

Demand Response as an Operational Capacity Resource

The combination of the growing amount of committed capacity resources being Demand Response and the increase in Generation retirements has resulted in a decrease in the installed generation reserve margin. As a result PJM expects more regular deployment of Demand Response in system operations. Under current rules and procedures, deployment of large amounts of demand response creates potential operational discontinuities which must be addressed to support ongoing reliable system operations. Additionally, the current rules permit Limited Demand Response to cover the entire amount of excess supply under the downward sloping demand curve which has limited the effectiveness of this mechanism as a forward investment signal for long term resources.

PJM expects that it will need to dispatch capacity Demand Response on a much more operational basis going forward. Currently large blocks of demand response have exactly the same notification time which is based on minimum standard rather than physical capability. Large amounts of Demand Response are emergency-only which creates large discontinuity in dispatch when moving into emergency operations. PJM recognizes the potential impact to reliability based on the existing capacity Demand Response construct that requires administrative procedures under Emergency operations to deploy capacity Demand Response.

The specific areas that PJM believes should be addressed are:

- Consider enhancements to Demand Response obligations that will address PJM's operational concerns. Consider both (i) changes to the existing administrative procedures during emergency conditions (e.g., more volumetrically granular dispatch) and/or (ii) changes to revise emergency DR from an administrative procedure to an economic dispatch approach.
- Consider changes to notification time requirements for Demand Resources to provide greater operational flexibility. The enhancements should seek to reduce and/or diversify the lead time for notification of Demand Response during emergency conditions when it is difficult to predict further out in time and PJM needs resources to respond more quickly.
- Consider enhancements to Demand Response rules to allow for demand-side resources to operate with a dispatchable range.
- Consider ways to prevent the volume of Limited Demand Response clearing in RPM auctions from impacting the long-term investment signals needed to ensure reliability.
- Assess the potential for changes to assumptions and modeling practices regarding Demand Response in PJM planning studies as a result of this investigation.