

**Markets Implementation Committee**  
**Proposal Alternatives Report**  
**November 16, 2011**

**DR subzonal dispatch and product specific dispatch**

**Background**

Load Management resources are comprised of Demand Resources and Interruptible Load for Reliability resources. The resources are comprised of individual registrations that identify the specific end use customers (i.e.: locations which are defined by EDC account numbers) that will participate, where they are located by address and the associated capacity commitment. DR registrations may be linked to a DR resource where the DR resource represents a zonal commitment made during an RPM auction, as part of an FRR plan or through a bilateral transaction. PJM typically dispatches by transmission zone by lead time but may also dispatch at a sub-zone level to manage reliability during a system emergency. Further, PJM may dispatch Annual and Summer Extended DR without dispatching Limited DR if PJM needs to reserve Limited DR for later in the summer season (Limited DR is only required to respond on 10 days during summer)

**Stakeholder process**

The Demand Response Dispatch Senior Task Force (DRDSTF) was established by the Markets and Reliability Committee (MRC) at the 2/16/2010 meeting. An Issue Charge was approved by the MRC at its meeting. The purpose of the DRDSTF was to review, and clarify where necessary, how PJM will dispatch Load Management (DR/ILR) on a sub-zonal basis during emergency situations in the future and how associated compliance results are calculated. This may entail proposed changes to the PJM governing documents and associated Manuals. It should be noted that these are primarily technical issues and have minimal impact on the overall market unless changes to the current procedure to handle event/test compliance and energy settlements are considered.

The DRDSTF responsibilities were reassigned to the newly created Demand Response Subcommittee (DRS). This was done to consolidate some of the DR specific activity to make the stakeholder process more effective.

**Responsibilities**

- 1) Determine any necessary interim rules for summer 2011 and implement no later than June 1, 2011. **This was completed and successfully utilized during the May 2011 Norfolk area of Dominion zone**
- 2) Business and Operational rules for sub-zonal definition and dispatch, including notification mechanics, will be determined. If approved, these will be incorporated in the necessary governing documents

3) Business rules for settlements and performance metrics associated with sub-zonal dispatch, where currently not clear in the tariff and the Manuals, will be determined.

4) Business and Operational rules for product specific (DR Limited, Summer Extended DR, Annual DR) dispatch, including notification mechanics, will be determined. If approved, these will be incorporated in the necessary governing documents. Business rules for settlements and performance metrics associated with sub-zonal dispatch, where currently not clear in the tariff and the Manuals, will be determined.

### **Proposals**

The DRS developed a solution matrix of the various subzonal related items but was not able to reach consensus on one proposal. The DRS was able to reach consensus on product specific dispatch procedures which has been included in proposals up for endorsement.

### **Product specific dispatch (included in all proposals considered by MIC)**

The new PJM products are available for the '14/'15 Delivery Year. PJM has communicated that Annual and Extended Summer DR products may be dispatched prior to Limited DR product to reserve Limited DR product for later in the summer season if necessary. CSPs indicated they need additional clarification of when they will be dispatched although all PJM does not know when this will occur since it would be based on a variety of factors as explained in the stakeholder process. The Proposal will establish a schedule to ensure product specific dispatch will only be considered when all products are dispatched simultaneously a certain number of times in the delivery year. This will ensure that PJM does not dispatch Annual/Summer Extended DR and never dispatched Limited DR.

### **Subzonal dispatch proposals**

PJM market rules currently allow PJM to dispatch Load Management resources on a more granular basis than a transmission zone. PJM has clarified how this will be conducted through the use of a "subzone" which represents a collection of zip codes & posted associated reference material. Further, PJM has clarified that under the existing market rules all Load Management resources must respond to such request or receive an event penalty and that any resource that has not been dispatched must test under the mandatory testing provisions. PJM has published additional training material with examples to ensure all market participants are clear on the existing market rules and the associated impacts. PJM has effectively dispatched resources on a subzonal basis during the summer of 2010 and again on a subzonal basis in May 2011.

### **Recommended Proposal (PJM proposal)**

The PJM proposal includes the product specific dispatch described above, enhances the existing market rules and attempts to address key CSPs issues. One of the key concerns raised by CSPs regarding subzonal dispatch was the ability for CSPs to communicate with their end use customer to effectuate the PJM dispatch signal received by the PJM ALL CALL system. CSPs indicated it is operational difficult to determine exactly which registration should respond to an event in real time if this is not set up well in advance in their systems. The PJM proposal will change the primary notification mechanism from the ALL CALL to an electronic messaging procedure which will include a list of each registration that must respond to the CSP in real time.

This will ensure the CSP knows exactly which registration and therefore end use customer must respond to the PJM dispatch signal instead of the need to cross reference a subzonal designation received over the ALL CALL with a list of zip codes published on pjm.com that comprise such subzone back to a list of active CSP registrations. The proposal will also eliminate emergency event penalties if pjm does not publish the subzone the day prior to the emergency event. If this does occur the resources will still be required to test since the emergency event was not considered mandatory. This proposal also clarified that DLC will only be required to respond to subzonal event if the CSP has the operational capability. PJM will coordinate directly with each CSP that has DLC prior to the subzonal event regarding their capability.

### **CSP Voluntary Proposal**

The CSP voluntary proposal established that all subzonal events do not require load reductions and therefore event penalties are not assessed although they will be reported for informational purposes. Further, registrations that are dispatched on a subzone basis will not be required to test if their performance during the subzonal event was equal or above their nominated capacity amount. This proposal will also require that locations (specific end use customer) be dispatched instead of a registration (one of more end use customers), which is the level where the capacity nomination are done and therefore require a proration process for purposes of event and test compliance.

### **CSP Mandatory Proposal**

The CSP mandatory proposal will require PJM to set up a subzone needed 90 days prior to the DY even though PJM does not know where and when a subzone may be needed. The proposal also pays the DR provider a premium (yet to be defined) amount to respond to a subzonal event. If the subzone is not established 90 days prior to the DY then CSP will not be assessed any penalties for dispatch in such subzone. This proposal also includes location specific dispatch instead of registration (unit of measure of capacity nominations) specific dispatch.

### **CSP modified proposal (implement CSP Voluntary proposal for 12/13 and 13/14 DY and then implement PJM proposal on 6/1/14 for 14/15 DY and future)**

Modify existing rules based on CSP Voluntary proposal for 12/13 and 13/14 DY and then implement PJM proposal on 6/1/14 for 14/15 DY and into the future. The proposal was suggested to help with transitional issues where CSP does not have administrative capability to dispatch at a subzone level today.

### 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.

<b>Demand Response Product and Sub Zonal Dispatch</b>			
<b>Proposal 1 - PJM Proposal</b>			
	IN FAVOR	AGAINST	ABSTENTIONS
In Room	52	20	15
On Phone	10	2	0
Total	62	22	15
% In Favor	74%		
<b>Proposal 2 - CSP (Voluntary)</b>			
	IN FAVOR	AGAINST	ABSTENTIONS
In Room	14	84	0
On Phone	2	9	0
Total	16	93	0
% In Favor	15%		
<b>Proposal 3 - CSP (Mandatory)</b>			
	IN FAVOR	AGAINST	ABSTENTIONS
In Room	8	94	0
On Phone	2	9	0
Total	10	103	0
% In Favor	9%		
<b>Proposal 4 - CSP (Voluntary) until 2014/2015. June 1 2014, transitions to PJM Proposal</b>			
	IN FAVOR	AGAINST	ABSTENTIONS
In Room	73	23	4
On Phone	2	9	0
Total	75	32	4
% In Favor	70%		