

Distributed Energy Resources (DER)

Stakeholder Process Update

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- Options within the solutions matrix developed in the MIC Special Session on DER may require feedback or endorsement by the OC
- A standing agenda item will be added to the OC meeting to keep members informed and to obtain feedback
 - An update on recent MIC DER Special Sessions will be provided
 - As needed, more detailed agenda items will be added for topics that require feedback or endorsement by the OC
- Determine if similar updates are required from Planning Committee



DER Problem Statement/Issue Charge Three Tasks

1. Education:

- PJM rules for generation
- PJM rules for demand response
- Other RTO rules benchmarking
- State/federal jurisdictional rules
- "Consider modifications to PJM interconnection queue rules for distributed resources."
- 3. "Consider modifications to **market participation rules** for distributed resources to more efficiently incorporate these resources into the energy, ancillary services and capacity markets."

http://www.pjm.com/~/media/committees-groups/committees/mrc/20160418-special/20160418-item-02a-distributed-battery-storage-issue-charge-revised-1,-d-,28,-d-,16-clean.ashx



- Task 1: Education—COMPLETE AND CLOSED (2016)
- Task 2: Interconnection modifications—IN PROGRESS (Planning Committee)
 - Scope includes education and new rules on:
 - Alternate Queue Process
 - Allocation of upgrade costs <\$5 million
 - Phasing in the queue process.
- Task 3: Market modifications—IN PROGRESS (MIC Special Sessions)
 - Goal: Evaluate current options for resources to participate in markets when both reducing load and injecting power past the load meter. Propose enhancements as necessary.
 - Approach: Initially focus on ancillary services, then energy and capacity.



- Primary Focus: Some generators and batteries behind a load meter have the ability to inject power:
 - How can they participate in wholesale markets?
- PJM Demand Response or Generation framework, but...
 - DR rules prohibit injection of power past load meter; and
 - Generation rules pose challenges for units that are wired with load.

Stakeholder Process Goal:

 Clear market rules for DER wired with and without load that wish to participate in wholesale markets.

Other discussion items of note:

- Non-wholesale DER visibility to PJM
- Aggregation for DER less than 100 kW