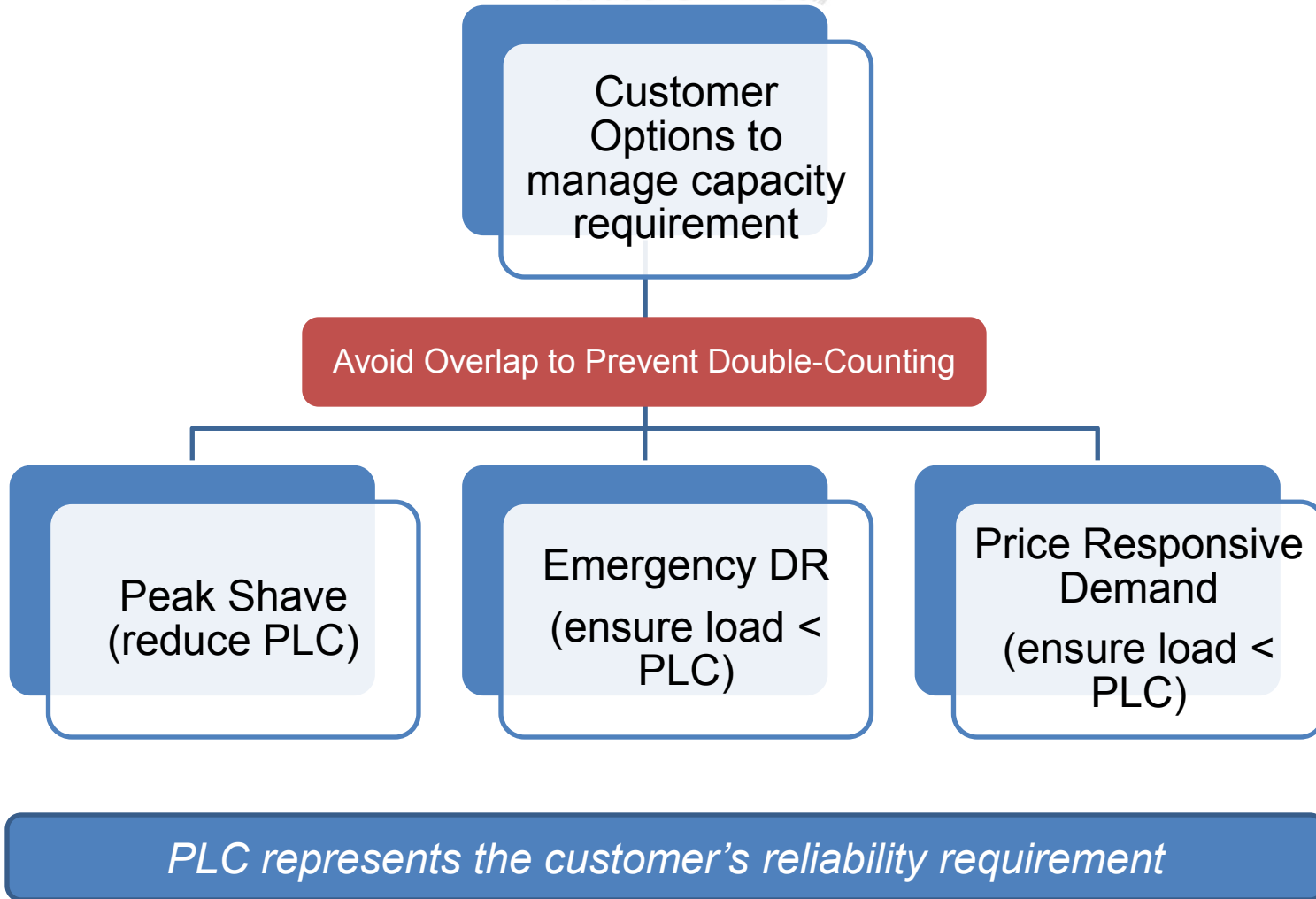


# DR RPM Issues – PJM proposed clarification of PLC related issue

February 22, 2013  
CSTF

## **DR 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**



A flowchart illustrating the PJM DR participation structure. It features three blue rounded rectangular boxes arranged horizontally, connected by a large, light blue arrow pointing to the right. The first box contains the text "DR nominates based on PLC". The second box contains "DR compliance based on load reduced below PLC". The third box contains "DR add backs based on load reduced below PLC".

DR nominates  
based on PLC

DR compliance  
based on load  
reduced below  
PLC

DR add backs  
based on load  
reduced below  
PLC

PLC represents the reliability (capacity) requirement for the customer

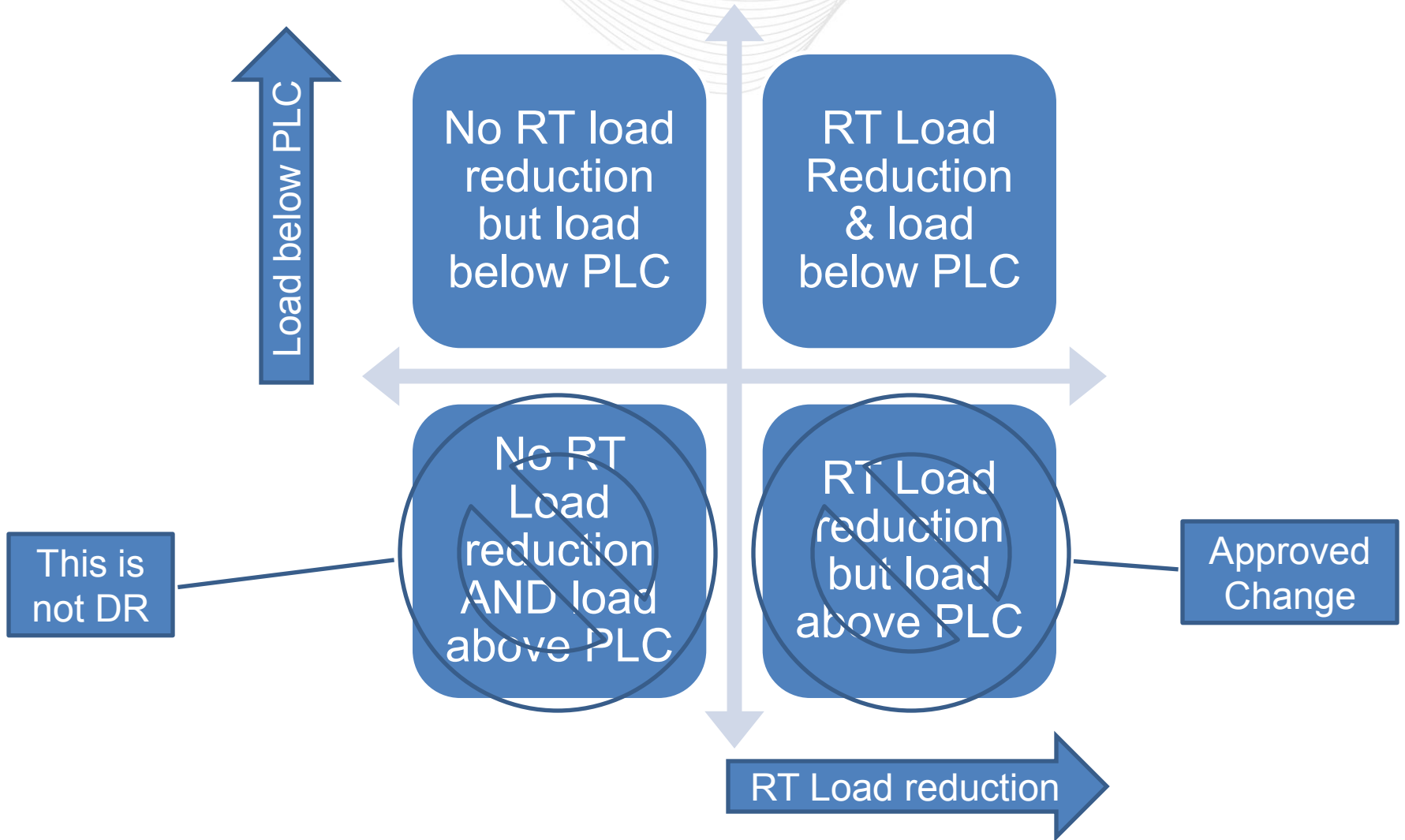


# Prior stakeholder process to address double-counting issue

	12/13 BRA		13/14 BRA							14/15 BRA							15/16 BRA																			
Items	summer 2008	May-2009	summer 2009	Dec-2009	Jan-2010	Feb-2010	Mar-2010	Apr-2010	May-2010	Jun-2010	Jul-2010	Aug-2010	Sep-2010	Oct-2010	Nov-2010	Dec-2010	Jan-2011	Feb-2011	Mar-2011	Apr-2011	May-2011	Jun-2011	Jul-2011	Aug-2011	Sep-2011	Oct-2011	Nov-2011	Dec-2011	Jan-2012	Feb-2012	Mar-2012	Apr-2012	May-2012	Jun-2012		
Training & member Q&A on GLD specifics																																				
Load Mgt Performance RPT - identifies GLD problems (comparable day)																																				
CSP reports of questionable behavior (contract MW > PLC)																																				
LMTF created by MIC - meets on variety of issues including Capacity M&V																																				
LMTF identifies issue with GLD above PLC (double counting)																																				
MIC endorsement of proposal to eliminate double counting (limit reduction below PLC) and change Comparable Day definition																																				
MRC approves part of proposal but defers other until Kema study complete (Comparable Day update & limit reduction to below PLC, etc)																																				
CSP reports of questionable behavior (contract MW > PLC)																																				
PJM & MMU publish statement regarding appropriate and inappropriate DR behavior for market																																				
FERC ruling on published PJM/MMU statement - treat as if it has not been issued																																				
MC approval of tariff language FERC filing to clarify and change existing rules (GLD must occur below PLC)																																				
Empirical analysis on DR M&V (Kema study) complete - GLD Comparable Day not accurate and recommendation is to use FSL for capacity compliance determination																																				
FERC approval and suspension of FERC filing																																				
FERC approval of filing subject to 60 day compliance filing (current state)																																				
FERC final filing (transition plan)																																				
FERC approval																																				
New M&V rules in effect																																				

- PJM's proposal provides a reasonable method for assuring that it meets its reliability targets.
  - PLC is reasonable performance metric
- Load drop must be relative to PLC which is consistent with Capacity nomination process
  - In this proceeding, PJM's proposal only acts to apply capacity nomination rules to capacity performance, which, as stated above, we find to be just and reasonable.
- PJM reliability concerns sufficiently supported – additional capacity could well be required
- FERC agrees that GLD means customer must drop load in real time for emergency and if already down then provided no load reduction.
- GLD load drop used to determine compliance will also be used for add back process

Customer's PLC is integral part of participation



- PJM suggested that stakeholders consider whether there may be a more accurate metric for establishing an end-use customer's reliability requirement than its peak load contribution ("PLC") as currently defined, or a better process to determine the customer's PLC. That and subsequent discussions demonstrate that a small number of curtailment service providers ("CSPs") continue to advocate abandoning reliance on end users' respective PLCs for purposes of measuring and verifying the performance of demand response capacity resources. These members support changing to an energy-based metric for measurement and verification ("M&V") of capacity performance, similar to the position that stakeholders considered at length, and ultimately rejected, in previous stakeholder discussions

Reliability requirement = Capacity Requirement



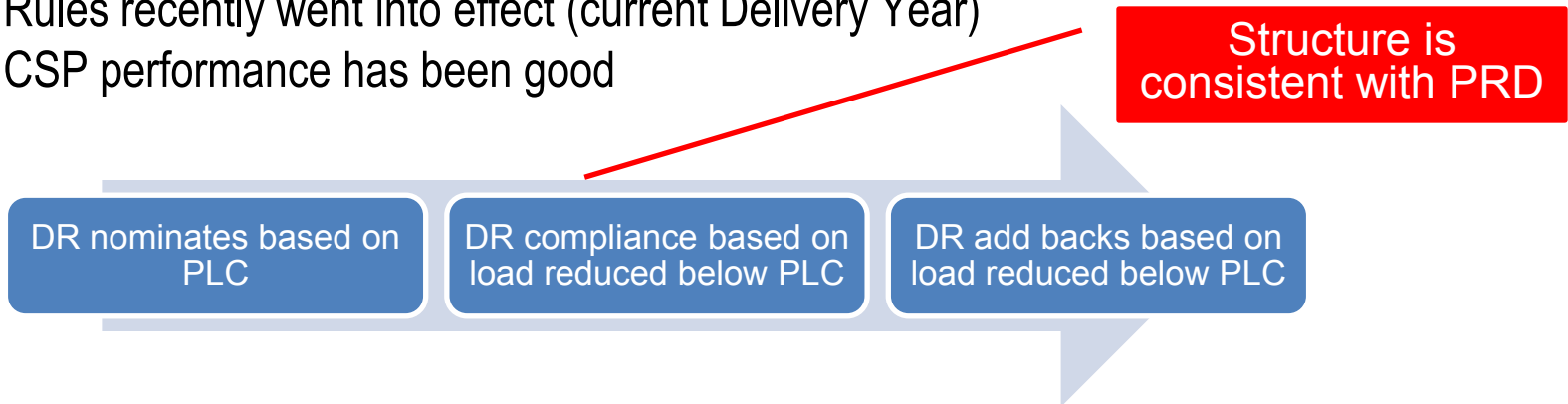
- In PJM's view, however, the performance of demand response resources in 2012 under the PLC M&V metric confirms the merit of the PLC for that purpose. PJM's preliminary analysis shows that, during two emergency dispatch events in July 2012, emergency demand response resources provided 104 percent and 103 percent, respectively, of their applicable capacity commitments.<sup>17</sup> This is in contrast to performance in previous years. It also indicates that, as anticipated in PJM's previous submissions in this docket, implementation of the new M&V rules that the Commission approved in this proceeding did not negatively affect demand response performance, while ensuring the reliability of the PJM system during system dispatch emergencies.

- Customer PLC Risk - Customer wants to be fully interruptible but does not know PLC 3 years in advance for BRA
- PLC may not be the “most” accurate reflection of individual customer’s capacity requirement
  - Customer load changes (growth or decline) is incorporated in PLC on a lagged basis - Customer’s load will grow this year but PLC is based on prior year’s load

Stakeholders indicated they would like to discuss these 2 items, but unclear on interest for broader PLC item

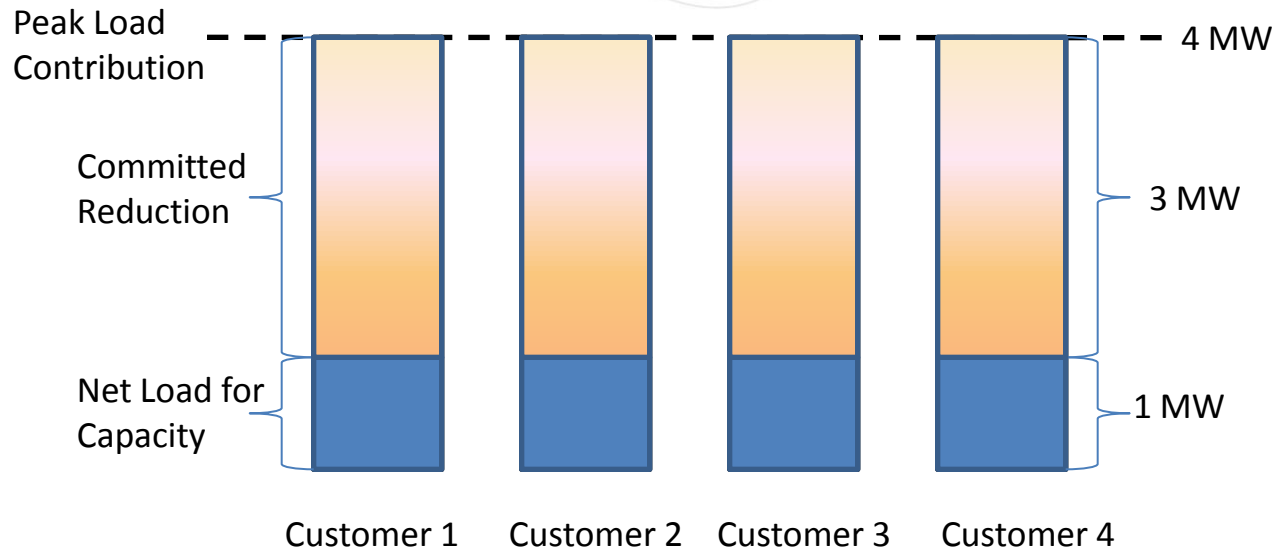
# PJM proposed issue clarification (PJM does not see this as a current issue)

- Do stakeholders want to consider any rules/guidelines or changes to the calculation of customer's PLC which represents the customer specific reliability requirement?
  - This was specifically not considered during prior stakeholder discussions
  - Proposed change may impact CSPs, EDCs and LSEs
    - Retail jurisdictional considerations
- Maintain structure of DR participation
  - Discussed in prior robust stakeholder process
  - addressed double-counting issue in the market
  - Rules recently went into effect (current Delivery Year)
  - CSP performance has been good

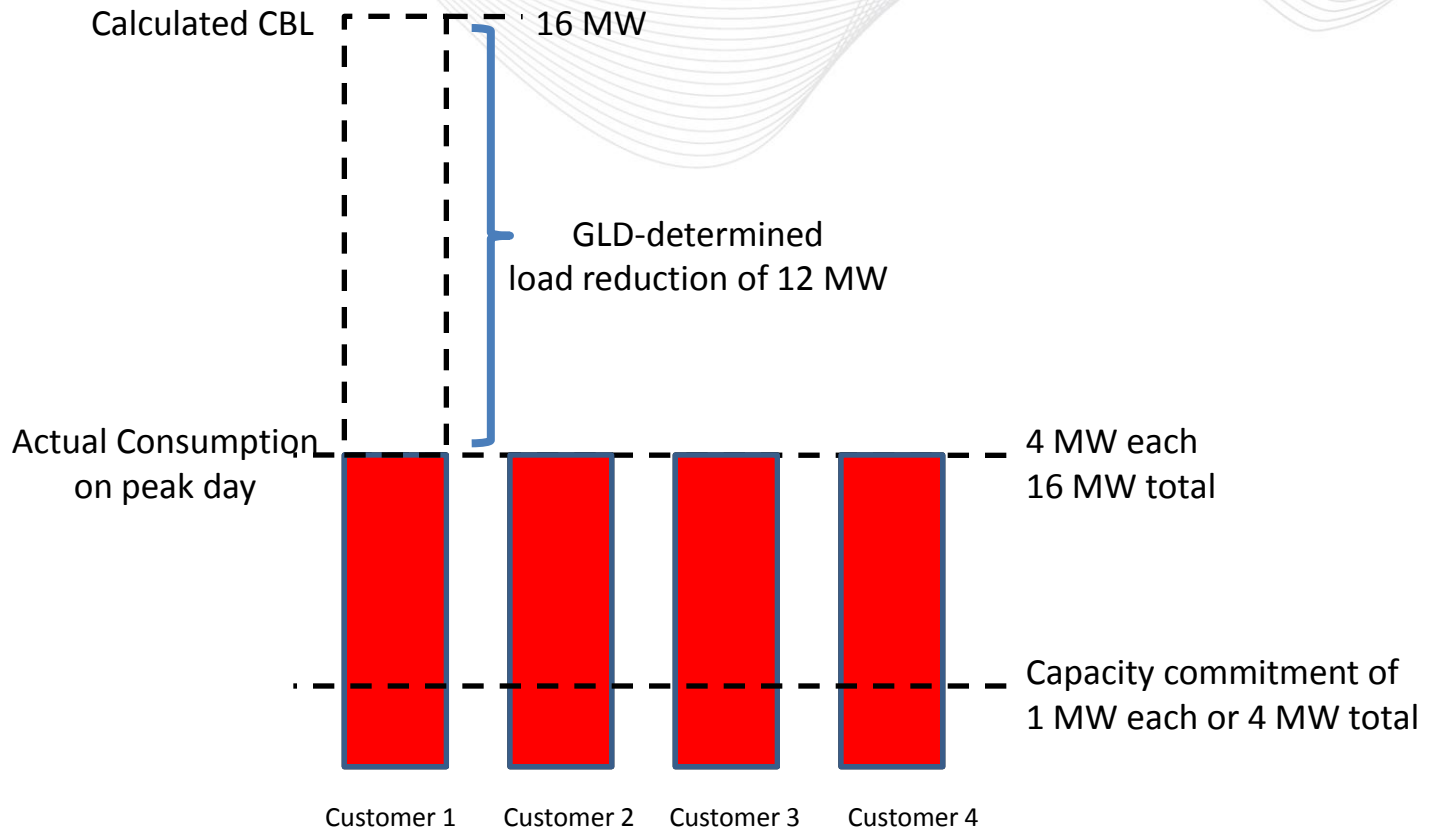


- Double Counting example
- High level DR overall time line

# Simple Example of issue



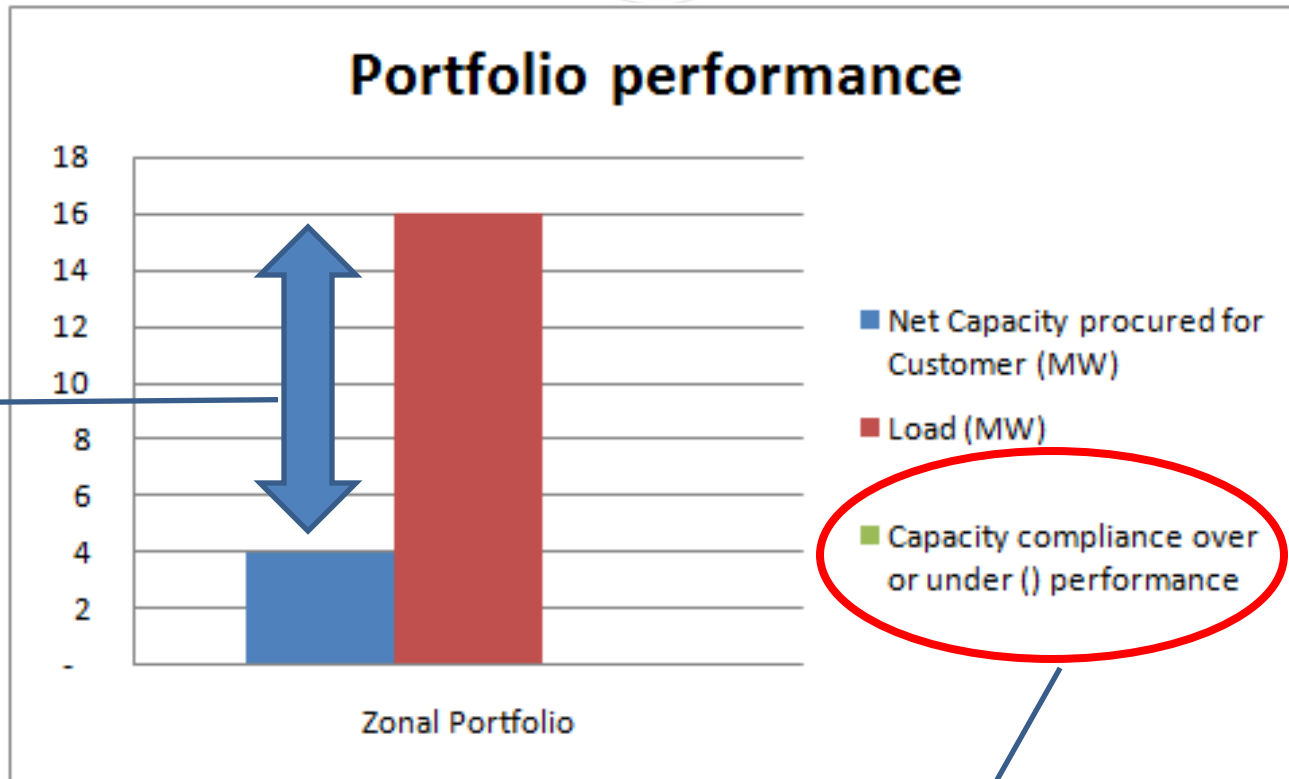
- PJM buys capacity for 4 MW based on the net capacity commitment of these four customers
- All four customers consume 4 MW on the peak day. PJM therefore must serve 16 MW of load instead of the 4 MW for which capacity was purchased



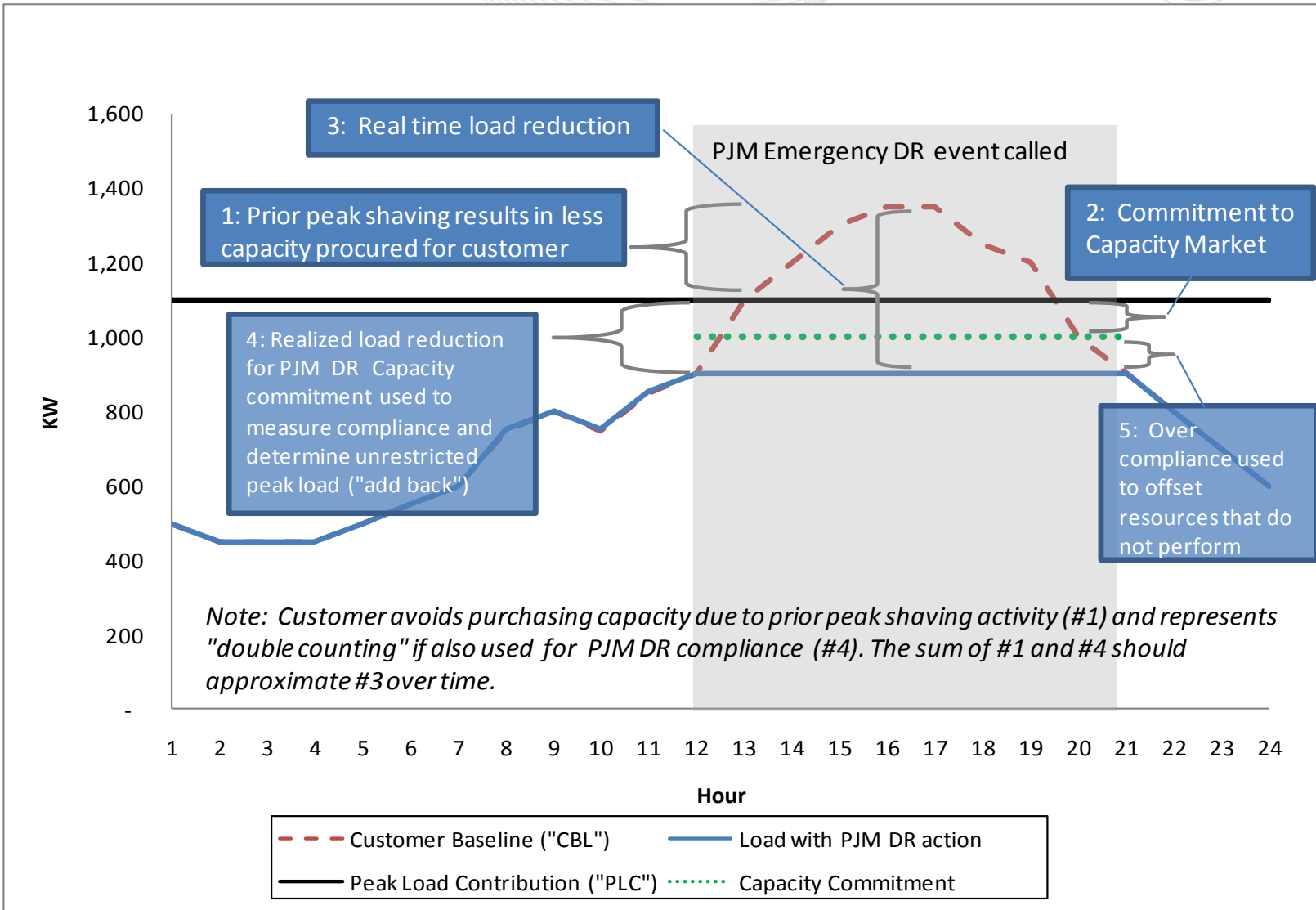
- Customer 1 submits a reduction quantity of 12 MW based on a calculated CBL of 16 MW and its actual load of 4 MW. Customer 2, 3 and 4 did not reduce load.
- As a result of this “double counting” all four customers appear compliant because the “over-response” of Customer 1 is applied to the shortfall for Customer 2 – 4.

Load higher than capacity procured during system emergency

Gap in capacity needed for system



CSP deemed to have fully complied with 12 MW capacity commitment which displaced 12 MW of capacity from another supplier





Steps	Activity	Jan-09	Apr-09	Jun-09	Oct-09	Jan-10	Apr-10	Jun-10	Oct-10	Jan-11	Apr-11	Jun-11	Oct-11	Jan-12	Apr-12	DY 1				DY 2				
																	Jun-12	Oct-12	Jan-13	Apr-13	Jun-13	Oct-13	Jan-14	Apr-14
1	Forecast to determine Reliability Requirement		█																					
2	BRA auction - DR capacity commitments for DY1		█																					
3	Customer 5 CP usage used as input to PLC for DY1											█												
4	EDC makes available customer PLCs (~1/1).													█										
5	CSP registers DR - nomination based on load < PLC													█										
6	CSP event performance (depends on product)													█										
7	CSP test performance													█										
8	CSP add backs for DY 2 based on usage in summer DY 1																							
9	Customer 5 CP usage used as input to PLC for DY1																							
10	EDC makes available customer PLCs (~1/1) for DY 2																█							