

WESTERN ENERGY IMBALANCE MARKET

Decision on Market Enhancements for Summer 2021 Readiness

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Management proposes enhancements to prepare for this upcoming summer in light of the performance of the ISO markets during last summer's heat events

1. Enhance the EIM's resource sufficiency evaluation to better ensure each BAA participates in the EIM with sufficient resources
2. Enhance energy interchange modeling with the ISO BAA to improve operational performance
3. Enhance market pricing during tight supply conditions by pricing reserve energy at the energy bid cap when arming ISO BAA load to meet contingency reserve requirements


EIM Governing Body governance role

- Primary approval authority:
 - Enhancements to resource sufficiency evaluation
 - Enhancements to energy interchange modeling
- Advisory role:
 - Enhancement to energy pricing when the ISO is arming load and releasing contingency reserves



Resource sufficiency evaluation is intended to ensure each BAA in the EIM participates with sufficient resources to reliably serve its load to minimize “leaning”

- Resource sufficiency evaluation includes two tests that address leaning:
 - Capacity test: ensures submitted schedules and energy bids meet load forecast
 - Flexible ramp sufficiency test: ensures submitted energy bids provide sufficient ramping capability to ramp from one market interval’s to the next interval’s load forecast plus an amount to account for net load uncertainty
- Failure of either test results in capping the BAA’s transfers at the amount scheduled in the previous market interval



Proposed resource sufficiency enhancement and other fixes result from review of resource sufficiency evaluation's performance during the August heat events

- Concerns raised with ISO passing capacity test when it appeared to be short capacity
 - May mean resource sufficiency evaluation was not fully capturing resource needs and resource availability
- Review also identified software errors that contributed to ISO erroneously passing resource sufficiency evaluation
 - Partial resource outages not accounted for
 - Energy transfers double-counted

Management proposes to enhance resource sufficiency evaluation's capacity test to account for net load uncertainty in addition to forecast load

- Net load can be significantly different than forecast, particularly with large amounts of renewable resources
- Flexible ramping sufficiency test evaluates ramping capability between intervals, including that need for net load uncertainty, but not overall capacity
- Enhancement better ensures each BAA provides sufficient energy bids and the associated resource capacity to meet its net load, including net load uncertainty
- Similar net load uncertainty requirement as flexible ramping product procurement

Adding net load uncertainty to capacity test ensures each BAA offers sufficient resource capacity to account for net load uncertainty

- Capacity Test:

Energy bids + schedules \geq forecast demand + **net load uncertainty** + net interchange

- Flexible Ramp Sufficiency Test:

Bid and scheduled ramping capability \geq forecast change in demand + **net load uncertainty** + net interchange

Management proposes an enhancement to require “automatic mirroring” of ISO intertie schedule changes

- Market models energy interchange between ISO’s intertie scheduling points and an EIM BAA through a “system resource” within the EIM BAA that is linked to the intertie scheduling point
- Under existing rules, it is optional for an EIM BAA to elect to automatically update a system resource’s schedule to correspond to intertie awards
- Management proposes to require this functionality to ensure balanced resource and interchange schedules
 - Avoids operational issues such as occurred last summer when a system resource schedule was inadvertently not updated

Management proposes an enhancement to improve market pricing when system conditions are very tight and the ISO is arming load to meet its contingency reserve requirements

- “Arming load” is when system operators configure the system to be able to immediately perform controlled load shedding
 - Armed load can count for contingency reserves in this event
 - Makes supply resources providing contingency reserves available to serve load
- Current market rules can result in lower market prices when contingency reserves released to serve load
- Propose to price energy at energy bid cap from resources released from contingency reserves to serve load
 - Provides appropriate price signals during tight supply conditions to improve incentives

Stakeholder's generally support or do not oppose adding net load uncertainty to the capacity test. PG&E and CPUC staff oppose it.

- EIM participants, BOSR, and DMM believe proposed change and fixing software errors are incremental improvements but urge ISO to develop more extensive modifications, including modifying consequences of resource sufficiency evaluation failure
 - ISO planning initiative to examine more comprehensive changes
- PG&E and CPUC believe adding uncertainty to capacity test may have unintended consequences and harm reliability
- Market surveillance committee believes change should be carefully tested and ISO should retain ability to reverse it
 - ISO planning additional analysis and ability to reverse



Stakeholders largely support other changes

- Widespread support for mandatory “auto-mirroring” as it will improve operational coordination
- Most stakeholders support pricing energy at bid cap from contingency reserves released when arming load
 - CPUC and PG&E believe changes needs to be more comprehensively examined
 - SCE continues to advocate to couple scarcity pricing changes without implementing system market power mitigation
 - Management believes change provides valuable market incentives

Management requests the EIM Governing Body approve the proposed resource sufficiency evaluation and mandatory auto-mirroring changes and support its real-time scarcity price change

- Enhances the EIM's resource sufficiency evaluation to better ensure each BAA can meet its net load including net load uncertainty
- Enhances energy interchange modeling to improve operational performance
- Enhances market pricing during tight supply conditions