

DR RPM Issues

August 14, 2012
CSTF

A large blue arrow pointing to the right, containing two rounded rectangular boxes. The left box is labeled "2012 items" and the right box is labeled "2013 items".

2012 items

2013 items

Items identified from Capacity M&V order (double counting, ER11-3322-000, 11/4/2011) that PJM will report status to FERC by 11/3/12 of any stakeholder discussions

Item	Source
1) Auditing of DR Contracts	Brattle
2) DR Resource Testing	Brattle
3) Interaction of Peak Load Contribution ("PLC") with end-user RPM cost assignment and DR Resource RPM revenue, and implication to DR resource auction participation	Stakeholders, *
4) Measurement and Verification of different PJM resources and products	Stakeholders, *
5) Process for DR Resources to change commitment to higher curtailment products in subsequent Delivery-Year auctions	?
6) DR Notification time During Non-Critical Summer Hours	?
7) Review assumptions used in DR Saturation studies	Stakeholders

* PJM must file informational report on status by 11/3/12 of related items

- Issue – DR offers into market but does not have the capability to perform based on product requirements (Limited, Extended Summer and/or Annual)
- Proposed Solution - “Introducing audits of demand-side resources to confirm their contractual and physical ability to respond as often and seasonally as claimed.”
 - Ensure contracts do not limit number of events that can be called if annual product.
 - Augment existing registration process to audit underlying required CSP/customer contracts

- CSP offers and clears in RPM auction
 - MW by zone
- CSP contracts with customers
- CSP registers customers to support RPM commitment
 - Registrations reviewed by EDC and LSE
 - PJM request contracts if duplicate registration (PJM does not evaluate terms of contract)
- If CSP registered MW < CSP RPM MW commitment then CSP received penalty
- If PJM calls an event CSP resources must perform or receive penalty
- If PJM does not call and event CSP resources must perform test or receive penalty.

- Issue – DR offers into market but does not have the capability to perform based on product requirements (Limited, Extended Summer and/or Annual)
- Proposed Solution – enhance existing testing to ensure DR Resources can be expected to perform when needed
 - Current test is limited (1 hour), CSP initiated and outcome is not know until after summer period

Notification of Load Management Tests and Retests in eLRS

- CSP is required to simultaneously test all their DR resources in a zone if PJM has not called an event in that zone by August 15
 - If an event is called between August 16 and September 30, no test will be required
- Testing details
 - All resources in same zone will test at the same time for 1 hour (non-holiday weekday, 12 Noon – 8 PM EPT)
 - Test can be conducted between June 1 and September 30
 - Data will be submitted in a format similar to event data submissions
 - Data must be submitted between October 1 and November 14
 - Notify PJM of intent to test 48 hours in advance
 - **Test and Retest notifications must be submitted in eLRS**
 - No limit on the number of tests a CSP can perform
 - Only submit data for the test which PJM will use to determine the Test Failure Charge



ALL TEST and RETESTS MUST BE COMPLETED BY SEPTEMBER 30

Notification of Load Management Tests and Retests in eLRS

- A CSP qualifies for an optional retest if the MW reduction in the zone is greater than 75% of its MW Commitment in the zone
- Only registrations that have a test reduction less than its Nominated ICAP are eligible to participate in the retest
 - **Retest notifications are submitted in eLRS 48 hours in advance for the selected registrations. *Failed registrations that are not selected for the retest will maintain the original test reduction values.***
 - Any resource affiliated with a failed resource must also participate in the retest, even if it passed the in the overall test
 - Affiliated means resources that have any ability to shift load and are owned or controlled by the same entity
 - Retest must be performed on comparable day (weather, time) of original test
 - No limit on the number of retests a CSP can perform
 - Only submit data for the retest which PJM will use to determine the Test Failure Charge



ALL TEST and RETESTS MUST BE COMPLETED BY SEPTEMBER 30



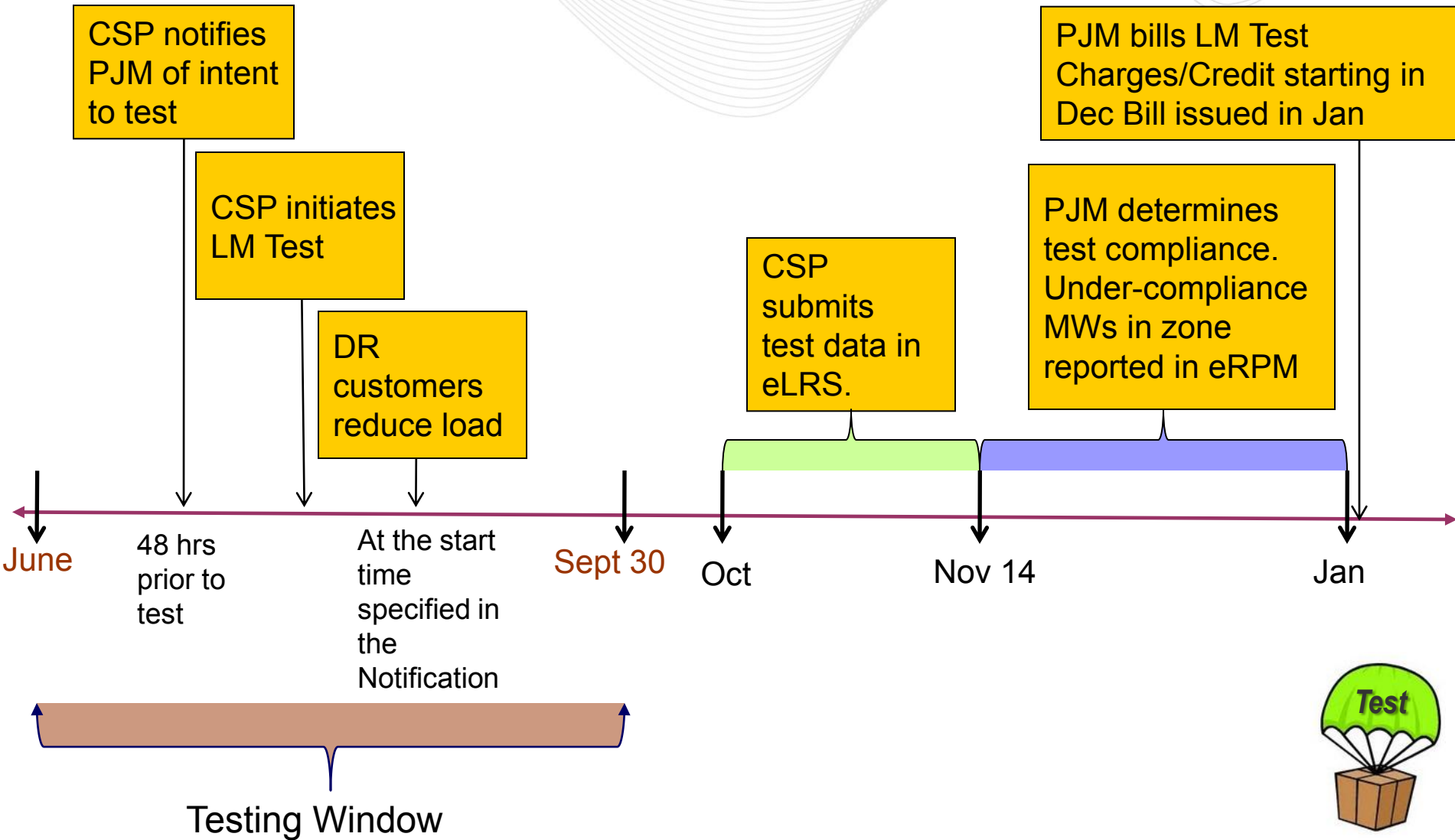
- Zonal Load Management Test Failure Charge:

- {Weighted Annual Revenue Rate + higher of (0.2 * Weighted Annual Revenue Rate) or (\$20 * 365)} * net capability testing shortfall (UCAP)

- Weighted Annual Revenue Rate represents what the resource would be paid during that DY
- 0.2 represents an additional 20%
- \$20 (multiplied for all days in the DY)

The higher of these two values would apply

Weighted Average Revenue Rate in LDA is determined by calculating (the weighted average of resource clearing prices in the LDA across all RPM Auctions, weighted by a party's cleared and make-whole MWs in an LDA) * 365



Item 3: Interaction of Peak Load Contribution ("PLC") with end-user RPM cost assignment and DR Resource RPM revenue, and implication to DR resource auction participation

- Discuss and refine short term issue that need to be addressed
- Determine any interaction between this item and longer term/2013 items
 - Characteristics/requirements of different DR products
 - Comparability of DR products and generation resources
 - Performance requirements
 - Penalties
 - Market/Reliability value
 - PJM Operation implications
 - Offer lead times
- Determine interaction between this item and FERC informational filing item(s)
 - the accuracy of the PLC in estimating a resource's contribution to the reliability requirement and amount of capacity which a customer is obligated to purchase
 - whether the PLC can be adjusted to account for load growth and other trends included in the PJM load forecasts that are used in RPM

1

- PJM forecast – determination of LDA/zonal reliability requirements

2

- CSP offers MWs in RPM

3

- EDC determines retail customer PLC

4

- CSP registers individual customers to support RPM commitment
- Nominations limited to customer PLC

5

- CSP resources respond to economic, emergency or test events
- Compliance measured as function

6

- Add backs provided to EDCs to consider as part of subsequent DY customer PLC determination

Item 4: Measurement and Verification of different PJM resources and products

- Discuss and refine short term issues that need to be addressed
- Determine any interaction between this item and longer term/2013 items
 - Characteristics/requirements of different DR products
 - Comparability of DR products and generation resources
 - Performance requirements
 - Penalties
 - Market/Reliability value
 - PJM Operation implications
 - Offer lead times
- Determine interaction between this item and FERC informational filing item(s)
 - applicability of the PLC performance metric for resources with higher performance outside of the summer period
 - how advanced metering and communications could foster the reliability of the PJM Capacity DR product.

Requirement	Limited DR	Extended Summer DR	Annual DR
Availability	Any weekday, other than NERC holidays, during June – Sept. period of DY	Any day during June-October period and following May of DY	Any day during DY (unless on an approved maintenance outage during Oct. - April)
Maximum Number of Interruptions	10 interruptions	Unlimited	Unlimited
Hours of Day Required to Respond <i>(Hours in EPT)</i>	12:00 PM – 8:00 PM	10:00 AM – 10:00 PM	Jun – Oct. and following May: 10 AM – 10 PM Nov. – April: 6 AM- 9 PM
Maximum Duration of Interruption	6 Hours	10 Hours	10 Hours
Notification	Must be able to reduce load within 2 hours of notification		
Event Compliance	Data due 45 day after end of event month		
Test Compliance	Mandatory test required if no emergency event called		

- GLD required to reduce load below PLC
- Load Drop used to determine capacity compliance also used to determine add back
- Guaranteed Load Drop or Economic Load Reduction (where applicable):
 - Minimum of $\{(comparison\ load - Load) * LF, PLC - (Load * LF)\}$
- Firm Service Level:
 - $PLC - (Load * LF)$

All products, resources and events measured based on same criteria except non-interval metered DLC

Item 5: Process for DR Resources to change commitment to higher curtailment products in subsequent Delivery-Year auctions

- Discuss and refine short term issues that need to be addressed

- CSP can handle changes to commitment (product or MW) through IA.

Item 6: DR Notification time During Non-Critical Summer Hours

- Discuss and refine short term issues that need to be addressed

- CSP determines each registration's notification time:
 - Long lead (2 hours)
 - Short lead (1 hour)
- Notification times are submitted as part of registration process and applicable for entire Delivery Year.

- Discuss and refine short term issues that need to be addressed
 - This is currently being discussed at PC.
- Determine any interaction between this item and longer term/2013 items
 - Characteristics/requirements of different DR products
 - Comparability of DR products and generation resources
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 - Penalties
 - Market/Reliability value
 - PJM Operation implications
 - Offer lead times

- Currently being discussed at PC