

## **Problem Statement/Issue Charge**

Current Demand Response (DR) protocols should be enhanced in order to provide assurances of DR frequency capability as new DR products enter the market and as the DR market matures.

### **Problem / Opportunity Statement**

Emergency Demand Response (EDR) has become an increasingly important element of the resource mix relied upon by PJM to meet its reliability requirements. Thus, PJM expects EDR to be deployed with greater frequency than in the past. In addition, because of the restrictions in the operating characteristics of “Limited DR” (10x6 DR), PJM has developed new DR products with more demanding frequency capability commitments: Summer Extended DR and Annual DR, effective for the 2014/2015 Delivery Year.

Section 4.3.5 of PJM Manual 18 (PJM Capacity Manual) sets forth the requirements for registration of Emergency DR Resources. Registration requirements include:

Customer-specific information to establish nominated load management levels (i.e., Peak Load Contribution, EDC Loss Factor, notification period, Firm Service Level data, Direct Load Control data, Guaranteed Load Drop data).

Current registration processes do not incorporate any requirement to identify factors that may limit DR resource participation including limitations on how frequently a DR resource can or will respond. Further, under Section 4.3.7 PJM Manual 18, “[n]ominated load reductions are effective for an entire RPM Delivery Year.”

Accordingly, the current registration procedures make no attempt to validate that individual DR resources or the DR portfolio as a whole can be expected to satisfy the frequency performance obligations associated with the each particular type of DR product. Furthermore, there are no current processes or reporting requirements to provide information to PJM during the Delivery Year regarding changes in the frequency performance capabilities of a DR resource portfolio even if a DR portfolio exhibits declining operating performance. The capacity markets, and the overall reliability of the PJM system, would be enhanced by addressing these gaps in the current processes.

In order to validate the physical, contractual and regulatory capabilities of DR capacity resources to satisfy the number of deployments they could be required to meet, PJM needs enhanced resource verification measures for DR frequency capability both at the time of registration and during the term of the Delivery Year. Adoption of such processes would address, at least in part, the need for procedures that “will allow PJM to confirm that resources can respond as often and seasonally as claimed,” as identified in the most recent Brattle Group RPM performance assessment

**Issue Source**

August 2011 Brattle RPM Performance Report, Issue Charge approved by the Markets & Reliability Committee on July 26, 2012 and PJM August 18, 2011 presentation to Markets & Reliability Committee

**Stakeholder Group Assignment**

Senior Capacity Task Force

**Key Work Activities**

1. Perform education on the current DR registration process and the collection of DR registration data.
2. Enhance current registration process to provide reasonable assurances that CSPs have analyzed the claimed frequency performance capabilities of individual DR resources and/or their DR portfolios at the time of registration to be commensurate with the type of DR product committed to PJM and the expected deployment of DR resources during the Delivery Year.
3. Develop a process for CSPs to update the frequency performance capability of their DR resources and/or DR portfolios during the Delivery Year.
4. Develop a process to confirm that CSPs have used reasonable methodologies to measure the frequency performance capabilities of their DR resources and/or DR portfolios.
5. Develop Reliability Assurance Agreement, Tariff and/or Manual language to implement the process improvements identified above.

**Expected Deliverables**

Draft Reliability Assurance Agreement, Tariff and/or Manual language for review, comment and approval from the Markets and Reliability Committee.

**Expected Overall Duration of Work**

This work effort can be completed in 6-8 months.

**Decision-Making Method**

The objective is to use the Tier 1, consensus-based, decision-making methodology (unanimity) on a single proposal (preferred default option), or Tier 2, multiple alternatives.