External Resource Participation Concepts

FOR DISCUSSION 11/29/16



Purpose

- Outline concepts for external resource participation related to administrative and operational impacts to EIM Entities
- Intended to help clarify why external resources and EIM entities may view the administrative and operational impacts differently
- Concepts are provided for discussion and would need further development if pursued for implementation
- Not intended to be a full discussion of all aspects of external resource participation

Assumptions <u>not</u> explored in this presentation

The following are assumed elements of an external resource's participation in the EIM:

- Demonstration of no leaning on EIM for capacity needs
- Application of measures to address market power mitigation
- Resource specific participation with ability to aggregate where flow impact is similar
- Ability to donate transmission to the EIM
- Requirement to have transmission to the EIM should be worked out with 3rd party transmission provider
- Pay appropriate administrative costs
- Fair transmission compensation

Assumptions explored in this presentation

External resource bids and schedules could be treated similar to EIM Participating Resource bids and schedules and minimize administrative or operational impact to the EIM Entity.

- External resources submit bids directly to the CAISO and are not part of EIM Entity Resource Sufficiency or prior to the hour operations
- External resource schedules are rolled up through a gen/load aggregation point or "hub" created for each non-EIM Entity BA, providing a single net schedule to the EIM Entity
- Through agreement with the participating external resource, the Host BA assures delivery of energy to the sink EIM Entity BA, consistent with ISO terms, if external resource does not perform

Prior to the Hour/Bidding

CAISO

EIM Entity

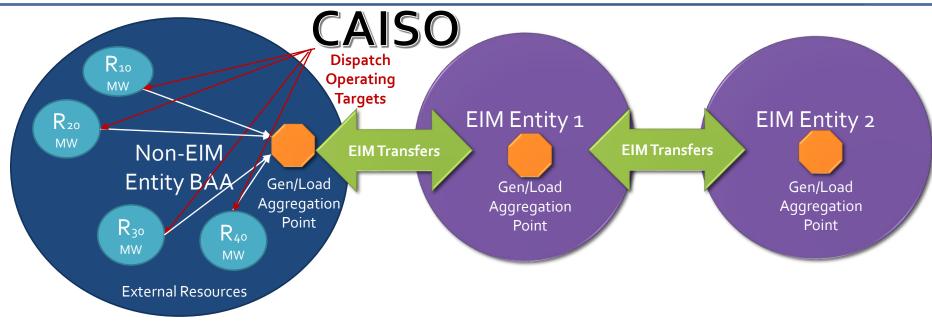
- <u>t-75 min</u>: base schedules, EIM
 Participating Resource bids and 1st RS
 test
- <u>t-55 min</u>: updated base schedules and 2nd RS test
- <u>t-40 min</u>: financially binding base schedules
- <u>t-22.5 min</u>: FMM results & tags adjusted
- <u>t-5 min</u>: RTD results

External Resource in Non-EIM Entity BA

• <u>t-75 min</u>: bid submitted to CAISO and demonstration of no leaning

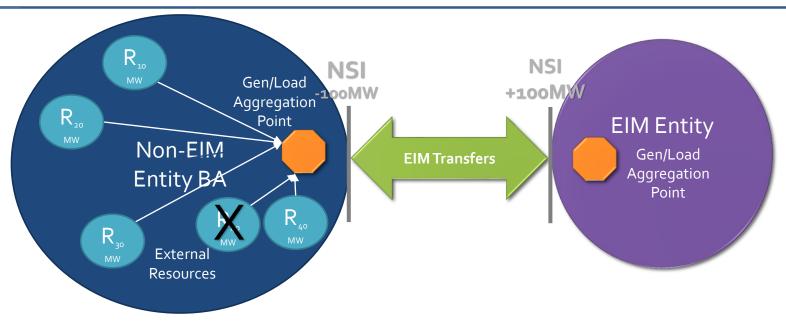
- <u>t-22.5 min</u>: FMM results & tags adjusted
- <u>t-5 min</u>: RTD results
- External resource bid is <u>not</u> included in any EIM BAA Resource Sufficiency evaluation or base schedule set up
- External resource bid is submitted directly to CAISO and included in the SCED optimization

Within Hour Operations – Dispatch and Schedules



- Each external resource will receive a dispatch operating target from the CAISO, similar to an EIM Participating Resource
- Non-EIM source BAs could explore the creation of a "hub" that receives all of the EIM participating external resource schedules and sends a net schedule to the EIM Entity, similar to how an EIM Entity schedules its EIM transfers.
- The scheduling hub does not represent the physical location of the resources but rather facilitates the accounting of energy and transmission to allow for minimal impact to each EIM Entity.
- This would relieve the burden of receiving multiple e-tags from multiple external resources.

Within Hour Operations – Non-Performance



- External Resources will be required to demonstrate they are not leaning on the EIM for capacity.
- If an external resource does not perform, the host BA is responsible for ensuring the energy is delivered to the sink EIM Entity BA.
- The process for contingency and curtailment events would be the same as it is for bi-lateral transactions and transfers received from other EIM Entities.

CONTACT INFORMATION

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