CESA
CALIFORNIA ENERGY STORAGE ALLIANCE

RI PHASE 2 – DAY-OF MARKET July 6, 2011 INITIAL STRAW PROPOSAL

Submitted by	Company	Date Submitted
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The California Energy Storage Alliance (CESA) is on record, in its Comments dated May 2, 2011, as strongly supporting the positive direction and constructive tenor of the proposals set forth in the CAISO's *Discussion & Scoping Paper on Renewable Integration, Phase 2*, dated April 5, 2011(Phase 2 Paper). CESA encourages the CAISO to aggressively pursue its stated objectives for Phase 2 of its Renewable Integration: Market and Product Review that are supportive of early adoption of energy storage resources.

CESA is therefore very gratified to see the continuation of the CAISO's targeted efforts reflected in the *Renewables Integration Market Vision and Roadmap Presentation*, dated July 6, 2011, and the *Day-of Market Design Framework Presentation*, dated July 11, 2011. CESA is also hopeful that this momentum will carry forward uninterrupted in the *Catalogue of Market Design Initiatives*, dated July 8, 2011, and the *2011 Catalogue of Market Design Initiatives Process Presentation*, dated July 15, 2011. CESA fully supports the CAISO's guiding principles, market vision and design framework. CESA also fully supports the comments submitted by CESA member companies thus far in this stakeholder process. CESA's responses to the specific questions posed in the stakeholder comments template provided by the CAISO follow below.

1. Please provide any comments on the ISO's proposed schedule, timeline, or process for this stakeholder process.

Response: *CESA fully supports the CAISO's proposed, schedule, timeline and process. Naturally, CESA will greatly appreciate any acceleration in implementation of the CAISO's proposals that can be accomplished. In order to encourage faster ramping capability into the market through improvements to the regulation response of existing resources and/or entry by new, fast regulation resources the CAISO should strive to structure its regulation payments to pay for that capability and change its regulation dispatch to take advantage of fast-ramping resources as soon as possible.*

2. Are there additional goals or operational challenges that the ISO should be addressing through this stakeholder process?

Response: *Any goals the CAISO adopts and solutions to challenges it proposes should be consistent with the energy priorities and mandates set by Governor Brown and the California Legislature. The CAISO should also expressly address linkages between proposed market reforms and other critical programs and interagency coordination, including most prominently the CPUC's Long Term Procurement, Resource Adequacy, and Renewables Procurement Standard and Demand Response proceedings. Of course, the CAISO should consider how potential renewable integration market reform priorities relate to critical near-term action items described in the Catalogue of Market Design Initiatives.*

3. Please indicate whether your organization agrees with the guiding principles listed in the straw proposal. If not, please indicate why not. If you would like to have other guiding principles added, please describe those additional principles.

Response: *CESA applauds the CAISO for tits proactive and innovative proposals. The establishment of a true energy-neutral ancillary service combined with increased scheduling flexibility will lower barriers to entry for a wide spectrum of new and existing energy storage resources.*

4. Please provide your organization's views on any incremental ancillary services you believe are necessary to accommodate the intermittency of renewable resources.

Response: *Fast response ancillary services, specifically regulation-up and regulation-down, are incremental and are critical to accommodating intermittency of renewables*.

5. Does your organization believe that Residual Unit Commitment should be performed more granularly than daily (i.e. on-demand RUC)? Is on-demand RUC needed if the 15 minute unit commitment, either in RTED (Option A) or RTPD (Option B) looks forward 8-10 hours?

Response: *RUC more frequently than daily, ("on-demand") can bring on-line more supply, and incur additional fixed costs, than are needed to solve the reliability need. Where fixed costs are not included in LMP, market prices will not include the costs that will be carried for the units committed. There may be more distortions to the market from on-demand RUC than can be anticipated.*

The changes and additions proposed to the ancillary services markets in the CAISO's proposals should serve to provide additional capacity and fast-response capability in the day-of market. These market tools should first and foremost be allowed to solve within-day capacity requirements. The introduction of further RUC processes and associated costs should only need to be considered if least-cost dispatch of ancillary service solutions fails to provide the required capability. In addition, the additional flexibility envisaged available in the ancillary services market should limit the requirement to commit as many units under the existing short-term unit commitment process to manage ramp shortages.

Any new RUC commitment process should consider the requirement for decommitment of resources to manage variability in expected generation. The mechanism and potential cost-adders for a RUC decommitment would also need to be considered in the evaluation of any new RUC process intended to manage variable output.

6. Does your organization prefer a two-settlement market or a three-settlement market?

Response: At this time, *CESA prefers the current two-market settlement system as we believe like the CAISO, that the complication of adding a third settlement market would create significant issues without providing clear benefits.*

7. Please provide your organization's feedback on the concept of a 1 minute Real Time Imbalance Service (RTIS).

Response: *RTIS should be energy neutral over all time horizons as much as possible. Any RTIS-product intended to increase flexible-response capability is designed such that all capable providers of this service, including energy storage, can fully participate in this market. RTIS should only be used to manage deviations within the energy dispatch interval, and therefore should be reset every RTED. If RTIS is dispatched in one direction for a considerable time, the reserve for frequency regulation may be brief.*

a. Does your organization agree that with RTIS, regulation should be changed to a bi-directional service?

Response: *To reflect current system operations, RTIS should be considered as two separate services. As proposed, RTIS would supply any persistent energy deviations; most likely utilizing ramp limited generation.*

b. Is one minute the correct dispatch interval for RTIS?

Response: *A one-minute dispatch interval for RTIS is a workable duration that provides intra-interval corrections in the real time market that are more energy intensive than the second to second balancing service provided by regulation.*

c. How should RTIS be bid, selected, and dispatched? Should a mileage bid be used for dispatch with a market clearing mileage price determined each minute?

Response: *The price paid for performance should be market-based. Market-based pricing will encourage resources with the lowest costs to provide ramp-rate to enter the market and ensure that ratepayers receive the benefit of new, low-cost resources.*

d. Does your organization's opinion on RTIS differ depending on whether Option A or Option B is chosen?

Response: *CESA's responses to RTIS-related questions would not change depending on whether Option A or B is chosen.*

8. Please comment on your organization's preference for Option A or Option B with regard to the real time market. If neither option is feasible in your view, please provide input on how the real time market should be configured.

   a. Would 15-minute real time prices enable price responsive demand or demand response?

   Response: *The ability of demand response to participate on either a 15-minute or 5 minute market would depend upon the specific details of any demand response program in CAISO.*

   b. In Option A, with 15 minute RTED, what is your organization's opinion about a 10-minute ramp period?

   Response: *Regardless of the RTED interval, a 10-minute ramp period is acceptable.*

9. How often should renewable resources be allowed to schedule?

Response: *Resource scheduling should reflect the expected real-time operation of the resource as much as possible, taking into consideration the practical requirements of system dispatch including system processing time, the availability of other system tools to manage changes in schedule, and the ability of resources to respond to new dispatch instructions arising out of schedule changes.*

a. In Option A does every 15 minutes make sense?

Response: *If Option A were to be implemented, then allowing a resource to submit revised schedules on a 15-minute basis if/when there was a material difference in their expected real-time output should result in a more accurate, and thus more efficient, dispatch of energy and ancillary service resources. Key to an efficient redispatch however is to ensure that market mechanisms were designed such that other technologies in the market could adequately and economically respond to the schedule change.*

b. In Option B should renewable generation be able to schedule every 5 minutes, 15 minutes, or some other time interval?

Response: *Under either Option A or Option B, the benefits of increasingly tighter schedule windows should be weighed against the costs of incorporating those schedules on the system. CESA supports a system operation approach, which accommodates the real-time technological realities of resources but also incentivizes participants to manage their real-time activities in line with output expectations.*

c. Does it make sense to limit this scheduling opportunity to only renewable resources, or should it apply more generally? Who should be able to schedule more granularly than hourly?

Response: *The ability of the system to accommodate real-time schedule revisions should equally apply to all resources.*