

**Comments of Powerex Corp. on
Draft 2017 Stakeholder Initiatives Catalog**

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Powerex appreciates the opportunity to provide preliminary comments on CAISO's September 15, 2016 draft 2017 Stakeholder Initiatives Catalog ("Stakeholder Catalog"). The comments are organized by the associated section(s) of the Stakeholder Catalog.

10 Energy Imbalance Market

The Stakeholder Catalog identifies seven initiatives related to enhancing and extending the Energy Imbalance Market ("EIM").

10.1 Enhancing Participation of External Resources

The EIM has been operating for nearly two years. Over that time, it has become clear that the EIM is becoming the principal intra-hour energy market across the west. The EIM's ability to continue to deliver the benefits of improved, coordinated dispatch and to continue to enable renewable integration in the region depends critically on its ability to continue to attract the participation of generating resources.

To date, resource participation in the EIM has been open only to those resources that happen to be located in the footprint of a balancing authority ("BA") that elects to become an EIM Entity (or resources that effectively join that BA's area through a pseudo-tie arrangement). While this approach is understandable for the initial implementation of a new market design, enabling participation by external resources is necessary to achieve the full potential (and original design) of the EIM. The benefits of the EIM will be expanded for all participants by enhancing the design to permit participation by resources located outside of EIM Entity BAAs.

Powerex strongly supports a CAISO stakeholder process to develop a framework for EIM participation by resources external to the EIM Area. A significant number of resources in the west are located in BAAs that have no need or intention to participate as full EIM Entities. Indeed, some BAAs in the west may face legal or regulatory barriers to this form of EIM participation. Under the existing EIM design, the EIM will be unable to benefit from access to resources in such BAAs, many of which are precisely the clean, flexible resources that can best serve intra-hour needs and assist in the integration of renewable resources.

Powerex notes that enabling EIM participation by external resources should be viewed as a complement—and not an alternative—to the existing EIM Entity framework. For many BAAs, participation as an EIM Entity offers a full range of valuable services including congestion management, diversification of variations in load and variable energy resource output, optimized dispatch, and more granular and efficient pricing of energy imbalance services under their transmission tariffs. These are inherently BAA-level benefits of the EIM, which will be received only by a BA that participates as a full EIM Entity. Powerex anticipates there will continue to be additional BAs that seek the benefits of EIM participation well beyond the ability to simply buy or sell energy on an intra-hour basis, and hence the EIM area will continue to expand through the addition of more EIM Entities. In Powerex’s view, the two frameworks for EIM participation are not in conflict, but instead will ensure that the EIM is able to expand to the greatest degree possible in the region.

Powerex recognizes the need to ensure that external resource participation in the EIM is not enabled in a way that harms EIM Entities or that leads to “free riding” by some participants on the investments made by other participants. At the same time, external resource participants should not be singled out and subjected to requirements or charges simply by virtue of being located external to an EIM Entity. Charges or other participation requirements—whether for EIM Entities or for external participants—need to be applied fairly, and consistent with cost causation principles. Powerex is optimistic that careful consideration of these issues in the stakeholder process can facilitate growth of the EIM and its benefits in a manner that is equitable to all participants.

10.2, 10.3, 10.4 and 10.5 EIM Transmission-Related Initiatives

Powerex fully supports addressing each of the issues identified under these initiatives. Powerex notes that there is a strong interdependence between issues such as the transmission requirements for EIM participation, compensation for transmission made available by EIM Entities to support EIM transfers between other EIM Entities, and developing a framework under which transmission service across third-party transmission systems can be made available to support EIM transfers and compensated appropriately.

Powerex believes there is a common issue across all of these initiatives, and that is the need for appropriate compensation whenever transmission service made available by one party is used to support the EIM transactions of other parties. For example, all EIM Entities currently make transmission service across their respective BAAs available for use in the EIM. Conceptually, at least, all EIM Entities *provide* this service to other EIM Entities and are also eligible to benefit from similar reciprocal access on the transmission systems of other EIM Entities. In practice, however, the location of each EIM Entity within the broader EIM footprint will determine whether it is providing more or less transmission access than it is receiving from others. An EIM Entity located at the “end” of the footprint, for instance, will not be used at all to provide wheel-through service for EIM transfers across its system. Instead, all EIM use of that EIM Entity’s transmission system will be solely to support EIM transactions of loads or resources within that EIM Entity’s BAA. Conversely, a more centrally located EIM Entity may see

its transmission system used extensively to support EIM Transfers between the EIM Entities adjacent to it, without deriving any direct economic benefit from such use.

A similar range of outcomes is possible for third-party transmission service made available by external resource participants. In some cases, the third-party transmission service may be useful only to deliver the output of the specific external resource. In other circumstances, the external participant may make available third-party transmission service that is highly useful to enable additional EIM Transfers between EIM Entities.

Powerex supports a stakeholder process dedicated to a comprehensive assessment of how transmission is made available for EIM use, appropriate compensation for the entities that makes the transmission available, and appropriate charges to the participants that utilize the transmission service made available by others.

10.7 Changes to EIM Greenhouse Gas Design to Address Secondary Dispatch Leakage

The California Air Resources Board (“CARB”) has expressed concerns and proposed changes to the manner in which greenhouse gas (“GHG”) emissions of out-of-state resources that participate in the EIM are identified and reported. Powerex believes the current EIM algorithm is not appropriately considering the GHG costs of out-of-state resources in the dispatch decisions, and is not accurately identifying the GHG emissions associated with EIM Transfers that serve load in California. Powerex supports CARB, CAISO and stakeholders to jointly work to assess the problem and develop solutions that can be implemented in a timely manner. Powerex notes that any steps proposed by CAISO must be consistent with regulatory changes made by CARB. Close coordination between CARB, CAISO and stakeholders will therefore be necessary.

11 Market Products

11.6 Flexible Ramping Product Enhancements

Powerex believes the Flexible Ramping Product is a major improvement in the design of CAISO’s real-time market to allow it to procure sufficient upward and downward flexibility to meet both expected and uncertain changes in net load. Powerex believes additional improvements would be beneficial. However, given the number and complexity of other high-priority matters in the Stakeholder Catalog, Powerex believes it may be advisable to monitor the performance of the initial implementation of the Flexible Ramping Product for a period of at least six months before considering the need or benefit of additional enhancements.

12 Congestion Revenue Rights

12.9 CRR Revenue Inadequacy

Powerex agrees that CRR revenue inadequacy is an important and problematic issue that needs to be addressed. Powerex also generally concurs with the Department of Market Monitoring on its 2014 assessment of the root causes of CRR revenue inadequacy. An extensive stakeholder process is needed to identify the merits and risks of specific proposals to address CRR revenue inadequacy. Such a stakeholder process should be timed so that implementation of any changes is aligned with the annual CRR allocation and auction process. A commitment by CAISO to not impose changes part way through the annual CRR term would avoid introducing unnecessary risk to acquiring CRRs in the near term.

12.1 CRR Market versus Auction

Powerex agrees with DMM's observations that the current CRR auction may not be producing beneficial or efficient outcomes for all CRRs that are sold. However, DMM's proposal to effectively end the CRR auction is only one potential way to address this issue. Powerex believes it would be premature to commence a stakeholder process around this specific proposed solution without first evaluating with stakeholders the underlying causes of the problem, considering other possible solutions, and fully evaluating the pros and cons of the potential approaches.

14 Resource Adequacy

14.1 Energy Products Delivered on Interties

Powerex notes that CAISO is already considering the eligibility and performance requirements of certain types of intertie products in the ongoing Flexible Resource Adequacy and Must Offer Obligation – Phase 2 stakeholder process. Powerex believes the priority should be to complete that effort before considering additional refinements related to intertie energy products.

14.2-14.4 Initiatives Related to the Maximum Import Capability Mechanism

Powerex believes that the Maximum Import Capability (MIC) mechanism poses a barrier to efficient procurement of Resource Adequacy capacity from external resources. The MIC mechanism prospectively limits the quantity of RA that each California LSE may procure over each CAISO intertie, even if the total limit for an intertie is not actually reached. In other words, it rations capacity even when it is not scarce. This has led to persistent, inefficiently low levels of procurement of RA capacity from external resources. Powerex strongly supports that CAISO and stakeholders conduct a comprehensive review of the MIC mechanism.