactive Power can create costs and inefficiencies which may ultimately pass through to CAISO customers. As CESA understands it, the basis for the CAISO’s asynchronous resource standard is equivalence to the performance capabilities of synchronous resources. But are these capabilities excessive? What studies could be or have been used to determine the optimal standardized performance capability? If the standard for synchronous resources is excessive, it should be reduced, and this change should inform standards for asynchronous resources.

¹ 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>)

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

2. The CAISO should not assume capability payments are embedded in long-term contracts. A ‘contract-neutral’ approach should be used.

CESA expects the CAISO to act as an independent entity within reason. In this role, the CAISO should develop rules that promote market efficiency, fairness, and other important principles. While out-of-the-market contractual issues may occasionally require consideration, the CAISO should generally avoid rules based primarily on assumptions about contracts. The CAISO should also reasonably expect that contracts may have provisions for the sharing, acceptance, or avoidance of regulatory risks, which likely factor into contract valuations. This viewpoint will liberate the CAISO to make changes primarily based on an independent assessment of best-practices, reasonableness, and market efficiency. Finally, the CAISO should not assume all resources have long-term contracts. This assumptions may hinder market participation by discouraging participation from uncontracted “merchant” resources.

Absent the CAISO’s broad uniform assumptions about contracts, the CAISO should reconsider the need for CAISO-directed capability payments for Reactive Power. While such payments may be based on an independent evaluator’s approach, CESA believes such payments could be warranted. This structure will inform contracting processes going forward, and Reactive Power capability payments may flow to current market participants based on contract terms. CESA recommends the CAISO first affirm it will reconsider issuing capability payments, and then address capability payment concepts in its next straw proposal. The CAISO may wish to build upon capability payment concepts from other RTOs, or ideas expressed in earlier Reactive Power market-design work conducted at the CAISO.

3. CESA supports the proposal to cover costs for Exceptional Dispatch provision payments.

As CESA understands it, the provisioning of Reactive Power by asynchronous resources can use a resource’s fuel or present opportunity costs. CESA agrees that compensation for these costs are appropriate in Exceptional Dispatch cases.

Further, CESA requests clarification regarding the costs of provisioning reactive power from asynchronous resources like energy storage in cases where no real power is being provided to the extent that this is not covered by exceptional dispatch cases. CESA expects resources under this possible case to receive fair cost-recovery. Relatedly, costs for energy storage ‘fuel’ and energy storage default-energy bids need clarification by the CAISO.

4. The basis for standards for dynamic capability need further details and explanation.

CESA questions CAISO’s basis for requiring a certain portion of the overall reactive capability to be dynamic. In particular, the proposed requirements for dynamic capability from asynchronous resources likely will raise costs due to the need for oversized inverters. While CESA believes that asynchronous resources should provide reactive power capability, is dynamic capability necessary? Why? CESA remains unclear on the basis for this proposed requirement other than that it may lead to reactive power capabilities in asynchronous resources that are

roughly equivalent to synchronous resources. This reason alone may be insufficient. Instead, CESA seeks feedback regarding whether static capability or ‘stepped’ static capability through the full band of required capability could equivalently address the CAISO’s system needs. Any further data or studies on these capabilities would help CESA understand this issue. CESA requests clarification on whether the effects of a stepped-functionality could address the CAISO need, and if this approach could replace the requirement for dynamic capability. CESA recommends a study-based approach be used for where dynamic reactive power capability is needed. As CESA understands, reactive power requirements are not local, even though provisioning tends to be localized. Therefore, it may be excessive to have all generators provide this capability at all locations without testing the need, especially if complying with this requirement would mean additional capital costs on generating sources. Ultimately, the CAISO should support equivalent solutions while also minimizing standards-based ‘overprocurement’ of reactive power capability.

If the full range of reactive power capability is shown to be required at certain locations based on CAISO studies, details of compliance may be warranted. Will the CAISO need dynamic reactive capability for all MW levels at any time, or only when providing market services, e.g. delivering energy under an energy award? These detailed implementation concepts need review in order to avoid unintended risks of noncompliance and to inform planning and resource development.

5. CESA supports the 1-second response time for asynchronous resource Reactive Power provisions

CESA appreciates the CAISO’s newest proposal for a one-second response time, which avoids excess costs on reactive power equipment while still providing sufficient and equivalent capability for the CAISO. To CESA this requirement is reasonable.