



PJM Summer Only DR Senior Task Force: **Proposal D Overview**

August 15, 2018

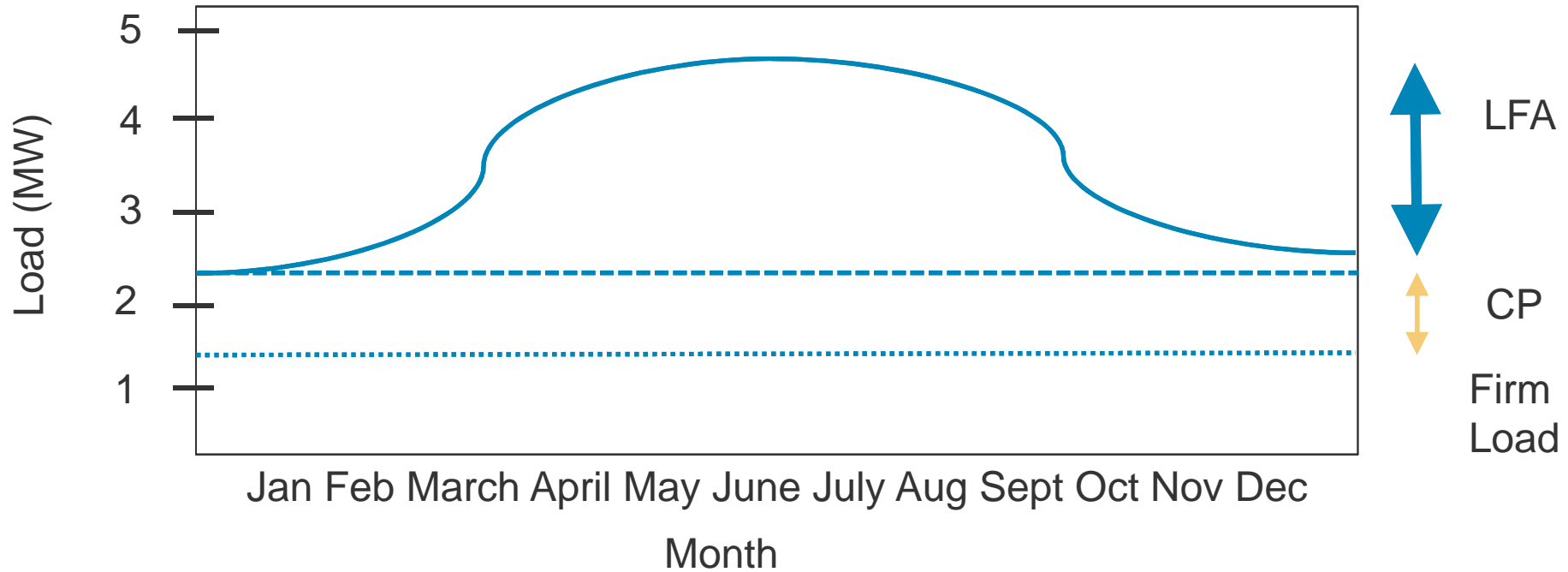
Overview

- Clarifies that customers participating in CP and LFA will use separate curtailment capability for each, in response to stakeholder requests.
- This presentation also describes other key features of our proposal.

Background

- PJM has a pivotal opportunity to align retail and wholesale markets.
- SODRSTF premise: state peak shaving summer DR resources should have opportunity to be valued. Many of these customers are also year-round DR CP.
- A customer can participate in both Capacity Performance and Load Forecast Adjustment so long as the customer is compliant with individual program requirements and no double counting.
- Key measures to prevent double counting (“Safeguards”):
 - M&V
 - Add Backs
 - Energy payment rules

Proposal D Example Customer Load: MW Curtailments under CP and LFA



1. Measurement & Verification

- An M&V process will be in force to demonstrate the MWs that are registered as ELRP are not the same MWs that are registered as LFA.
- In the case of an event, this M&V process will clearly capture that the source of curtailment is the resource originally identified as ELRP or LFA.
- If ELRP and LFA events are simultaneous, this M&V process will also demonstrate the cumulative nature of the reductions.

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.

Proposal Details

Key Differentiators

- M&V
- Triggers
- Eligibility
- Operational and Supervisory Control
- 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. An M&V process will be in force to demonstrate the MWs that are registered as ELRP are not the same MWs that are registered as LFA. In the case of an event, this M&V process will clearly capture that the source of curtailment is the resource originally identified as ELRP or LFA. If ELRP and LFA events are simultaneous, this M&V process will also demonstrate the cumulative nature of the 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. This process also clarifies that no double counting will occur for customers enrolled in CP. |

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 or Order 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 |
|---|--|---|
| <p>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</p> | <p>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 incrementally as wholesale DR for the same Delivery Year. Customers must clearly identify what curtailment activity is related to which program. The same MW cannot be counted under LFA and ELRP.</p> | <p>Key differentiator from PJM proposal. New language states explicitly that the same MW cannot be counted twice.</p> |

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 or Order 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> |

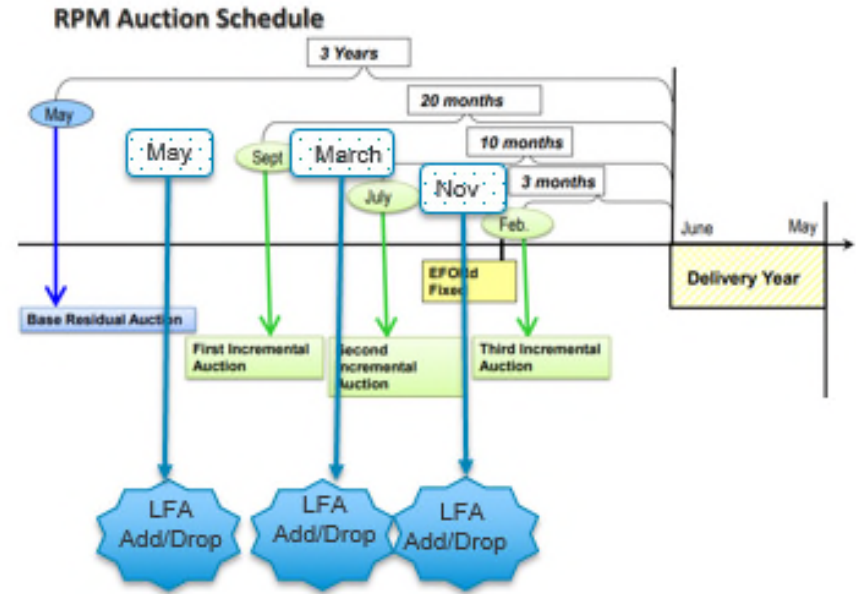
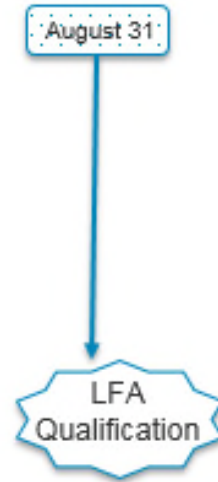
2q. Add backs

| 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. More discussion is needed if PJM could accept a deadline closer to BRA, such as October 31 st . |

5. Applicable auction



| PJM | EnerNOC | Explanation |
|-----|--|--|
| BRA | Load Forecast Adjustments can be made prior to 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 only for the portion of curtailment registered in ELRP. 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. New language adds details. |

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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