



CALIFORNIA LARGE
ENERGY CONSUMERS
ASSOCIATION

RDRR economic dispatch -
minimum on time and
fixed cost

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Agenda

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RDRR Background

- Reliability Demand Response Resource (RDRR) consists primarily of utility programs such as Base Interruptible Program (BIP) and Capacity Bidding Program (CBP)
- RDRR has historically been dispatched during emergency conditions and has been highly reliable
- RDRR was dispatched repeatedly during the 2020 and 2022 grid events and was helpful in preventing rolling outages
- RDRR is typically dispatched for several hours across the entire duration of a grid stress event
- The majority of MWs participating in these programs are large Commercial and Industrial (C&I) customers:
 - Primarily interested in producing their “widget” but enroll in demand response programs to offset high energy costs and help the grid prevent rolling outages
 - Often have high opportunity costs for each curtailment event due to lost production, lost wages, unproductive energy, maintenance costs, and restart costs
 - Run large complicated operations that often require several hours or more to restart, regardless of the duration of a curtailment event
- Enrollment in RDRR programs has declined in the last several years resulting in reduced RDRR capacity, partially due to high frequency of dispatch in recent years, and concern about increased frequency and uncertainty about future dispatches
- Improving the accuracy of RDRR physical operating characteristics would help in **CAISO resource optimization accuracy** and **mitigate program attrition to retain RDRR**

Dispatch Background

- RDRR has historically been dispatched primarily by forced or exceptional dispatch at the discretion of CAISO operators under specified operating conditions
- RDRR may also be enabled for economic dispatch at the discretion of CAISO operators, and then potentially dispatched economically based on bid price and operational characteristics
- The Minimum On Time (MOT) and Fixed Cost proposals would only impact economic dispatch
- Whether or not RDRR is enabled for economic dispatch, CAISO operators retain their discretion to dispatch by force

Dispatch Changes

- RDRR had historically been available for economic or forced dispatch under AWE Warning conditions
- Upon CAISO implementation of the NERC EEA standard in 2022, RDRR was available for dispatch under EEA 1 conditions
- In June 2023, a CPUC resource adequacy (RA) decision ruled that RDRR should be available for dispatch in EEA Watch conditions
- The ruling resulted in CAISO changing its emergency procedures 4420 from allowing dispatch of RDRR in EEA 1 to allow dispatch of RDRR in EEA Watch conditions
- The possibility of **enablement for economic dispatch during EEA Watch** prior to emergency conditions caused great concern by participating RDRR customers and **increases the importance of accurate reflection of operating characteristics** in economic dispatch optimization

Proposals to Improve Dispatch Accuracy

- Minimum On Time (MOT) - increase the allowed tariff MOT and modify dispatch systems to respect longer MOT
 - Goal to accurately reflect participating customer physical requirements
 - Current tariff rules limit the maximum MOT to one hour
 - However, many participating demand response customers have longer MOT requirements that should be reflected in economic optimization
 - Real time pre-dispatch (RTPD) has a limited time horizon insufficient for proposed increased MOT
 - Short-Term Unit Commitment (STUC) does not currently respect MOT in dispatch optimization
 - Proposal to **allow** higher MOTs but not *require* higher MOTs - the master file should accurately reflect the resource
- Fixed Cost - allow RDRR customers to include fixed costs in their economic bid
 - Current rules do not allow RDRR resources to include fixed costs
 - However, fixed costs for other resources is a long-established practice to accurately reflect cost of dispatch
 - RDRR customers also have costs that are tied to a dispatch event, rather than the duration of the event
 - For example, many customers will lose a fixed value of "widgets" regardless

CAISO RDRR MOT Proposal and Next Steps

- CAISO Reliability Demand Response Resource Minimum on time Final Proposal published January 18, 2024
- Proposal recognized the **RDRR dispatch issues related to resource optimization accuracy and attrition** of participating customers **impact on RDRR capacity**
- Proposed MOT of 255 minutes, less than the MOT of 300 minutes. Start-up Time equal to or less than 255 minutes
4.13.5.3 Dispatch Parameters for RDRRs
Each Reliability Demand Response Resource shall be capable of reaching its maximum Load curtailment within forty (40) minutes after it receives a Dispatch Instruction, and shall be capable of providing Demand Response Services for at least four (4) consecutive hours per Demand Response Event. Each Reliability Demand Response Resource shall have a **combined Start-Up Time and minimum on time less than or equal to of no more than one (1) hour 255 minutes.**
- However, the CAISO Proposal clarified that the tariff change alone would not impact economic dispatch, explaining that it “does not change how RDRR real time bids, if enabled in the market, are considered in RTPD for dispatch” and going on to explain that “RDRRs are not considered for commitment in STUC”
- RTPD has a limited horizon insufficient for proposed increased MOT and STUC does not currently consider RDRRs for dispatch
- The **proposal now is to further the original CAISO RDRR MOT Proposal** by adopting the proposed tariff change to increase allowed MOTs and investigate which system changes are required for this higher MOT to be respected in dispatch; and investigate how fixed costs could be considered for RDRR dispatch in the context of otherwise required system changes

Questions / Appendix