IMM Comments on Proposed DR Penalties

MRC

April 22, 2026

IMM

Monitoring Analytics

Issues with PJM Proposal

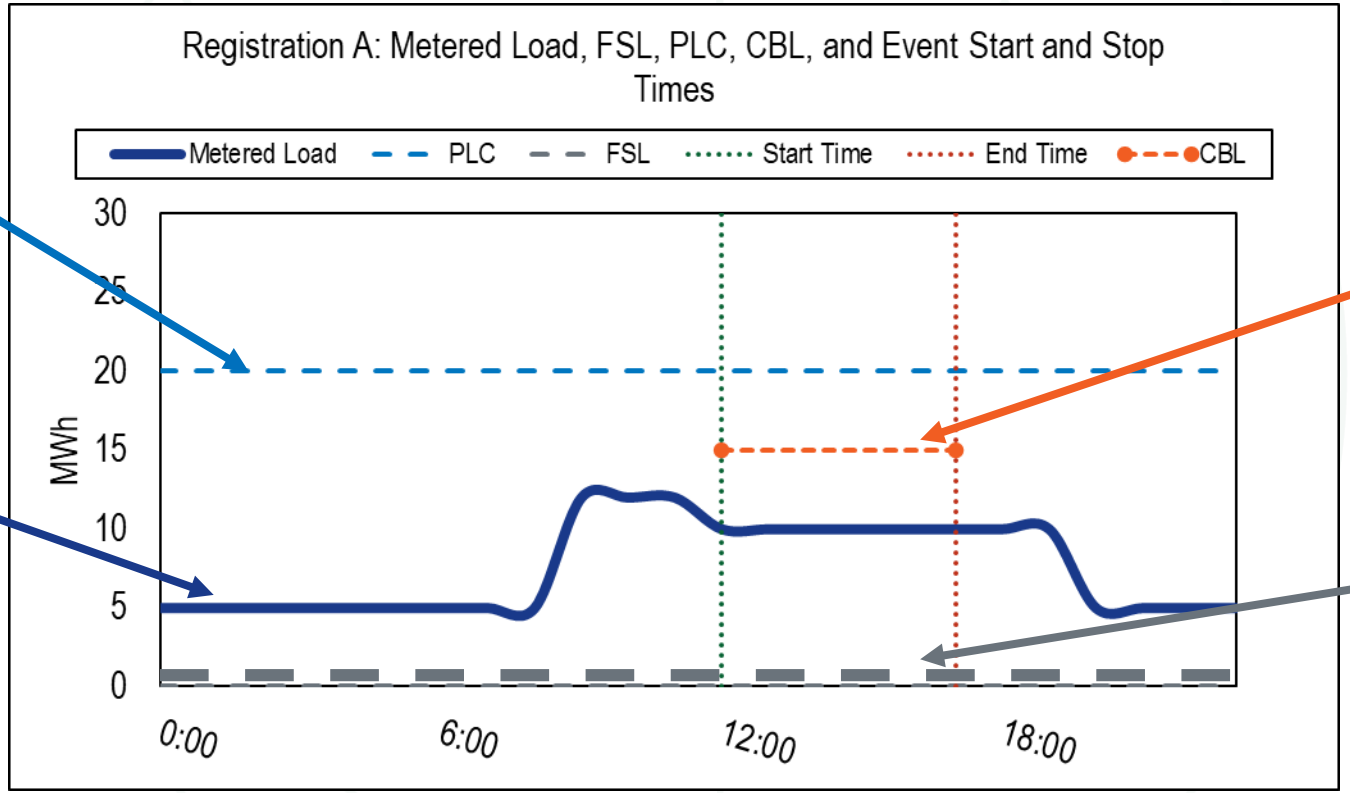
- Tariff and RAA require that Resources reduce load when dispatched
- Demand Resources are paid even if they increase load when dispatched
- Profitable to sell Demand Response even with zero performance
- PJM's proposed penalties are significantly weaker than the existing DR test failure penalty
- Penalties collected should be returned to load that paid for capacity

PERFORMANCE REQUIREMENTS AS DEFINED BY TARIFF AND RAA

Definition of DR Capacity

- DR sellers of capacity are paid for the difference between PLC and FSL
  - PLC is the level of capacity that the customer would have to pay for, but for selling DR.
  - PLC is Peak Load Contribution
  - FSL is the level to which the DR seller of capacity agrees to reduce when called
  - FSL is the level of capacity that the DR seller actually pays for
  - FSL is Firm Service Level

DR Capacity Illustrated



Annual customer peak load (PLC)

Load (Meter)

Estimate of what load would have been without DR event (CBL)

What load needs to reduce to (FSL)

Attachment K Section 8.5

"Following PJM's request to reduce load, (i) participants in the Energy Only Option voluntarily may reduce load; and (ii) participants in the Full Program Option are required to reduce load unless they have reduced load pursuant to the Economic Load Response Program."

RAA Definition of “Firm Service Level” (FSL)

“…’Firm Service Level’ or ‘FSL’ of Demand Resource shall mean the pre-determined level for which an end-use customer's load shall be reduced, upon notification from the Curtailment Service Provider's market operations center or its agent.”

Conclusion

- **Participating demand response registrations are required to take action to reduce their load from their current level to their FSL during an event**

PJM PERFORMANCE METRIC

Issues with Current Performance Metric

- **Current PJM performance metric**

$$PJM\ Performance = \frac{PLC - (Metered\ Load * Loss\ Factor)}{ICAP}$$

where,

$PLC = Peak\ Load\ Contribution$

$FSL = Firm\ Service\ Level$

$ICAP = PLC - FSL$

$$PJM\ Performance = \frac{PLC - (Metered\ Load * Loss\ Factor)}{(PLC - FSL)}$$

Issues with Current Performance Metric

- **Issues**
  - **Performance is measured based on PLC not CBL.**
    - Customer Baseline Load (CBL): estimate of hourly load in absence of DR event
    - CBL is only calculated if the CSP requests settlement
    - Dispatched DR registrations are not required to settle in event hours
    - Registrations that fail to reduce or increase demand are still considered to have positive performance if they are below their PLC

Issues with Current Performance Metric

- **Issues**
  - **Performance is measured based on the PLC, not a CBL.**
    - We cannot know if the registration has met the Tariff's requirement to "reduce load" without a CBL.
    - The purpose of the CBL is to measure what load would have been but for the reduction in load in response to PJM call to reduce.
    - The PLC is a static value that is not based on actual or estimated load and does not take into consideration conditions specific to the day and time of the event.

Issues with Current Performance Metric

- **PJM performance metric excludes/ignores negative performance values**
  - If a registration increases its demand during the event, it is defined to have a performance of 0 MW rather than the actual negative performance.
- **PJM performance metric allows for netting across all registrations in the PJM footprint**
  - Masks poor performers
  - Not aligned with the Tariff and RAA requirement that individual participants reduce load to FSL
  - Reduces PJM's ability to ensure resources perform where needed to address localized reliability problems

IMM Performance Metric Recommendation for FSL Registrations

$$IMM\ Performance = \frac{(CBL - Metered\ Load)}{(CBL - FSL)}$$

where,

$CBL = Customer\ Baseline\ Load$

$FSL = Firm\ Service\ Level$

$Actual\ Reduction = CBL - Metered\ Load$

$Expected\ Reduction = CBL - FSL$

$$PJM\ Performance = \frac{PLC - (Metered\ Load * Loss\ Factor)}{(PLC - FSL)}$$

Comparison of Metrics

$$PJM\ Performance = \frac{PLC - Meter}{PLC - FSL}$$

$$IMM\ Performance = \frac{CBL - Meter}{CBL - FSL}$$

IMM Performance Metric Recommendation for FSL Registrations

- IMM measures reduction from current load (CBL) to actual load after reduction (metered load)
- Compares to target reduction: CBL to FSL
- Benefits
  - CBL provides an hourly estimate of what the load would have been without the DR event
  - The PLC is not a measure of current load
  - Negative performance (increase in demand) is correctly accounted for

PJM PROPOSAL

PERFORMANCE INCENTIVE EFFECTIVENESS

PJM's Proposed Nonperformance Penalties

- **PJM proposes to retain the existing nonperformance penalty framework for Performance Assessment Events.**
  - **A Performance Assessment Event leads to one or more Performance Assessment Intervals (PAI)**
- **PJM proposes to apply 50 percent of the existing PAI penalty rate to Demand Resources that fail to perform when called during a non-PAI event.**
  - **Using PJM performance metric**
- **PJM's proposed penalty structure for nonperformance when called is not an effective performance incentive.**

PJM's Proposed Nonperformance Penalties

- **PJM's proposal is premised on a flawed definition of performance which is inconsistent with the Tariff and RAA requirements.**
- **PJM's existing test failure penalty is dramatically higher than the proposed non-PAI event performance penalty**
  - **It is irrational to impose significantly higher penalties for failing a test than for failing to perform during an actual event.**
- **PJM's proposal makes it more consequential to fail a test than to fail to perform when dispatched during an actual emergency.**

PJM DR Penalties: zero performance

	Status Quo	PJM Proposal (PAI penalty *0.5)	PAI Penalty	Test Penalty Structure
Penalty	$0	$1,366,938.63	$2,733,877.26	$13,469,069.38
Penalty Percent of RPM Revenues	0.0%	12.2%	24.4%	120.0%

PJM Proposal: With zero performance, resource retains 87.8 percent of their RPM Revenues (non PAI event)

Conclusions

- Load management resources have the same obligation to perform when called upon, regardless of whether the dispatch event occurs as part of a PAI.
- There is no reason to apply a discounted penalty rate to nonperformance during non-PAI events.
- The proposed penalty structure will not provide effective performance incentive.
- Even with zero performance when called, it is profitable to sell load management.
- PJM's proposed penalty is significantly weaker than PJM's current test based penalty.
- If there is zero payment, there should be zero payment.

Monitoring Analytics, LLC
2621 Van Buren Avenue
Suite 160
Eagleville, PA
19403
(610) 271-8050

MA@monitoringanalytics.com
www.MonitoringAnalytics.com