

DRS Proposals: Load Management Product specific dispatch & sub zonal dispatch

MRC

11/16/2011

- Product Specific Dispatch
- Sub zonal Dispatch

- Current language allows PJM to dispatch Annual and Extended Summer DR without dispatching Limited DR.
- PJM outlined conditions when DR product specific dispatch may be implemented
- Stakeholder interests:
 - Transparent rules
 - Ensure annual and extended summer DR are not dispatch based on convenience which could result in limited DR never dispatched

- PJM may dispatch Annual DR and Extended Summer DR **prior to Limited DR** to reserve Limited DR capability for other potential system emergencies based on following schedule:

Period	# of zonal (all Load Management products) events
Before 7/1 of DY	2
Before 8/1 of DY	4
Before 9/1 of DY	7

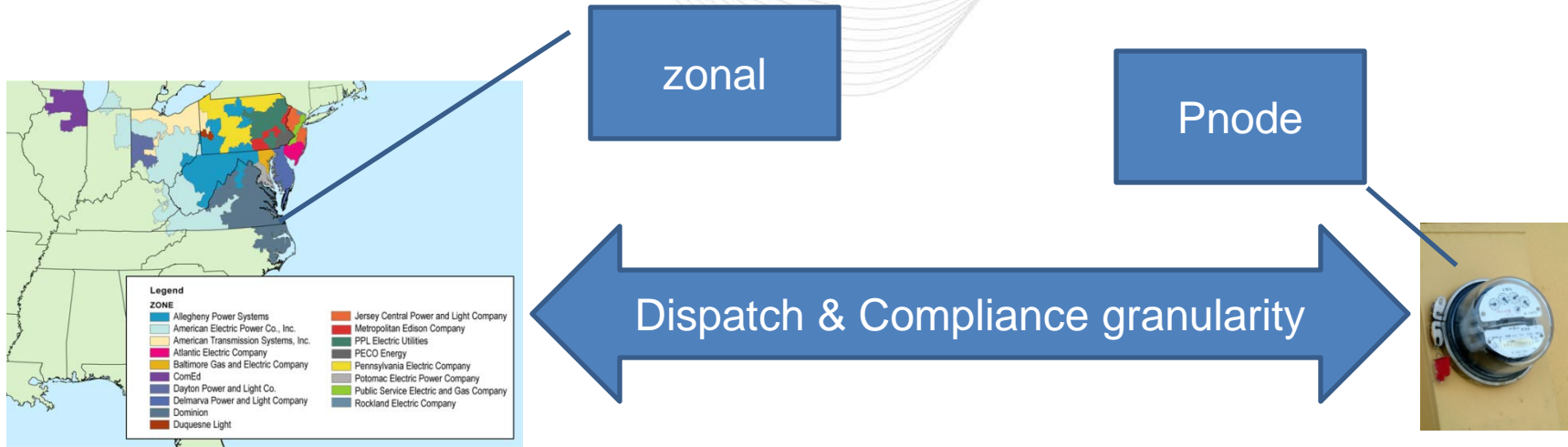
PJM will not consider product specific dispatch unless zone already dispatched frequently based on schedule

- Example
 - PJM dispatches 4th Emergency Load Management event for PECO zone 7/15.
 - PJM may consider product specific dispatch if another emergency event is needed in PECO zone prior to 8/1.
- Extent to which PJM may dispatch Annual DR or Extended Summer without dispatching Limited DR depends on number of factors:
 - **# zonal events already dispatched**
 - *Must be a zonal event (PJM will not dispatch by product at sub zonal level)*
 - Amount of DR committed for DY for each product type
 - Number, lead time, location and performance of past load management events.
 - Expected future system conditions that may necessitate additional LM events
- Change test penalty rate to be product specific
 - Test may be done by product and therefore align the test penalty rate with what is tested if CSP has multi product portfolio which is not tested on same hour.

This does not impact when and how PJM will dispatch all products together to maintain system reliability.

- Sub zonal dispatch

- **Current market rules allow zonal, lead time and sub-zonal dispatch:**
 - Key limitation based on use of ALL CALL technology
- **PJM worked with stakeholders and published operational procedure prior to summer 2011.**
 - DR must respond or receive event penalty
 - DLC requirement based on operational capability (PJM coordinates directly with CSP)
 - DR that was not required to respond must perform mandatory test
- **Successful implementation sub-zonal dispatch:**
 - State by Zone implementation in summer 2010.
 - Collection of Zip codes implemented in summer 2011.



- Sub zones defined in advance to enable CSP to easily dispatch their customers.
- Transparency of rules from Dispatch to Settlements (clear communication for customer expectations)
- Flexibility to manage the system based on unpredictable conditions
- No compliance penalties OR additional compensation for any sub zonal dispatch

- Maintain existing sub zonal rules & enhance existing documentation
 - If DR is dispatched it must respond or receive emergency event penalty
 - If DR is not dispatched it must test
 - DR paid for energy based on higher or full LMP or strike price plus shutdown cost (make whole payment)
 - Subzones will continue to be based on zip codes (instead of pnode)
 - Dispatch will be done by registration instead of underlying location for simplicity.
 - DLC only required to respond where there is operational capability. PJM to coordinate with associated CSP.
- PJM and CSP to implement electronic notification as primary notification (instead of ALL CALL).
 - PJM to include list of registrations to CSP to facilitate CSP notification of customers.
- Event penalty only applies if PJM establishes subzone prior to operating day.
 - PJM to provide advance notice as possible if new subzone may be utilized.

Proposal 1 - PJM Proposal			
	IN FAVOR	AGAINST	ABSTENTIONS
In Room	52	20	15
On Phone	10	2	0
Total	62	22	15
% In Favor	74%		

Proposal 2 - CSP (Voluntary)			
	IN FAVOR	AGAINST	ABSTENTIONS
In Room	14	84	0
On Phone	2	9	0
Total	16	93	0
% In Favor	15%		

Proposal 3 - CSP (Mandatory)			
	IN FAVOR	AGAINST	ABSTENTIONS
In Room	8	94	0
On Phone	2	9	0
Total	10	103	0
% In Favor	9%		

Proposal 4 - CSP (Voluntary) until 2014/2015. June 1 2014, transitions to PJM Proposal			
	IN FAVOR	AGAINST	ABSTENTIONS
In Room	73	23	4
On Phone	2	9	0
Total	75	32	4
% In Favor	70%		

- Proposal differences from solutions matrix
- Product definitions
- Product requirements
- Sub zonal dispatch – current compliance process
- Sub zonal dispatch – current test process

DR Subzonal Dispatch - Solution Matrix (Proposal Comparison)

Design Criteria (or Component)		Importance	Proposed Solution			
			Current Rules	PJM	CSP (Voluntary)	CSP (Mandatory)
1	Basis of subzone		PJM has flexibility based on system conditions but has implemented procedures to use Zip Codes	Zip Code (current procedure)	same as PJM	same as PJM
2	Timing of when subzones are established		PJM has flexibility based on system conditions but has implemented procedures to contact CSP as far in advance as possible if considering a new subzone	1 day before dispatch but provide as much advance warning to CSP as possible	same as PJM	90 days prior to Delivery Year
3	Most granular dispatch instruction *		Registration	Registration (current rules)	Location	Location
4	Subzonal dispatch will be done for what reason?		Targeted Reliability reasons - For example, PJM to called on Norfolk portion of Dom zone.	Targeted Reliability reasons - For example, PJM to called on Norfolk portion of Dom zone.	same as PJM	same as PJM
5	Primary method for CSP notification		ALL CALL. Secondary information includes Emergency Messages in eData, emails and posting event directly in eLRS	Electronic message - PJM will send list of registrations that need to respond	same as PJM	same as PJM
6	When to measure and report capacity compliance?		always	always	same as PJM	same as PJM
7	Which subzonal events will be subject to penalties?	High	all subzonal events	Only apply penalty for subzones created 1 day before dispatch (see B2)	Never apply penalties	Only apply penalty if subzone set up 90 days before DY. (see A2)
8	Event compliance calculation		Mandatory response counts as 1 event & use proration process for commitment (current rules)	Mandatory response counts as 1 event & use proration process for commitment (current rules)	Not applicable	same as PJM
9	Which registrations are required to test?	High	Only those registrations that did not have a mandatory requirement to respond (current rule)	Only those registrations that did not have a mandatory requirement to respond (current rule)	All registrations that did not report sub zonal event performance to registered level	CSP may choose whether to use a) Only those registrations that did not have a mandatory requirement to respond or b) conduct and use zonal test results which may occur before or after the sub zonal event.
10	Compensation in the energy market		Higher of LMP or strike price (current rule)	Higher of LMP or strike price (current rule)	same as PJM	Pay premium in addition to higher of LMP or strike price

* DLC will only be dispatched by zip code or registration if CSP has operational capability to dispatch accordingly. PJM will instruct DLC on specific actions for subzonal events.

- Effective with the 2014/2015 DY, a load management resource (i.e., demand resource) may be one of three product types:
 - ❖ **Limited Demand Resource**
 - ❖ **Extended Summer Demand Resource**
 - ❖ **Annual Demand Resource**

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 when requested by PJM All Call system within 2 hours of notification, without additional approvals required		
Registration in eLRS	Must register sites in Emergency Load Response Program in Load Response System (eLRS)		
Event Compliance	Must provide customer-specific compliance and verification information within 45 days after the end of month in which PJM-initiated LM event occurred.		
Test Compliance	In absence of the PJM-initiated LM event, CSP must test load management resources and provide customer-specific compliance and verification information.		

- Number of events used to determine event multiplier based on number of events the registration has been dispatched
 - PEPCO DC dispatched twice
 - PEPCO zone dispatched once
 - 33% for PEPCO DC registrations (since they were actually dispatched 3 times) and 50% for non DC PEPCO resources (since they were actually only dispatched once and need to take min of 50% or 1/# events)
- Sub-zonal commitment based on registrations that were dispatched:
 - ILR = nominated capacity of registrations dispatched
 - DR = DR commitment * (nominated value of DR registrations dispatched/Total nominated value of DR registrations in zone).
 - CSP may not use other zonal registrations to substitute sub-zonal registrations that are dispatched.
 - Registrations dispatched based information submitted by CSP for location in eLRS.
 - PJM will use zip codes in eLRS just prior to event to determine exactly which registrations are required to respond.

- If registrations not dispatched then still required to perform annual test.
 - For example in 2010:
 - APS (WV, VA and MD) dispatched and therefore not required to Test
 - APS (PA) NOT dispatched and therefore required to Test
 - If test already conducted it is not necessary for CSP to submit the results.
- Sub-zonal commitment based on registrations that were NOT dispatched:
 - ILR = nominated capacity of registrations NOT dispatched
 - DR = DR commitment * (nominated value of DR registrations NOT dispatched/Total nominated value of DR registrations in zone).
 - CSP may not use other zonal registrations that were dispatched to substitute registrations that are required to test.