September 5, 2014

Submitted by Rachel Gold and Susan Schneider via email to the CAISO at RSA@caiso.com

RE: Comments of the Large-scale Solar Association on "Reliability Services – Revised Straw Proposal"

The Large-scale Solar Association (LSA) hereby submits these comments on the August 11, 2014 document, "Reliability Services – Revised Straw Proposal" (Proposal). The Proposal was discussed at an August 18th stakeholder meeting. LSA's comments address the Proposal provision that would apparently exempt wind and solar resources not providing "flexible RA" capacity from the proposed Availability Incentive Mechanism (AIM) (Proposal, p.37).

LSA supports these Proposal provisions generally and appreciates the CAISO's recognition of the strong incentives contained in Power Purchase Agreements (PPAs) for high availability levels. However, LSA requests clarification on the following points, which are described in detail below.

- The Proposal provision exempting wind/solar "system RA" resources is intended to apply to all resources providing "generic" (non-flexible) RA based on the discussion in the Proposal, i.e., that the exemption would also apply to wind/solar resources providing non-flexible Local RA capacity.
- Wind/solar resources providing flexible capacity would only be subject to the applicable AIM in the relevant Must-Offer Obligation (MOO) hours for their flexibility category, i.e., those resources would also be exempt from the AIM in hours where MOOs might apply for RA but flexible-capacity MOOs do not.

In addition, the CAISO may need to review its treatment of opportunity costs in the market optimization to account for future changes in the supply market, as explained further below.

Summary of relevant Proposal provisions regarding AIM exemptions

The Proposal would exempt wind and solar resources providing "system RA" from the proposed Availability Incentive Mechanism. This exemption would be based on two factors:

- These resources are already incented to be highly available. "Wind and solar resources' output influences their QC [Qualifying Capacity]. Therefore, wind and solar resources are already incented to perform during their must-offer hours."
- Applying the proposed mechanism to these resources would be unfair to other RA Resources. "…The only way to assess wind and solar under the proposed methodology is to use the resources forecast as a baseline for comparison," and if these resource "perform up to a forecasted amount that is less than their RA amount; they could be taking away payments from resources that are in fact performing up to their RA amount."

Wind and solar resources providing flexible RA would not be exempted, "because their EFC and NQC is not inherently tied to whether the resources economically bid as opposed to self-schedule." These resources would be expected to "bid up to a specified forecast and be dispatched downward." Where these resources "have output dependent on a dynamic forecast," the CAISO would "measure flexible RA availability using economic bids at CAISO- or the scheduling coordinator- provided forecast to assess availability."

The current RA Standard Capacity Product (SCP) availability-reporting mechanism would terminate when the AIM becomes effective (August 18th meeting slide no. 39), as would the current grandfathering provision exempting resources having Power-Purchase Agreements (PPAs) executed before August 2010 from that mechanism.

LSA comments – AIM exemptions

LSA fully supports the proposed AIM exemption in the Proposal for wind and solar resources not providing flexible RA, and the termination of the current RA SCP mechanism and associated grandfathering provisions once the AIM is implemented.

LSA also understands and does not oppose the CAISO's proposed applicability of the AIM to wind/solar resources providing flexible capacity. However, as noted above, LSA requests that the CAISO clarify that the AIM would only apply in the hours when the flexible-capacity MOO is in effect.

LSA has stated many times (e.g., in the stakeholder process that established the RA-SCP mechanism) that there are significant incentives for high availability under the current structure that additional mechanisms are unnecessary. These incentives apply equally to wind/solar resources providing System or Local RA (hence, the first clarification requested above).

Aside from the NQC incentives cited in the Proposal, virtually all PPAs for wind/solar resources provide payments only for energy produced, i.e., there is no capacity payment and all PPA revenues are completely dependent on maximum equipment availability and production. Moreover, these PPAs contain multipliers that provide for higher payments (and thus even greater availability/production incentives) during hours that are designed to be highly correlated with system needs.

These PPA provisions provide much greater monetary incentives than any RA SCP or AIM for the high availability and production levels that the CAISO seeks from wind and solar resources during critical system periods. In fact, no evidence has been offered to date that resources exempt from the current RA SCP mechanism have any lower availability or production levels than those that are not exempt, and LSA does not believe that further investigation would yield such evidence.

In other words, LSA does not believe that the current mechanism has (or would have) any impact on wind and solar availability or production in high-need hours. These mechanisms only add unnecessary complexity to the PPA process, and risk to suppliers, with no corresponding benefit.

LSA agrees with the Proposal that there would be no further need for grandfathering provisions regarding the RA SCP mechanism once that mechanism expires.

LSA comments – opportunity costs in market optimization

Section 6.13 of the Proposal states as follows:

> Use-limited resources can have daily or monthly limitations. Daily limitations, MWh or other limitations, can be accounted for in the optimization and should not lead to the need for special treatment under the availability incentive mechanism. On the other hand, the ISO's market optimization cannot account for monthly limitations. To address this deficiency, the ISO will allow resources to include opportunity cost in their minimum load and start-up costs. (Resources can already include opportunity costs in default energy bids.) This functionality was initially included in the commitment cost enhancements initiative and will be completed in a separate initiative. The opportunity cost functionality will be implemented prior to or at the same time the availability incentive mechanism becomes effective.
>
> Some use-limited resources that do not have calculable opportunity costs may be exempted from the availability incentive mechanism. Any exceptions will be determined through a review of use plans. The ISO seeks stakeholder feedback on the types of use-limitations that may require an exemption from the availability incentive mechanism.

LSA recommends that the CAISO investigate this issue further before concluding that the current daily market optimization can address all forms of opportunity costs for Use-Limited Resources in the future, especially less-traditional, more complex configurations that may arise – e.g., coupling of solar generation and storage. These facilities may have different kinds of opportunity costs than existing, more traditional generators; some of these new opportunity costs may be recognized in the current daily optimization, but others may not.

LSA also supports allowing inclusion of opportunity costs in start-up and minimum-load bids, and consideration of other ways of recognizing opportunity costs outside the daily market optimization.