PJM Proposal

Summer-Only Demand Response
Senior Task Force (SODRSTF)

August 15, 2018

Purpose

To better value summer-only demand response resources through the load forecasting process that would serve as an alternative to supply-side participation in the capacity market.

- The focus of the PJM Proposal is to improve the accuracy of the long-term zonal and RTO load forecast.
- The proposal attempts to be responsive to participant needs in program design while still satisfying PJM's planning needs
  - Program needs to be both predictable and measurable

Eligibility

- Participation is restricted to load reduction programs (both direct control and behavioral) governed by a tariff approved by the Relevant Electric Retail Regulatory Authority (RERRA).
- The entity subject to the tariff will be fully responsible for satisfying the load forecast adjustment requirements; however, that entity or its authorized agent may manage a portfolio of interruptible customers under the RERRA tariff.
- Customers that are included in the load forecast adjustment may not also participate as DR (Emergency or Economic) or as PRD for the same Delivery Year. The purpose of this requirement is to avoid double-counting.

Program Requirements

- PJM will consider programs on a case-by-case basis
- The program participant must provide PJM with:
  - A THI (Temperature-Humidity Index) Trigger for interruption
  - The duration of the interruption in hours
  - The MW value of the curtailment (this may vary by hour)
  - The months over which the interruption can occur
  - All historical addbacks for the nominated programs
- Note: Different program requirements could lead to different shaving frequencies and durations and to different forecast outcomes.

Forecast Adjustment Mechanism

- PJM will initially generate a new lower load forecast based on a modified load history that assumes perfect curtailment performance back to 1998.
  - Program will be assumed to be enacted every time a pre-determined Temperature-Humidity Index (THI) threshold is reached or exceeded.
  - At the conclusion of each summer, the program's actual MW curtailment for each event will be expressed as a percentage of the amount of MW it committed to curtail (this percentage is capped at 100%). The metric to measure performance will be based on the customer baseline load (CBL). The average performance factor of the last three years will then be the assumed performance over all historical years going back to 1998.

Applicable Auctions

- Peak shaving programs will impact the reliability requirement used in the Base Residual Auction (BRA) and Incremental Auctions (IAs) for a given delivery year.
- The MW curtailment value submitted to PJM for the BRA cannot be later reduced in the IAs. MW curtailment values submitted to PJM for IAs can only be in addition to those submitted for the BRA and must represent new peak shaving programs that were not in place the previous year.

Valuation of the Load Forecast Impact

- Peak shaving programs will receive no direct payment; instead their value will be received as avoided capacity cost based on a shift in the Variable Resource Requirement (VRR) curve used in the Base Residual Auction and Incremental Auctions.
- The VRR curve reflects the reliability requirement, which depends on, among other factors, the load forecast and the monthly load profile.
- The entire zone receives the benefit of a lower load forecast. The EDC will continue to allocate the lower zonal forecast to all LSEs within its zone in accordance with its state-approved allocation methodology.

Why Does Peak Shaving Need to Report by August 31?

- It allows PJM staff sufficient time to incorporate peak shaving programs into the load forecast.
- The PJM load forecast must be completed in time for Regional Transmission Expansion Plan studies to begin in December and for developing BRA Planning Parameters for posting on February 1.
- Allowing peak shaving programs to report program components in December will not allow for timely PJM staff and stakeholder review and completion of the load forecast and jeopardizes the RTEP process and RPM deadlines.