



Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market & Infrastructure Development

Date: December 6, 2017

Re: **Decision on consolidated energy imbalance market initiatives**

This memorandum requires Board action.

EXECUTIVE SUMMARY

Management proposes to modify the market rules for the ISO's core non-generator resource model. The non-generator resource model was recently approved by the ISO Board of Governors as part of the *energy storage and distributed energy resource* policy initiative. In reviewing potential uses of the model, Management identified certain aspects that would benefit from additional clarification and inclusion in the tariff. The EIM Governing Body has an advisory role on the non-generator resource market rule modifications and will be providing verbal comment on these proposed changes to the ISO Board at the general session meeting.

Several EIM system functionality enhancements, which were included in the consolidated EIM initiatives, were approved by the EIM Governing Body on November 29, 2017 and are on the Board's consent agenda. The EIM system functionality enhancements automate manual processes, facilitate bilateral financial settlement, and expand the market's modeling capabilities. The enhancements are consistent with the existing EIM design.

Management proposes the following motion:

Moved, that the ISO Board of Governors approves the proposal to clarify market rules for the non-generator resource model as described in this memorandum dated December 6; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the non-generator resource model described in this memorandum, including any filings that implement the overarching initiative policy but contain discrete revisions to incorporate Federal Energy Regulatory Commission guidance in any initial ruling on the proposed tariff amendment.

DISCUSSION AND PROPOSAL

Management proposes modifications to the market rules for the “core” non-generator resource market model. The EIM Governing Body supports these modifications under their advisory role.

The ISO developed the non-generator resource model to accurately reflect the operational characteristics of storage devices in the market. These resources are able to seamlessly move from injecting energy to withdrawing energy from the grid. However, their ability to do so is limited by the storage device’s state of charge. Consequently, the ISO enforced a constraint to respect the storage device’s state of charge to ensure the resource receives a feasible dispatch.

As part of the ISO’s *energy storage and distributed energy resources* policy initiative, Management determined there are devices or aggregations of distributed resources that do not need the state of charge to be enforced. Consequently, the initiative developed a non-generator resource model that does not have a state of charge constraint. This is referred to as the “core” non-generator resource model.

During the implementation of the “core” non-generator resource model, the ISO realized the “core” model could be used more broadly in the ISO market for applications other than modeling distributed energy resources. For example, it can be used to support Powerex’s participation in the EIM which will use the non-generator model to model its aggregated resources in the EIM. In addition, the core non-generator model will facilitate the provision of regulation down from neighboring balancing authority areas without the need for an energy schedule.

In reviewing these other potential applications of the non-generator resource model, Management identified certain market rules that are needed for its broad use. Management proposes the following market rules for using the core non-generator resource model:

1. The non-generator resource must be capable of generating energy. Consequently, for negative generation, the resource will not be subject to ISO settlement charges applicable to demand other than any appropriate energy settlement. The non-generator resource will not be charged these settlement charges applicable to demand, which are generally uplift charges, because the negative generation is reducing generation relative to a baseline and is not actual load.
2. Whether the non-generator resource’s energy bids are subject to local market power mitigation will be based on the underlying resource’s technology. The local market power mitigation rules in the tariff for that technology will apply to the generic non-generator resource. For example, if the underlying resource is a conventional generator, then it will be subject to mitigation. If the underlying resource is a storage device, then it will not be subject to market power mitigation because storage devices are currently exempt from market power mitigation.

3. Non-generator resources using the core model will not be eligible to count for resource adequacy capacity at this time due to current system configuration limitations. Changes needed to address resource adequacy may be addressed through a future policy initiative.

Stakeholders support these modifications because they leverage existing resource modeling and provide additional clarity on use of the core non-generator resource model. For additional information on stakeholder comments, reference Appendix A: stakeholder comment matrix.

PROPOSAL ELEMENTS APPROVED BY EIM GOVERNING BODY

Several EIM system functionality enhancements that were included in the consolidated EIM initiatives effort fall under the EIM Governing Body's primary authority. At its November 29, 2017 meeting, the EIM Governing Body approved these enhancements for inclusion on the Board's December 14 consent agenda. A copy of the November 22, 2017 memo and stakeholder matrix provided to the EIM Governing Body are included for the Board's reference as part of the consent agenda item.

The EIM system functionality enhancements, which are described in the EIM Governing Body memo, will automate existing manual processes, facilitate bilateral settlements, and improve modeling accuracy. The enhancements are consistent with the existing EIM design principles.

SCOPE CHANGES

Management removed three items from the scope of the consolidated EIM initiatives because stakeholders did not support addressing these items at this time. These items are as follows: (1) third party contribution of transmission to the EIM, (2) a mechanism to manage bilateral schedule changes, and (3) equitable sharing of wheeling benefits. A detailed description of each of these items and details on why they were ultimately not supported by stakeholders at this time can be found in the November 22, 2017 EIM Governing Body Memo included for the Board's reference as part of the consent agenda item.

CONCLUSION

Management requests the ISO Board of Governors approve the described generic non-generator resource market rule modifications. These changes will allow the model to be efficiently and broadly used by EIM entities and neighboring balancing areas. The model leverages existing resource modeling and the proposed market rules provide necessary clarity on use of the core non-generator resource model.