



DATE: August 19, 2026
TO: MC/MC Webinar
FROM: IMM
SUBJECT: January 25, 2026, Pre-Emergency Load Management Performance FAQ

The June 24, 2026, Market Monitor Report to the Members Committee included information about the performance of demand resources during the cold weather events in January 2026.¹ The report explained why PJM's performance metric significantly overstated the performance of demand resources. The IMM concluded that the DR performance was about 50 percent while PJM concluded that the DR performance was about 100 percent.

The IMM prepared this memo to further explain the reasons for the different results. A goal of understanding the DR performance metrics to improve DR performance measurement so that PJM does not rely on resources that do not and cannot perform at expected levels when PJM calls on them in emergency conditions.

Demand Response Concepts

The discussions of DR performance rely on basic concepts, captured in acronyms:

- **PLC:** Peak Load Contribution. This is the load level that the DR customer pays for as a result of the capacity market cost allocation, typically based on five coincident peaks.
- **FSL:** Firm Service Level. This is the load level that the DR customer agrees to reduce to when called to perform, regardless of the customer's load prior to dispatch.
- **(PLC – FSL):** This is the reduction in load that the DR customer sells in the capacity market as capacity.
- **CBL:** Customer Baseline. The CBL for a customer is an estimate of what load would have been if the customer had not responded when called to perform and reduced load.
- **(CBL – FSL):** This is the reduction from the existing load of a DR customer that the DR customer agreed to provide when it sold DR in the capacity market.
- **Metered Load:** This is the actual load of the DR customer, including the actual load when the DR customer is called.
- **(CBL – Metered Load):** This is the best estimate of the actual load reduction that the DR customer achieved when called. $(CBL - \text{Metered Load}) / (CBL - FSL)$: The actual load reduction compared to the load reduction that the customer agreed to provide when selling DR in the capacity market.

¹ See Monitoring Analytics, LLC, "Market Monitor Report," MC, (June 24, 2026) <https://www.monitoringanalytics.com/reports/Presentations/2026/IMM_MC_Market_Monitor_Report_20260624.pdf>.

If all DR customers responded fully when called, all DR customers would reduce their load to FSL. Not all DR customers respond fully. A performance metric is needed that compares the actual reduction of DR customers to the reduction that DR customers agreed to provide when they sold capacity in the PJM market.

The best measure of performance is the actual load reduction compared to the actual load reduction that the customer agreed to provide when selling DR in the capacity market:

- $(\text{CBL} - \text{Metered Load})/(\text{CBL} - \text{FSL})$.

PJM's measure of performance is the amount of capacity paid for minus the metered load compared to the level of response that the customer sold as DR in the capacity market:

- $(\text{PLC} - \text{Metered Load})/(\text{PLC} - \text{FSL})$.²

The January 25, 2026, Pre-Emergency Load Management Event

The January 25, 2026, Pre-Emergency Load Management event occurred between the hours of 14:30 and 19:00 in the BGE, DOM, and PEPCO Zones. All Pre-Emergency Load Response resources with lead times of 120 minutes, 60 minutes, and 30 minutes were dispatched.

1. Question: Given that Demand Resources did not reduce to their FSL during the January 25, 2026, Pre-Emergency Load Management event, how did PJM's performance metric of $(\text{PLC} - \text{Metered Load})/(\text{PLC} - \text{FSL})$ calculate 100 percent performance?

Answer: In PJM's implementation of its performance metric, both within and across curtailment service providers (CSPs), PJM simply zeroes out negative performers. If a registration's metered load is higher than their PLC, PJM calculates their performance as 0. If a registration's metered load is below their firm service level (FSL), PJM calculates their performance as in excess of the target and therefore as overperformers. If a registration is below their FSL for the period of the demand response (DR) dispatch for any reason, PJM's performance calculation credits them with overperformance. For example, a store that is closed on Sundays, and thus below its FSL, would be an overperformer if there were a DR dispatch even though no actions were taken to curtail load.

² The recommended performance metric and the PJM performance metric are slightly simplified here. The metrics defined in this memo are for the summer. There are performance metrics modified for the winter. For a more complete explanation, see the Demand Response section of the *2026 Quarterly State of the Market Report for PJM: January through June*.

The combination of these two elements of PJM's performance metric can make a negative performance look positive.³ For example, assume that performance is assessed across two DR registrations within a CSP. Both registrations have a PLC of 15 MW, an FSL of 0 MW, and a CBL of 15 MW for the duration of the event. In aggregate, because the PLC and CBL are the same in this example, the registrations have an expected reduction of 30 MW under both the PJM and IMM metrics.

During the event, the first registration's load is 5 MW below its PLC and the second registration's load is 10 MW above its PLC. Under PJM's performance metric, the first registration's performance would be calculated as a 5 MW reduction and the second registration's negative performance would be calculated as a zero response.

The PJM performance metric would value their performance as a demand decrease of 5 MW with a performance of positive 17 percent.

The calculations for the PJM metrics:

$$\begin{aligned}
 \text{PJM Performance Metric} &= \frac{\text{Max}[(15 \text{ MW} - 10 \text{ MW}), 0] + \text{Max}[(15 \text{ MW} - 25 \text{ MW}), 0]}{(15 \text{ MW} - 0 \text{ MW}) + (15 \text{ MW} - 0 \text{ MW})} \\
 &= \frac{5 \text{ MW} + 0 \text{ MW}}{30 \text{ MW}} \\
 &= \frac{5 \text{ MW}}{30 \text{ MW}} \\
 &= 0.17
 \end{aligned}$$

Where

Registration 1 reduction = $\text{Max}[(15 \text{ MW} - 10 \text{ MW}), 0] = 5 \text{ MW}$. This is PLC – metered load, cannot be negative.

Registration 2 reduction = $\text{Max}[(15 \text{ MW} - 25 \text{ MW}), 0] = 0 \text{ MW}$. This is PLC – metered load, cannot be negative.

Registration 1 ICAP = $15 \text{ MW} - 0 \text{ MW} = 15 \text{ MW}$. This is PLC - FSL

Registration 2 ICAP = $15 \text{ MW} - 0 \text{ MW} = 15 \text{ MW}$. This is PLC – FSL.

³ See Monitoring Analytics, LLC, "PJM vs IM Performance Metric Example," MIC. (March 11, 2026) <https://www.monitoringanalytics.com/reports/Presentations/2026/IMM_MIC_PJM_vs_IMM_Performance_Metric_Example_20260311.pdf>.

The calculations for the IMM metric:

The IMM performance metric recognizes that the two registrations in aggregate have a demand 5 MW above their PLC with a performance of negative 17 percent.

$$\begin{aligned} \text{IMM Performance Metric} &= \frac{(15 \text{ MW} - 10 \text{ MW}) + (15 \text{ MW} - 25 \text{ MW})}{(15 \text{ MW} - 0 \text{ MW}) + (15 \text{ MW} - 0 \text{ MW})} \\ &= \frac{5 \text{ MW} + (-10 \text{ MW})}{30 \text{ MW}} \\ &= \frac{-5 \text{ MW}}{30 \text{ MW}} \\ &= -0.17 \end{aligned}$$

Where

Registration 1 actual reduction = (15 MW – 10 MW) = 5 MW. This is CBL – metered load, (PLC = CBL in this example)

Registration 2 actual reduction = (15 MW – 25 MW) = - 10 MW. This is CBL – metered load, (PLC = CBL in this example). This is a negative number.

Registration 1 expected reduction = (15 MW – 0 MW) = 15 MW. This is CBL – FSL

Registration 2 expected reduction = (15 MW – 0 MW) = 15 MW. This is CBL - FSL

In the January event, the graph on slide 6 of the Market Monitor Report shows the group's load for the full day of the event.⁴ The high performance calculated by PJM's metric and the group's relatively low load in aggregate indicates that many individual registrations may have had a load below their FSL before dispatch and would be considered overperformers in the PJM metric. When combined with the zeroed out performance values for registrations whose loads were above their PLCs, the result is an inflated performance for the dispatched group.

2. Question: Why did registrations not reduce to their FSL during the January event?

The IMM initiates communications with CSPs after Pre-Emergency and Emergency Load Management events to discuss performance and event specific matters. Some entities chose not to comply with dispatch instructions. In addition, it appears that many entities are fundamentally unable to comply with dispatch instructions in extreme cold weather

⁴ See Monitoring Analytics, LLC, "Market Monitor Report," MC (June 24, 2026) <https://www.monitoringanalytics.com/reports/Presentations/2026/IMM_MC_Market_Monitor_Report_20260624.pdf>.

conditions, which are the types of conditions that are likely to trigger the dispatch of DR. The January 2026 event in particular illustrates that CSPs have committed to curtailments that they are unable to consistently provide. A combination of reasons resulted in the group's low performance score (58 percent) calculated using the IMM metric.

3. Question: Under the new non-PAI penalty structure that was filed by PJM, approved by FERC on June 26, 2026, and will be effective on June 1, 2028, how are penalties calculated and would any have been assessed for this event?

Answer: Under the existing penalty structure, no penalties were assessed for underperformance. Under the new penalty structure, penalties are triggered when a Demand Resource is dispatched during a non Performance Assessment Interval (non-PAI) event and fails to achieve its defined load reduction obligation.⁵ The new penalty structure continues to use incorrect performance metrics which means that the new penalty structure cannot be accurate or provide good incentives. Performance is measured by comparing the resource's load reduction, defined as PLC minus metered load, to its assigned obligation during the event, defined as PLC minus FSL. If a registration's metered load is higher than their PLC, PJM calculates their performance as 0. If a registration's metered load increases rather than reduces after being dispatched, but remains below their PLC, PJM credits them with positive performance calculated as PLC minus metered load. If a registration's metered load is below their firm service level (FSL), PJM calculates their performance as in excess of the target and therefore as overperformers. If a registration is below their FSL for the period of the demand response (DR) dispatch for any reason, including if not in response to PJM's dispatch instruction, PJM's performance calculation credits them with overperformance. Resources that underperform are assessed a nonperformance charge, while resources that exceed their obligation receive an over performance bonus credit.

The nonperformance charge is calculated using the same performance assessment method applied during Performance Assessment Intervals, but at a rate equal to 50 percent of the existing PAI nonperformance penalty rate. Penalty revenues are first used to fund payments to overperforming resources, with any remaining excess allocated pro-rata to load.

The IMM agrees that DR resources should be subject to a nonperformance charge when dispatched during non-PAI events. DR resources are economic resources and should be required to perform whenever called. PJM fails to provide any analytical support for the use of the 50 percent penalty for nonperformance during a non-PAI event. PJM fails to explain why a penalty equal to 50 percent of the PAI rate will effectively induce performance. PJM fails to address the fact that under the new penalty structure, a DR customer could fail to respond to

⁵ The effective date for these changes, approved by FERC on June 26, 2026, is June 27, 2026, ahead of the 2028/2029 BRA and, while they would have resulted in penalties being levied, were not in effect for the January 2026 event. 195 FERC ¶ 61,253 (2026).

any call by PJM, pay the defined penalties and still be profitable. The resulting incentive is inconsistent with the obligations of a capacity resource.

The IMM's recommendation is that the appropriate penalty is to not pay daily capacity payments to demand resources in proportion to the correctly measured performance shortfall until the resource demonstrates successful performance or a successful test. All penalty revenues should be returned to the load that pays for capacity resources and should not be paid as bonus credit to demand resources who are already fully compensated.⁶

⁶ See "DR Nonperformance Penalties," IMM presentation to Market Implementation Committee. <https://www.monitoringanalytics.com/reports/Presentations/2026/IMM_MIC_DR_Nonperformance_Penalties_20260120.pdf> (January 20, 2026).