

Load Management Testing CSP Presentation

PJM DRS

June 19, 2019

Proposals Background

- Authors: CPower, Direct, Enel X, NRGCS
- Represent 90%+ of competitive CSP Load Management DR in PJM
- Conversations at the DRS and outside with PJM, IMM, Industrials, other CSPs, LSEs, Utilities, etc added perspective

Key difference in system conditions between testing and real events

Under Status Quo, CSPs work with customers to identify a common time across a zone to conduct a test. Scheduling testing is a complex job, which takes into account managing the costs to a customer.

For instance, CSPs take into account when a manufacturer is on the last day of a production goal and behind schedule; or for example, for a government facility, not conducting a test if it would compromise national security.

In real grid emergencies, a black out is a serious threat to the full grid, including DR customers. A black out can cause physical damage to customer assets and put employee safety at risk. Customers receive an incentive payment (strike price) in real events for DR performance.

Load forecasts 7 days forward provide a week ahead suggestion that an event may be on horizon. In addition, in most grid emergencies, a Hot/Cold Weather Alert generally precedes the DR event.

Comparison of PJM Gen vs DR Testing Rules

	DR Status Quo	Gen Status Quo	PJM DR Proposals
Duration	1 hour	1-2 hours 1 Hour for infrequently used resources	2 hours
Scheduling Test	Capacity Owner	Capacity Owner	PJM
Seasons	Summer – Jun-Sept	Summer and Winter Winter met through data adjustment	Summer or Winter
Test Limit	No limit	No limit	One
Retest Limit	No Limit	No limit	No Limit / One
Test shortfall Impact	Full year	Until next full test	Full year

Sources: M18, M21, Matrix

Elements are needed to manage costs for customers, if PJM takes on Scheduling

Based on customer survey data, Enel X found **week-ahead participant notification** (in addition to Day-Ahead and Day of), will limit costs to customer participation. While sharing the exact day of a test is ideal, having knowledge of what week the test will be, will also allow DR customers to plan appropriately.

Survey Results: Customers Prefer Advanced Notice and CSPs Scheduling Tests

“For an emergency event, we understand the need for short notice and are **happy to curtail to protect the grid, but why make us scramble for a test?** We lose \$60,000 per hour of wasted material and lost productivity.”

Large plastics manufacturer

“We lose 100’s of thousands of dollars in **lost production** to shut down the plant with no notice.”

S&P 400 Index: Large food processor/manufacturer

“When you [CSP] send us high alerts during **hot or cold weather alerts**, we plan ahead to have people available.”

Large research university

“We have a minimum 90-minute downtime, which **costs us \$540,000**. The capacity payments for tests make this up if we can plan around it.”

S&P 600: Energy company

We have two proposals

Our Preference is for “CSP1: CSP Scheduled Test” Proposal. This proposal compromises on many elements and reflects PJM proposal, but retains CSP scheduling of testing, which is vital to customers.

“CSP2: PJM Scheduled Test” is a discussion concept. PJM’s proposals taking on scheduling of tests adds costs to customers. This discussion concept includes elements to manage costs for customers to comply.

Review of Key Elements in Matrix for each
proposal

CSP1: CSP Scheduled Test

- Generally accepts changes in PJM1
 - Summer/ Winter Testing Requirement based on PJM preference for a season
 - 2 Hour testing
- CSP schedules test

CSP2: PJM Scheduled Test

- Generally accepts changes in PJM1
 - Summer/ Winter Testing Requirement based on PJM preference for a season
 - 2 Hour testing
- PJM schedules test with elements to manage customer costs
 - Up to 2 tests
 - Unlimited re-testing by CSP
 - Narrower windows (3 months per season)
 - Notification
 - Month
 - Week
 - Day Ahead
 - Day of

Updates across both CSP proposals

#13 Resource Test Compliance Target: Reflects new requirement for two season performance and dates