



# Desired Dispatch Operations

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October 16, 2023

- **2.5.3.4 Real-time Security Constrained Economic Dispatch**  
 Timeline and Instruction Set A RT SCED dispatch case is executed automatically every five (5) minutes or when manually executed by the operator at least eight (8) to ten (10) minutes prior to a target time. **All generators are expected to follow the dispatch signals upon approval of the RT SCED dispatch solution every five (5) minutes.** Shortly after the dispatch signals are sent out, the prices for those dispatch signals are calculated by the Locational Pricing Calculator (LPC) as further defined in Section 2.7 of this Manual and are posted online

## 1.11.3 Pool-dispatched Resources.

As part of the real-time security constrained economic dispatch calculation, the Office of the Interconnection shall use submitted ramp rates to calculate the next dispatch point.

(b) The Office of the Interconnection shall implement the dispatch of energy from other pool-dispatched resource increments, including generation increments from Capacity Resources the remaining increments of which are self-scheduled, by sending appropriate signals and instructions to the entity controlling such resources, in accordance with the PJM Manuals. **Each Market Seller shall ensure that the pool-dispatched resource offered or made available by that Market Seller complies with the energy dispatch signals and instructions transmitted by the Office of the Interconnection upon receipt.**

Generators must be able to follow PJM's dispatch instructions based on the submitted ramp rate. OA Schedule 1 Section 1.7.19.

## **1.7.19 Ramping.**

A generator dispatched by the Office of the Interconnection pursuant to a control signal appropriate to increase or decrease the generator's megawatt output level shall be able to change output at the ramping rate specified in the Offer Data submitted to the Office of the Interconnection for that generator. ***Market Sellers must specify a ramping rate in the Offer Data that is an accurate representation of the resource's capabilities given the confines of the PJM software.***

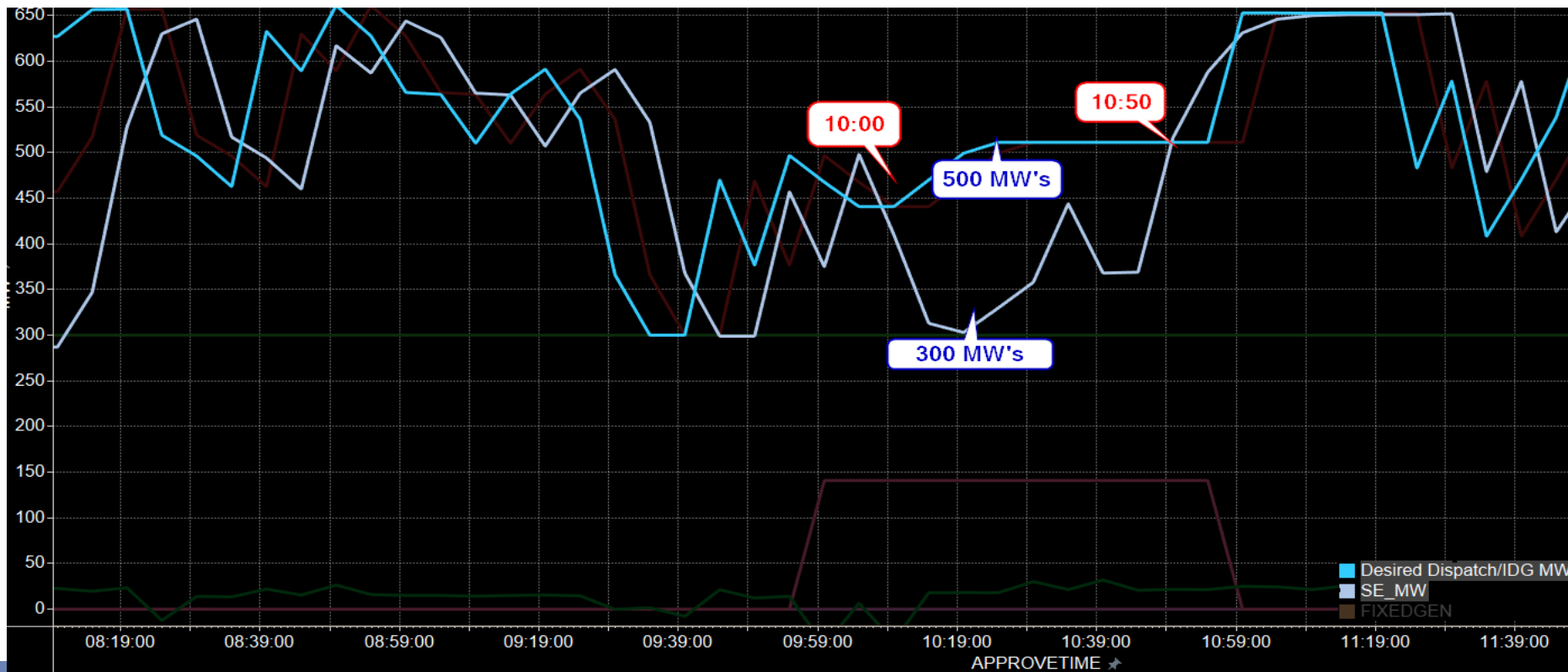
Generators must respond to PJM's directives to start, shutdown or change output levels. OA Schedule 1 Section 1.7.20.(b).

## **Market Sellers selling from generation resources and/or *Economic Load Response***

***Participant resources within the PJM Region shall:*** report to the Office of the Interconnection sources of energy and *Economic Load Response Participant resources* available for operation; supply to the Office of the Interconnection all applicable Offer Data; report to the Office of the Interconnection generation resources and *Economic Load Response Participant resources* that are self-scheduled; with respect to generation resources, report to the Office of the Interconnection bilateral sales transactions to buyers not within the PJM Region; confirm to the Office of the Interconnection bilateral sales to Market Buyers within the PJM Region; ***respond to the Office of the Interconnection's directives to start, shutdown or change output levels of generation units, or change scheduled voltages or reactive output levels of generation units, or reduce load from *Economic Load Response Participant resources*; continuously maintain all Offer Data concurrent with on-line operating information; and ensure that, where so equipped, generating equipment and *Economic Load Response Participant resources* are operated with control equipment functioning as specified in the PJM Manuals.***

- Resource scenarios of units not closely following
  - Forgetting to contact Generator Dispatcher to adjust log reason
  - Disregard dispatch signal
  
- Member Operator Training message is to follow the SCED signal

- A PJM objective function is least cost dispatch
- Identify sustained resource deviations to manage reliability
- All resources are to follow the SCED signal as closely as possible, instead of following within a certain threshold



## Stakeholder Concerns:

- Modeling unique resource characteristics
  - Mill points, Duct burners (operational discontinuities)
- Transparency by providing a real-time tracking indicator

What other resource characteristics need to be considered as a measure of following dispatch?

Have participants frequently observed instances in which a unit is unable to follow dispatch for a sustained period of time and the plant Operator/Market Operations Center(MOC) is unaware?



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**Operating Reserve Clarification for Resources  
Operating as Requested by PJM**

**Potential Solution Options – Desired MW Calculations**



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THINK BEFORE  
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