



An Enel Group Company

PJM Summer Only DR Senior Task Force:
**Key Components to Aligning Wholesale and
Retail Electricity and Proposal Updates**

August 2, 2018

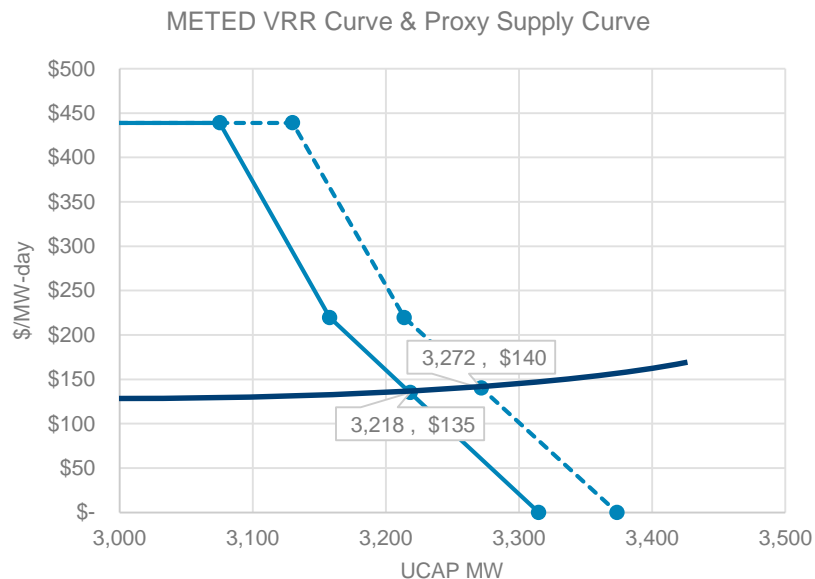
Overview

- We have received feedback and reviewed stakeholder survey results.
- Presentation
 - Explains three themes we believe are missing from current proposals.
 - Updates the Matrix on these three issues and other additional changes since prior version.

Summary

- PJM has a pivotal opportunity to align retail and wholesale markets.
- Key issue: A customer can participate in both Capacity Performance and Load Forecast Adjustment.
 - This can be achieved so long as the customer is compliant with individual program requirements
 - Logical with current PJM planning and resource adequacy model
 - Consistent with current PJM practice
- Eligibility must allow customers participating in retail and wholesale
- “Add Backs” are a valued planning mechanism
- Energy payment rules should be continued

Example: LFA is primarily retail-economic, distinct from reliability-wholesale



- 50 MW of LFA-qualified retail peak-shaving program (Act 129)
- Pre-LFA capacity costs to MetEd LSEs = 3,272 MW x \$140/MW-day x 365 days = **\$167.2 MM**
- Post-LFA capacity costs cost to MetEd LSEs = 3,218 MW x \$135/MW-day x 365 days = **\$158.6 MM**
- Savings = **\$8.6 MM**
- PPUC decides to “keep” X% as savings for all MetEd ratepayers; allocate (1-X)% of savings as direct compensation to program participants via non-bypassable retail charge to all MetEd ratepayers
- Assumptions:
 - 1:1 ratio of Act 129 MW:LFA MW
 - PJM has perfect load forecast at time of BRA
 - No IA activity
 - \$0.10/MW supply curve sensitivity

1. Eligibility must allow customers participating in retail and wholesale

- Problem Statement
 - “PJM recognizes there may still be Demand Response **resources** that are unable to make annual commitments, unable to aggregate commercially prior to the auction, or unable to clear as “summer only” through the new enhanced aggregation rules that have been implemented as part of the auction clearing process. PJM understands that these resources have made investments, and in some instances commitments to **state regulators**, that will result in their continued operation (primarily as peak shaving resources).” (emphasis added)
- FERC has demonstrated interest in eliminating market barriers to customer participation in both retail and wholesale programs.
 - Peak shaving is a retail activity for financial purposes.
 - Emergency dispatch is for wholesale grid reliability.
- PJM’s current proposal is a step backwards on this issue.

Key issues regarding “eligibility”

- Currently, customers are already participating as CP resources and impacting the load forecast via state programs.
- PJM has developed analytical tools to recognize state load management mechanisms into load forecast models more effectively than is done with current models.
- LFA is a valuable asset to states and demonstrates enhanced value that PJM brings to ratepayers across states in region.

2. “Add Backs” are a valued planning mechanism

- Where are we now?
 - PJM calculates “add backs” for wholesale DR dispatches in order to develop an unrestricted load profile to feed into load forecast models, but retail DR and peak-shaving are not included.
- Where does PJM want to go?
 - PJM acknowledged in its June 2017 DR Strategy paper that significant increases or decreases in retail “load management” behavior could result in over- or under-procurement of capacity, leading to unnecessary costs to load or potential reliability concerns.
- Dangers of not going there?
 - Not incorporating LFA add backs in developing the unrestricted load profile would result in “double-counting” LFA-qualified MWs after year 1 and limit the flexibility of retail program administrators to adjust MW values from year to year (e.g. ramping Act 129 from 50 MW to 250 MW over time).
- Model forward
 - Assuming PJM will know individual customers’ service account numbers for each LFA-qualified state program, PJM should mirror its existing wholesale DR add back process for LFA dispatches.

3. Energy payment rules should be continued

- What is currently done for state peak shaving?
 - PJM has already provided guidance for status quo interactions of state programs with wholesale markets.
 - When triggered, a PA Act 129 customer must curtail via their registered amount in the state program.
 - A customer is prohibited from receiving PJM wholesale energy market payment during this curtailment.
- How should existing principles be extended to LFA?
 - Customers will continue to not offer or receive wholesale energy market payments (RT, DA, SRM, Reg) during LFA-only dispatch.
 - If there is a retail LFA dispatch at same time of wholesale ELRP dispatch, there is a wholesale emergency energy payment in light of the ELRP activity.
 - If a customer enrolled in LFA and wholesale programs, and experiences a wholesale-only event, customer is eligible for wholesale energy payment.

Matrix Updates

Key Updates to Matrix

- M&V
- Eligibility
- Add backs
- Timeline
- Precautions to prevent double payment

2a. Performance Measurement (M&V)

PJM	EnerNOC	Explanation
Current Economic DR Rules to determine real time energy market load reductions.	Current Economic DR Rules to determine real time energy market load reductions.	Same, pending further discussion. If DA dispatch, CBL may need to use alternative method to SAA in order to account for weather-sensitive load or other real-time factors correctly.

2c. Curtailment Triggers

PJM	EnerNOC	Explanation
THI threshold as determined by EDC.	As determined by Program Administrator (EDC, LSE, CSP, State or Other) – THI or day-ahead load forecast. Other triggers may be used so long as PJM can also model them.	Preserves status quo of current state programs modelled on day-ahead load forecast. Recognizes long timeline to make changes to state programs. Preserves flexibility to identify new triggers that may be more effective at predicting peak load in future.

2g. Supervisory Control

PJM	EnerNOC	Explanation
<p>EDC or its agent is fully responsible to fulfill the load forecast adjustment requirements which are focused on improving the accuracy of the long term zonal load forecast. EDC or its agent manages a portfolio of interruptible customers under an approved RERRA tariff and can rotate interruptions amongst its customers to provide the required MW amount of peak shaving while also respecting the interruption limits on each customer.</p>	<p>Program Administrator (EDC, LSE, CSP, State or Other) is fully responsible to fulfill the load forecast adjustment requirements which are focused on improving the accuracy of the long term zonal load forecast. Program Administrator manages a portfolio of interruptible customers under an approved RERRA tariff and can rotate interruptions amongst its customers to provide the required MW amount of peak shaving while also respecting the interruption limits on each customer.</p>	<p>Adopts new PJM language with important tweak: recognizes under RERRA control to determine whether it is EDC or another regulated entity.</p>

2k. Interruption Days

PJM	EnerNOC	Explanation
Unlimited as dictated by the THI threshold.	Unlimited, as dictated by the chosen threshold.	Allows state flexibility while accomplishing PJM goals.

2m. Eligibility

PJM	EnerNOC	Explanation
Load reduction programs governed by EDC tariffs that will meet the PJM load forecast adjustment criteria for the committed delivery year. Customers that are included in load forecast adjustment may not also participate as DR (Economic or Load Management) or PRD for the same Delivery Year	Retail load reduction programs governed by EDC or other State Program tariffs that will meet the PJM load forecast adjustment criteria for the committed delivery year. Customers that are included in load forecast adjustment may also participate as wholesale DR for the same Delivery Year.	Key differentiator from PJM proposal.

2o. Rules Regarding Party who Receives Value

PJM	EnerNOC	Explanation
Zone	Zone	Now the same as PJM, reflecting feedback we received.

2p. Operational Control

PJM	EnerNOC	Explanation
<p>EDC or its agent is fully responsible to fulfill the load forecast adjustment requirements which are focused on improving the accuracy of the long term zonal load forecast. EDC or its agent manages a portfolio of interruptible customers under an approved RERRA tariff and can rotate interruptions amongst its customers to provide the required MW amount of peak shaving while also respecting the interruption limits on each customer.</p>	<p>Program Administrator (EDC, LSE, CSP, State or Other) is fully responsible to fulfill the load forecast adjustment requirements which are focused on improving the accuracy of the long term zonal load forecast. Program Administrator manages a portfolio of interruptible customers under an approved RERRA tariff and can rotate interruptions amongst its customers to provide the required MW amount of peak shaving while also respecting the interruption limits on each customer.</p>	<p>Adopts new PJM language with important tweak: recognizes under RERRA control to determine whether it is EDC or another regulated entity.</p>

2q. Add backs

PJM	EnerNOC	Explanation
TBD	PJM will mirror its existing wholesale DR add back process for LFA dispatches.	New design component, essential to recognize state peak shaving.

4. Timeline for reporting program components to PJM

PJM	EnerNOC	Explanation
August 31st prior to BRA.	August 31 st prior to BRA and applicable deadlines prior to each IA.	Updated from just BRA, recognizing this is essential for aligning state timelines and to preserve reliability.

5. Applicable auction

PJM	EnerNOC	Explanation
BRA	Load Forecast Adjustments can be made in BRAs and Incremental Auctions to adjust LFA MWs based on realities.	Updated from just BRA, recognizing this is essential for aligning state timelines and to preserve reliability.

6. Precautions to prevent double payment

PJM	EnerNOC	Explanation
TBD	Customers will continue to not offer or receive wholesale energy market payments (RT, DA, SRM, Reg) during LFA-only dispatch. If there is a retail LFA dispatch at same time of wholesale ELRP dispatch, there is a wholesale emergency energy payment in light of the ELRP activity. If a customer enrolled in LFA and wholesale programs experiences a wholesale-only event, customer is eligible for wholesale energy payment.	New design component, extending current PJM practices on treatment of state peak shaving customers to LFA customers.

Conforming changes

- Several design component options included language that has been confusing to readers and should simply state Non-Applicable (“N/A”)
 - 2d. Energy Market Must-Offer Requirement – N/A
 - 2e. Capacity Market MW valuation – N/A
 - 2h. Capacity Market Replacement Mechanism – N/A
 - 3. Capacity Performance Seasonal Aggregation – N/A

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