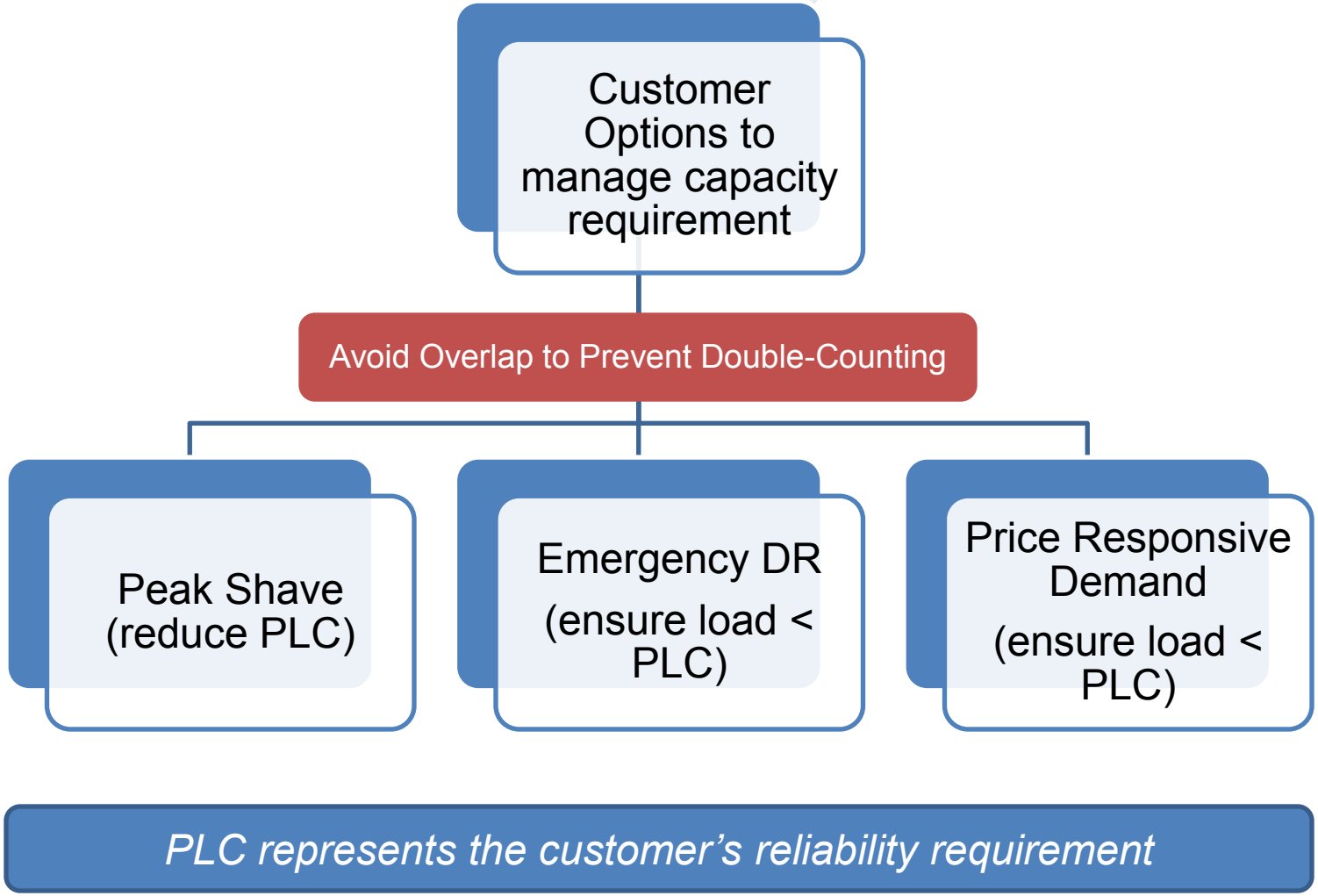
DR RPM Issues – PJM proposed clarification of PLC related issue

February 22, 2013

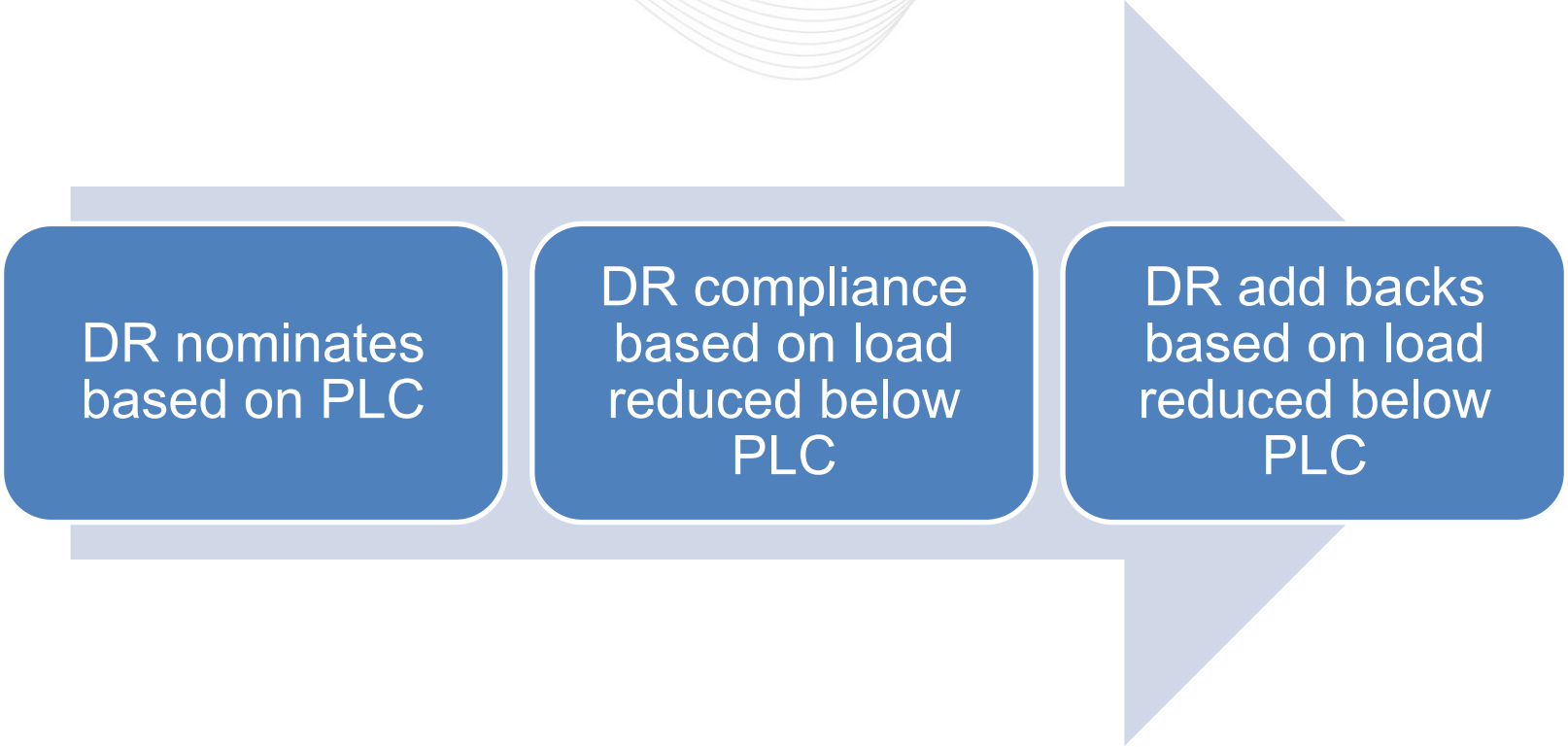
CSTF

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

Background

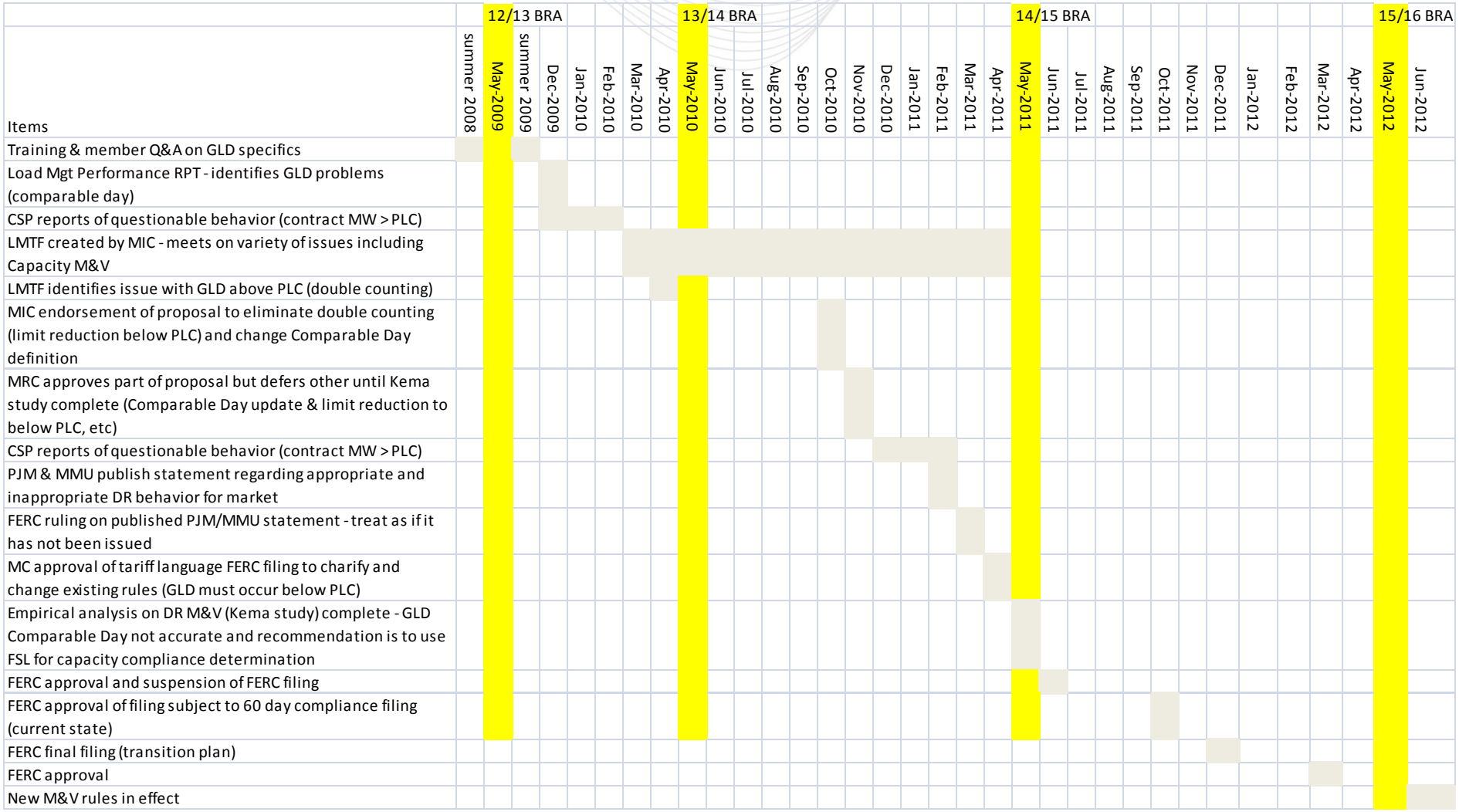


PJM DR participation structure



PLC represents the reliability (capacity) requirement for the customer

Prior stakeholder process to address double-counting issue

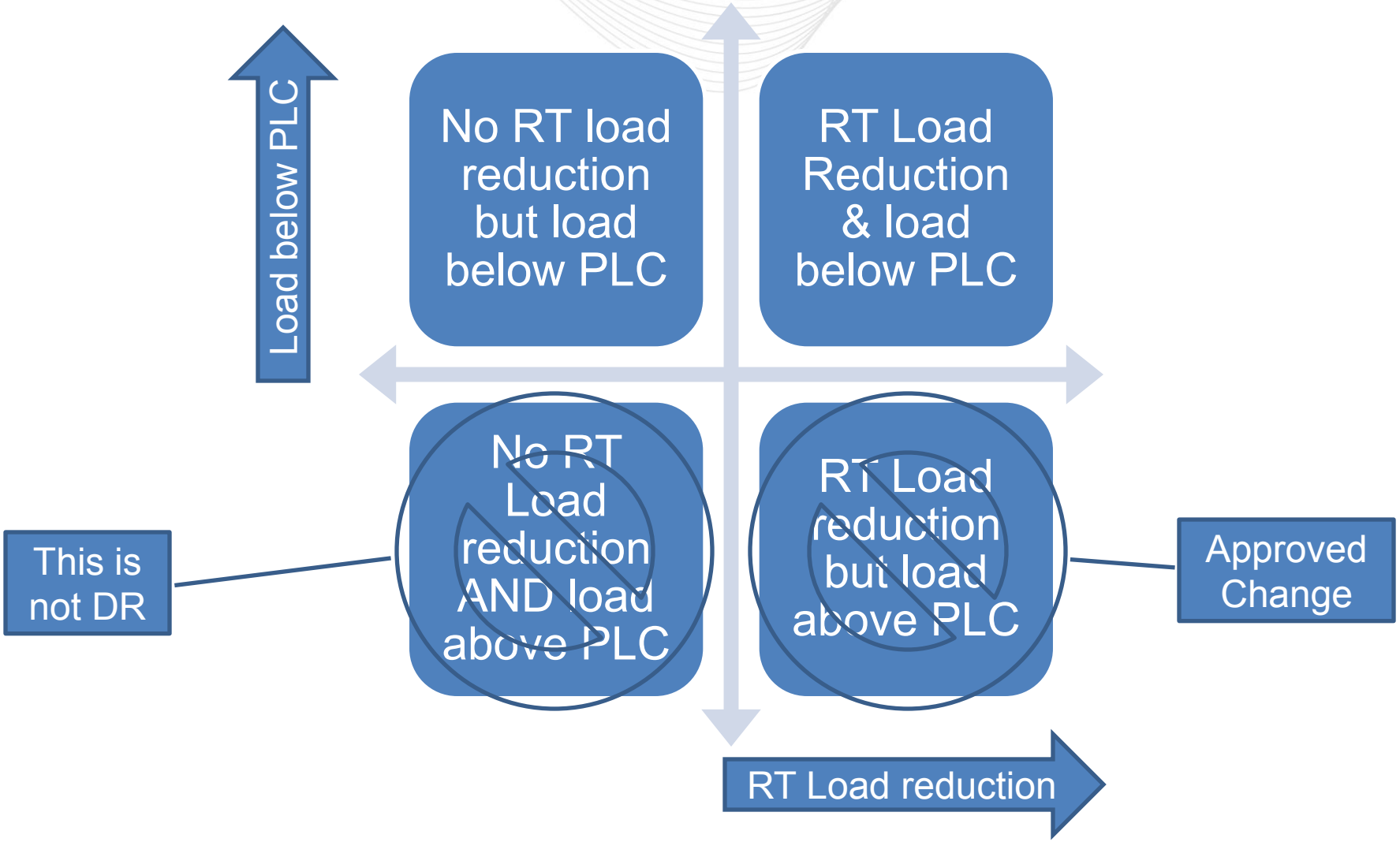


FERC Order outcome (relevant portion)

- 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

M&V change for double counting



PJM informational report

- 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

PJM informational report (cont')

- 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.17 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.

What specific PLC issues does the CSTF want to discuss?

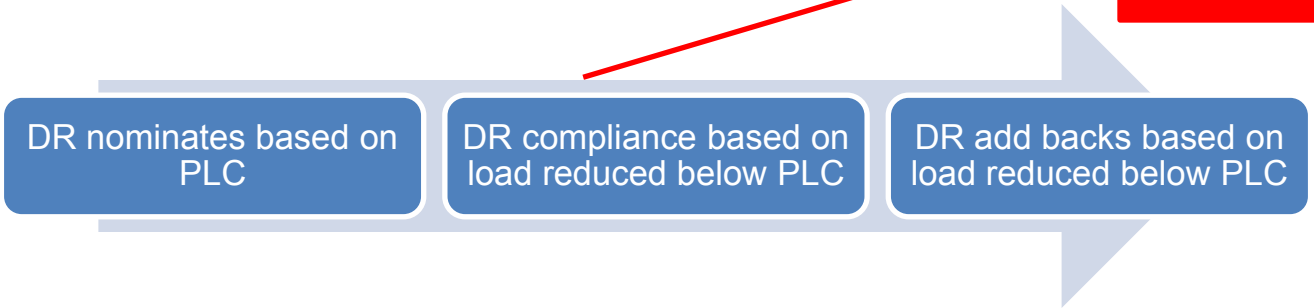
- Customer PLC Risk - Customer wants to be fully interruptible but does not know PLC 3 years in advance for BRA
- PLC may not be the "most" accurate reflection of individual customer's capacity requirement
  - Customer load changes (growth or decline) is incorporated in PLC on a lagged basis - Customer's 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

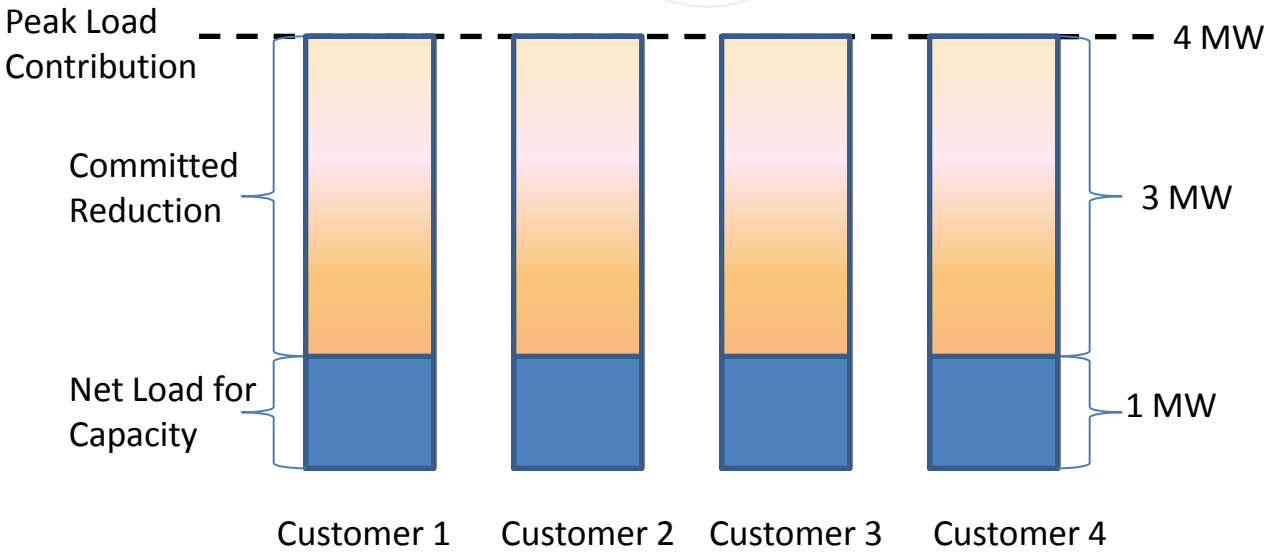
Structure is consistent with PRD



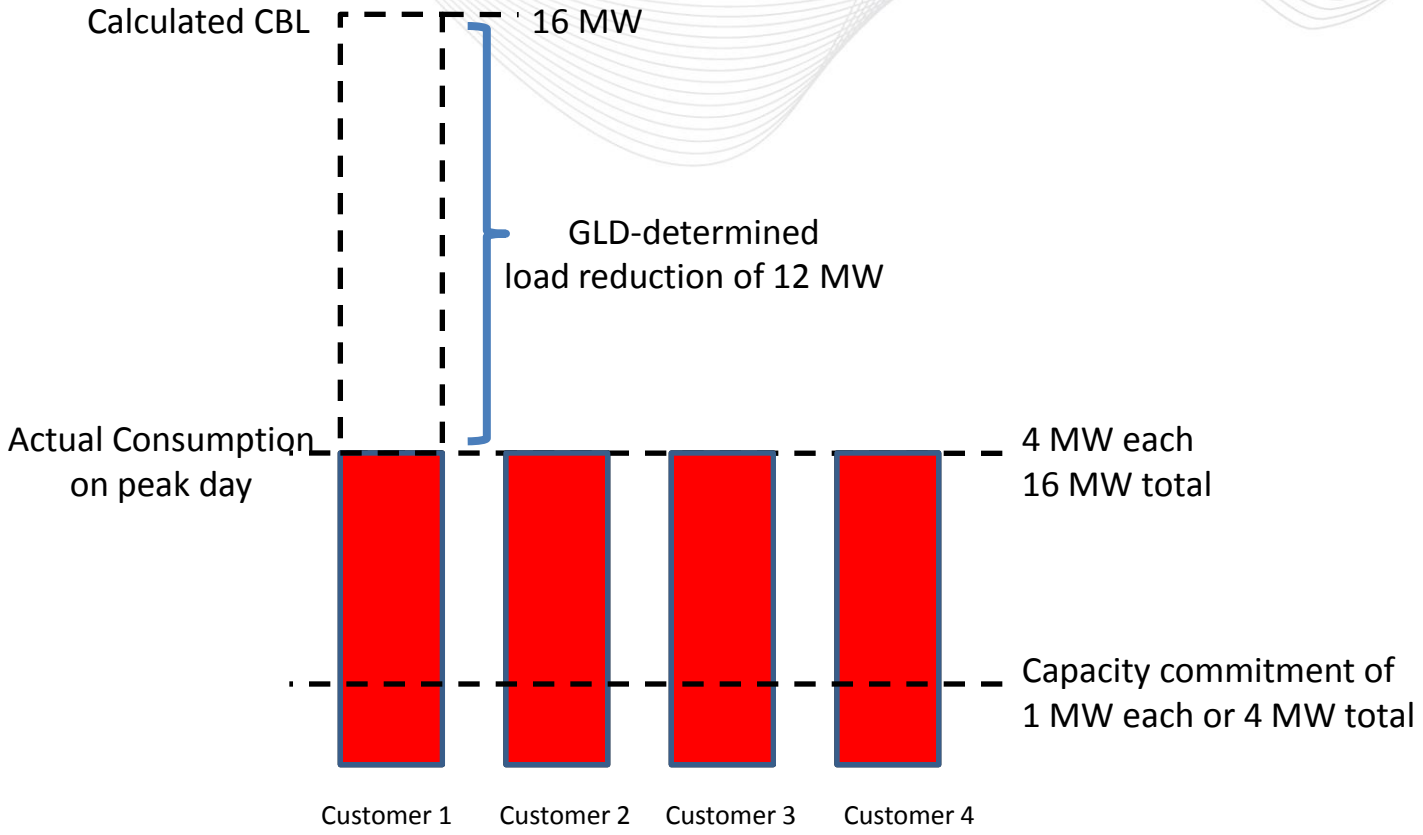
Appendix

- Double Counting example
- High level DR overall time line

Simple Example of issue

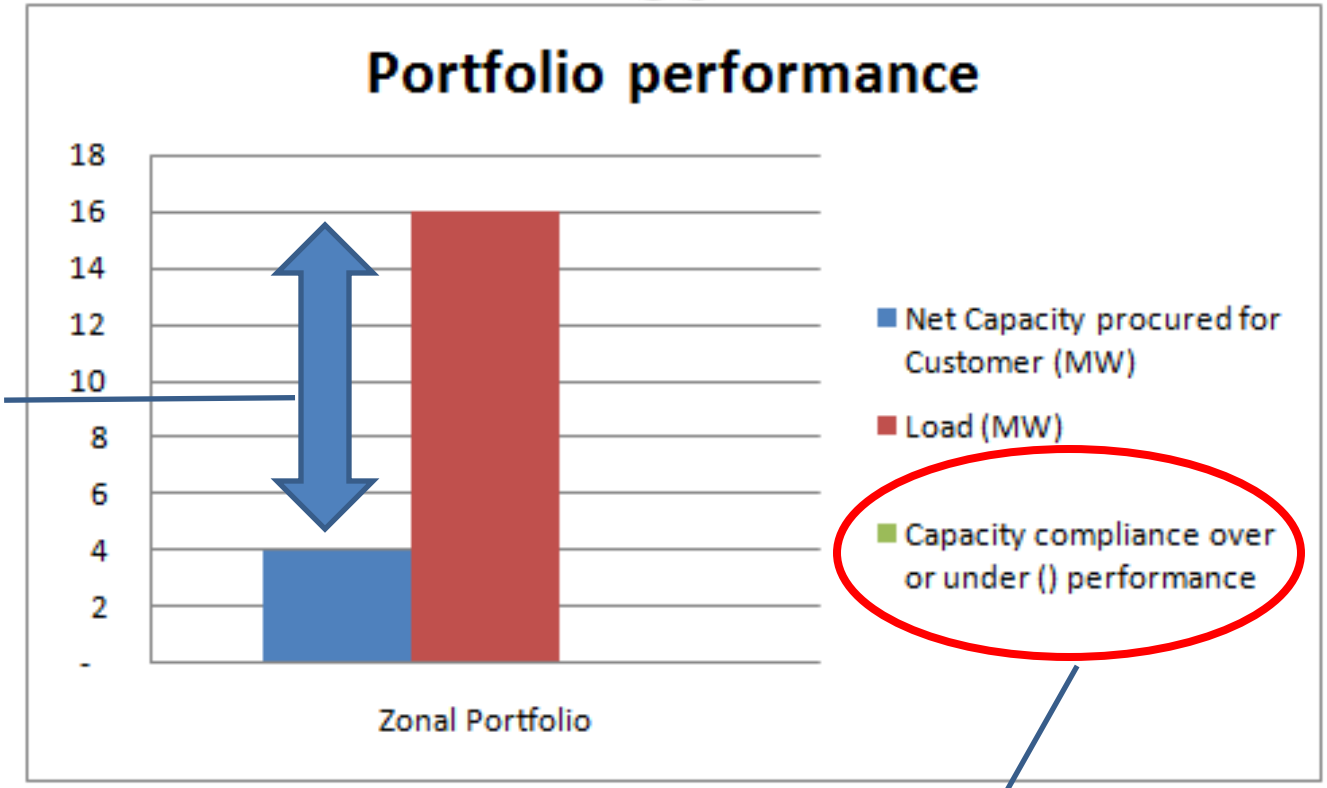


- PJM buys capacity for 4 MW based on the net capacity commitment of these four customers
- All four customers consume 4 MW on the peak day. PJM therefore must serve 16 MW of load instead of the 4MW for which capacity was purchased



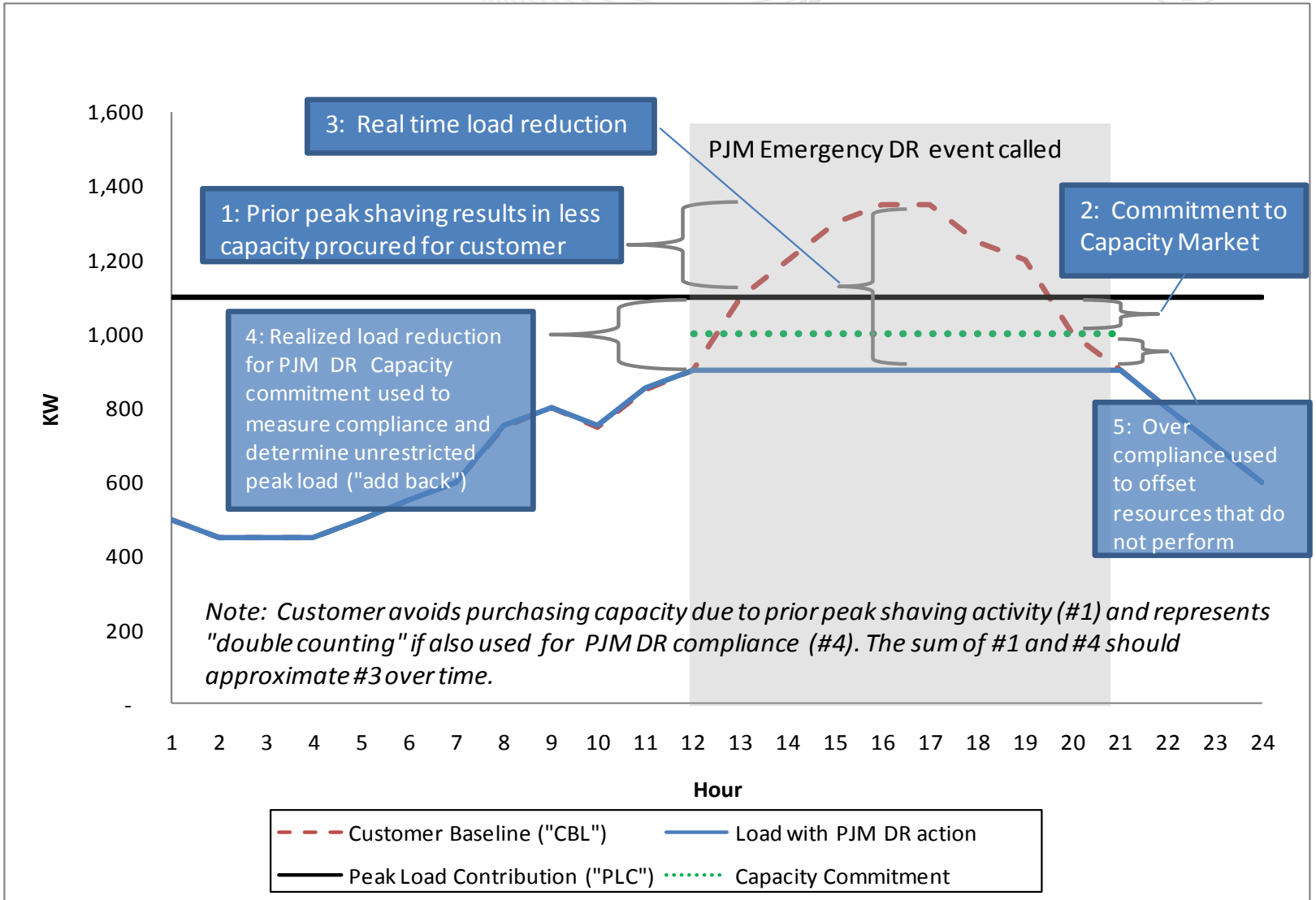
•Customer 1 submits a reduction quantity of 12 MW based on a calculated CBL of 16 MW and its actual load of 4 MW. Customer 2, 3 and 4 did not reduce load.
•As a result of this "double counting" all four customers appear compliant because the "over-response" of Customer 1 is applied to the shortfall for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


3: Real time load reduction
PJM Emergency DR event called
1: Prior peak shaving results in less capacity procured for customer
2: Commitment to Capacity Market
4: Realized load reduction for PJM DR Capacity commitment used to measure compliance and determine unrestricted peak load ("add back")
5: Over compliance used to offset resources that do not perform
Note: Customer avoids purchasing capacity due to prior peak shaving activity (#1) and represents "double counting" if also used for PJM DR compliance (#4). The sum of #1 and #4 should approximate #3 over time.
KW
1,600
1,400
1,200
1,000
800
600
400
200
-
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour
Customer Baseline ("CBL")
Load with PJM DR action
Peak Load Contribution ("PLC")
Capacity Commitment

High Level DR Timeline