

**Comments of Powerex Corp. on
Resource Adequacy Enhancements Straw Proposal**

| Submitted by | Company | Date Submitted |
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Powerex appreciates the opportunity to submit comments on CAISO’s Resource Adequacy Enhancements Straw Proposal – Part 1. In the Straw Proposal, CAISO sets out proposed changes to the Resource Adequacy (“RA”) framework, including changes to the rules governing import RA and the Resource Availability Incentive Mechanism (“RAAIM”). CAISO states that it is concerned that its existing import RA rules create the potential for RA imports to represent speculative supply or be double counted for reliability. CAISO also states that it is proposing changes to enhance the RAAIM in order to increase the incentive for resources to comply with their must-offer obligations.

Powerex recognizes that, as part of its Intertie Deviations Settlement process, CAISO has recently proposed modifications to the financial incentives associated with the delivery of market awards by external suppliers to address concerns of large quantities of intertie delivery failures that occur during critical operational periods. While Powerex appreciates the progress in this area and believes the proposed modifications will be an improvement over the status quo, the CAISO continues to maintain a general market framework that allows for suppliers to offer energy to the CAISO that they do not actually have and to subsequently “shop around” to purchase supply in the event that they are dispatched by the CAISO. Powerex continues to believe that this approach is fundamentally out of step with the “firm energy” framework that characterizes bilateral trading outside of the CAISO markets – in which the seller is required to have the physical capacity to be able to deliver the contracted product.

The CAISO has further identified that the problem of speculative supply is not limited to the day-ahead and real-time markets and extends to its RA framework. Given that the RA framework is designed for the specific purpose of ensuring that California has sufficient resources to maintain reliability, Powerex believes that it is of critical importance that CAISO address the issues of speculative supply and double-counting of RA imports by adopting a framework that ensures that all import RA commitments are backed by physical capacity and can be counted upon to perform when called upon by the CAISO.

Powerex appreciates CAISO’s attention to the significant and pressing reliability and price formation issues raised by speculative supply. In keeping with CAISO’s broadly stated concerns, Powerex believes that permitting speculative supply to participate in CAISO’s energy markets and RA program forces CAISO ratepayers to bear costs associated with capacity that plays little to no role in maintaining reliability within California, depresses the prices received by other suppliers that have the physical capability and transmission necessary to support their delivery obligations, and jeopardizes reliability. Unless addressed, Powerex believes that the problem of speculative supply has the potential to impair the further development and expansion of the CAISO markets.

For these reasons, Powerex generally supports CAISO’s proposals respecting import RA contracts and resource performance. Powerex believes, however, that additional measures are necessary to accomplish the objective of preventing speculative supply in the RA context. Specifically, Powerex believes that CAISO should:

- Implement additional measures to ensure that import RA contracts are backed by physical capacity and can be counted upon to perform in accordance with their obligations;
- Clarify must-offer and bidding requirements; and
- Ensure that outages and availability are properly reflected in the quantity of RA that a resource is eligible to provide.

I. Rules Governing Import RA Contracts

A. Powerex Supports Efforts To Deter Speculative Supply And Avoid Double-Counting

In the Straw Proposal, CAISO explains that it has become increasingly concerned about the potential for “Non-Resource Specific RA import resources to be double counted for reliability.” CAISO explains that this may happen when a resource has been relied upon to meet California RA requirements while also being relied upon by other regions or balancing authority areas (“BAA”) to meet capacity or energy needs. In order to avoid the potential for double counting, CAISO explains that it is considering requiring that import RA resources specify the source BAA or, alternatively, requiring that import RA contracts be “resource-specific.” CAISO notes that avoiding double counting is increasingly important as CAISO considers extending the day-ahead market to EIM entities.

Powerex strongly supports CAISO’s proposal to require suppliers that commit to provide import RA to disclose the source BAA and e-Tag source that will be used to deliver the RA energy and capacity. This basic information regarding the characteristics of the capacity being sold should be disclosed at the time that supply plans are due for the relevant RA showing (*i.e.*, monthly or annual). Moreover, during each hour of the RA contract term, CAISO should also require sellers of RA capacity to submit an e-Tag identifying the same source BAA and generation source (unless excused by CAISO due to generally infrequent force-majeure events) that was designated in the import RA contract. These additional measures are needed to align the RA capacity actually being made available to the CAISO with the RA capacity included in the monthly and annual showings. Powerex believes that requiring the disclosure of this information will help reduce the potential for an external supplier to commit to provide import RA without securing the capacity necessary to support its obligation and waiting until it is dispatched in the day-ahead or real-time markets to attempt to procure energy on a short-term basis to meet its delivery requirements.

Powerex also agrees with CAISO that identifying the source BAA may not resolve the risk that the CAISO grid continues to be indirectly exposed to speculative supply through the double-counting of import RA capacity by both the CAISO and the source BAA. For example, CAISO’s proposals would not prevent a supplier from supporting an import RA contract with physical capacity located in an external BAA, but where the external BAA is itself relying on offsetting short-term energy purchases to meet its firm load obligations. If supplies are not available in the short-term markets, then exports from that BAA (including delivery of RA capacity sold to LSEs in the CAISO BAA) may be curtailed. This scenario would continue to make reliability of the CAISO grid dependent on the availability of supply in the short-term markets, and should be addressed.

Powerex therefore believes that CAISO should consider two additional enhancements to protect against the potential for suppliers to engage in such conduct.

First, the CAISO should consider revising its tariff to make clear that entities selling RA must have a reasonable expectation when they enter into the commitment that the capacity at issue is surplus to the needs of the source BAA throughout the term of the RA capacity contract. To satisfy this requirement, capacity should not be considered to be “surplus” if the supplier will need to make short-term purchases of energy to either support its delivery obligation to the CAISO or, alternatively, to serve its own load. A Tariff requirement that makes it clear that entities must have a reasonable expectation that any contracted RA capacity is surplus to the needs of the source BAA (or any other obligation) would enable CAISO to request information from the supplier, after the fact, to demonstrate compliance if the RA capacity sold by the supplier failed to perform as required.

Second, CAISO should require an entity selling RA to share data with CAISO to verify that the source BAA maintains unloaded capacity consistent with the RA capacity sale.¹ This would allow CAISO to verify that capacity that has been sold as RA capacity and committed to serve California remains available throughout each delivery hour, and is not used to support other sales transactions and is not necessary to serve load within the source BA. The unloaded capacity must also be in excess of any purchases and exports from the CAISO BAA under the inertia bidding framework. That is, RA capacity sold to California LSEs for the purposes of serving California load cannot be “demonstrated” by headroom that results from energy exports from the CAISO BAA. The CAISO already has this type of visibility in the case of EIM participants and associated BAAs; similar visibility could be established for non-EIM entities seeking to sell RA capacity to California LSEs.

Powerex appreciates that no single measure will fully address all potential concerns regarding RA capacity provided by resources located outside the CAISO BAA. For example, data showing unloaded capacity cannot identify capacity that is unloaded only as a result of short-term energy purchases; while an expectation that a resource is surplus to the needs of a source BAA does not ensure that operations will actually make that capacity available through real-time. As a result, a suite of measures, including CAISO’s proposal augmented by the measures described above, are necessary to better ensure that import RA contracts are supported by physical capacity and can be relied upon by the CAISO. A well-crafted set of measures is necessary to ensure not only that sellers of RA capacity have access to physical resources needed to perform on their obligations, and have secured such at the time of the RA sale, but also that sellers maintain the availability of this capacity and do not commit it for other purposes, and that this capacity is genuinely in addition to capacity of the CAISO BAA.

Powerex recognizes that the CAISO’s proposed enhancements, together with the additional measures proposed above, are substantially more robust than the measures under the existing RA program. While this is a major improvement relative to today, these measures are still considerably less stringent than the requirements imposed by several other markets. For instance, some organized markets limit the participation of external resource participation in RA programs to resources that have implemented a pseudo-tie arrangement. Powerex is very supportive of CAISO’s efforts to enable California LSEs to access physical capacity located outside of the CAISO BAA to meet their RA requirements, but care must be taken to avoid creating gaps that will continue to allow entities to sell RA that is not supported by physical resources, to effectively sell the same capacity multiple times, or to appear to sell capacity that is supported only by simultaneous exports from the CAISO BAA itself.

¹ The capacity would be “unloaded” only if the offer was not dispatched by the CAISO. Naturally, any RA capacity that is offered into the CAISO markets and dispatched for energy would not be expected to remain “unloaded” in the source BAA.

Powerex supports the CAISO taking prompt action to implement robust measures to strengthen the RA program, and thus reduce the potential for existing gaps in that program to undermine reliability or lead to a more serious event. The fact that no such consequences have been experienced to date should not be misconstrued as evidence of the strength of the existing RA program. Rather, it appears more likely to be due to the general availability of surplus supplies in the WECC in the recent past. As grid conditions in other regions of the WECC tighten, however, it will become increasingly important to ensure that the RA program is robust and achieves its objective of ensuring that the CAISO has access to sufficient physical resources to safely and reliably operate its grid.

B. Powerex Believes That Further Discussion Of The Must-Offer Obligation Is Required

In the Straw Proposal, CAISO states that currently the real-time must offer obligation of an import RA resource is limited to the quantity of MWs awarded in the day-ahead market. CAISO explains that it is proposing to require import RA resources to submit offers into the real-time market equal to the full quantity of their RA commitment. CAISO states that the intention of its proposal is to deter speculative suppliers from providing RA and to ensure comparable treatment for import RA and internal RA resources.

As noted above, Powerex supports taking steps to ensure that import RA contracts are supported by physical capacity that is available and capable of performing when called upon by CAISO in real-time. Ultimately, the goal of the RA program is to ensure that CAISO has sufficient capacity and flexibility to reliably meet real-time demand under a full range of operational conditions. As a result, it is critical that the RA program be structured in a manner that ensures not only resource adequacy in the day-ahead market, but ensures that there are sufficient resources available to the CAISO to reliably operate its system in real-time.

For that reason, Powerex generally supports the proposal to extend the must-offer obligation of import RA capacity to both the day-ahead and real-time markets. Extending the must-offer obligation to the real-time market would eliminate the potential for speculative suppliers to commit to supplying import RA knowing that they can minimize the potential that they will actually be required to deliver energy by submitting offers into the day-ahead market at a price that ensures that they are not committed. It also would ensure that all resources that are committed to provide RA make themselves available for scheduling and dispatch by CAISO in the real-time market.

At the same time, Powerex believes that, as CAISO considers substantial modifications to the design of its Day-Ahead Market, including the procurement of capacity that would have a real-time must-offer obligation, it may be appropriate and efficient to enable the day-ahead solution to release RA resources from the real-time must-offer obligation where production costs can be reduced by allocating that obligation to a different resource. In the event that real-time needs can be met more efficiently using non-RA resources that agree to provide flexibility and offer their capacity into the real-time market, then it would be appropriate for CAISO to release less efficient RA resources from their real-time must obligation.

C. CAISO's Discussion Of Day-Ahead Bidding Granularity Requires Clarification

In the Straw Proposal, CAISO states that it is exploring the potential for modifications to the current provisions allowing for hourly block scheduling by RA imports. More specifically, CAISO states that it believes that modifying the bidding and scheduling rules to require all import RA

resources to provide 15-minute bidding granularity would ensure comparable treatment of internal and external resources. CAISO further explains that this change would only allow for non-RA import energy to be bid and scheduled in hourly blocks.

Powerex believes that CAISO's proposal requires additional clarification. Currently, bidding is hourly, even for internal units that can have those bids dispatched in 5-minute intervals. If CAISO is proposing to require import RA resources to submit bids with 15-minute granularity—which does not currently exist for any class of resource—then Powerex believes that a broader discussion about the bidding granularity of all resources is warranted before proceeding with any such changes as part of this initiative.

Powerex also believes that it would be inappropriate to impose a 15-minute bidding requirement on resources supplying System RA and Local RA. While requiring 15-minute bidding granularity may be appropriate in the case of resources that supply Flex RA, Flex RA is a premium product; conversely, there is nothing about System RA or Local RA needs that would require a resource to be 15-minute dispatchable. Powerex believes that requiring 15-minute bidding granularity for resources supplying System RA and Local RA would needlessly restrict the category of resources able to supply these products.

Powerex therefore requests that CAISO clarify that it is not proposing to require import RA resources to meet their real-time offer requirements only through the submission of economic bids that can be dispatched on a 15-minute basis. That is, import RA resources will continue to be able to satisfy any real-time offer requirement through hourly self-schedules, block hourly economic offers, as well as 15-minute economic offers.

II. Powerex Encourages CAISO To Move Forward With Efforts To Ensure Availability And Performance Is Reflected In The Quantity Of Capacity A Resource Provides

In the Straw Proposal, CAISO proposes to modify the rules governing the application of the RAAIM to planned and forced outages. With respect to planned outages, CAISO states that it is considering giving resources the option of having the CAISO procure capacity on the resource's behalf for any days on which it is on planned outage using the standing Competitive Solicitation Process bids or cancelling the outage. Alternatively, CAISO states that it is considering prohibiting resources taking planned outages during a month from providing RA capacity during that month. With respect to forced outages, CAISO is proposing to both eliminate the exemptions from the assessment of the RAAIM and to modify the RAAIM to include event-based triggers for an assessment of resource availability and performance.

Powerex supports CAISO's decision to evaluate its existing availability and outage rules to determine whether these rules provide the appropriate incentives for resources to be available and perform when needed by the CAISO. Powerex agrees with CAISO that the RAAIM mechanism can play a role in helping to ensure that resources that commit to provide RA comply with their must-offer obligation and respond when called upon by the CAISO.

Powerex emphasizes, however, that financial incentives alone are not sufficient to ensure that adequate resources are committed in advance to protect the reliable operation of the grid. Even with the prospect of severe financial penalties, a seller that has committed to provide RA will not be able to obtain substitute supply if there is no supply available in the short-term markets. As a result, in order to achieve the objective of ensuring that sufficient capacity is committed on a forward basis to reliably serve load, it is critical that RA procurement rules explicitly take into account resource outages and unavailability when determining the quantity of RA capacity that a

resource can provide. Accordingly, Powerex urges CAISO to move forward with efforts to the modify the calculation of the quantity of RA that a supplier can provide, in a manner that takes into account the potential for supplier outages, as part of Part 2 of this proceeding.

Likewise, improving the RAAIM is no substitute for measures that help ensure that RA contracts are supported by physical capacity at the time of the relevant RA showing. In other words, even with the proposed improvements to the RAAIM, there is an independent need to take affirmative steps—including those detailed in the CAISO's Straw Proposal as well as the additional measures outlined above--to prevent the speculative supply of RA.