COMMENTS OF CALIFORNIA ENERGY STORAGE ALLIANCE ON CAISO REGULATION ENERGY MANAGEMENT DRAFT FINAL PROPOSAL

The California Energy Storage Alliance (CESA) appreciates the opportunity to comment on both the CAISO's *Regulation Energy Management Straw Proposal* published on December 15 and revised on December 17, 2010 (REM Proposal), and the related presentation slides used for the stakeholder conference call hosted by the CAISO on December 21, 2010. CESA takes this opportunity to once again reaffirm its continuing very strong support for the REM Proposal as it presently stands since it should remove significant barriers that limit the full participation of fast energy storage resources in the CAISO's wholesale markets.

The stakeholder process has substantially strengthened the REM Proposal by, for example, inclusion of a spreadsheet using actual regulation dispatch to show how the REM energy offset and energy settlement would function as predicted based on actual CAISO system data. Likewise, addition of data regarding regulation substitution for spinning reserve should help allay stakeholder concerns. Clarification that only resources requiring REM to participate in the CAISO's markets would qualify for REM, thus limiting the participation in REM to resources that require the REM functionality, is also very helpful. Clarification that "no-pay" applies when the REM resource does not respond to its AGC signal to maintain its preferred operating point is similarly useful. Finally, the CAISO's commitment to monitor REM performance, and review market rules if and when REM resources reach 40% of regulation capacity requirements provides the reassurance needed by some market participants that a rational measured approach is being taken that will pose no threat to stability of the system.

As now described in the REM Proposal, and explained at the stakeholder meeting on December 21, the CAISO's approach to regulation is entirely consistent with the method proposed in the FERC's *Notice of Proposed Rulemaking on Integrating Variable Energy Resources* (NOPR) and approved by FERC for use in other wholesale regulation markets. A traditional generator must be operating in order to provide regulation down, while a demand side resource must operate to provide regulation up. Flexibility provided by the REM Proposal's economic state of charge management enables energy storage to economically provide regulation up or down from its initial state. By using the 5-minute real-time energy market to manage the state of charge of energy storage resources, REM will enable technologies with 15-minute storage capability to continuously provide regulation service for a full hour for many successive hours. Since the bid timeline of the real-time energy market does not enable energy storage resources to manage their state of charge, REM removes this barrier by allowing energy storage to provide regulation on a comparable basis to generation.

CESA very much welcomes the CAISO's undertaking in the REM Proposal to continue to evaluate implementing a "mileage payment" compensation mechanism that will compensate resources for both the amount of capacity a resource can make available and its ramping ability to deliver the capacity. However, CESA must caution that approval of the REM Proposal is a necessary predicate to the ability of the energy storage industry to continue to participate in the ongoing stakeholder process. In order to move to a true pay for performance scenario it is vital that the REM Proposal first be approved and implemented, CESA anticipates that the CAISO's filing with the FERC will detail its work with CESA and other stakeholders to finalize the design elements of REM and resolve the technical issues surrounding the real-time available capacity of non-generator resources such as fast storage to provide regulation services. CESA therefore now looks forward to approval of REM by the CAISO's Governing Board in February 2011, as planned, and being in a position to be counted as an enthusiastic supporter when the CAISO files the progress report required by the FERC in March 2011.