WPL Calculation Education Session

Summary of Historical Dispatch Data

November 20, 2026

Michael Pohlod

Kerinia Cusick

Voltus

Summary

The challenge

Two issues have combined to create a challenge with the calculation of Winter Peak Load (WPL) used for Demand Response:

1. PJM operators are increasingly relying on demand response, likely due to load growth and capacity procurement shortfall.
2. The methodology for calculating Winter Peak Load was changed.

Past workarounds

Existing solutions have been adequate until now:

Summer dispatch (ELRP or economic)

Summer peak calculation uses an “add-back” approach that keeps curtailed DR whole.

Winter dispatch (ELRP or economic)

- Before DY 2027/28, WPL could be measured any time between HE7 and HE21, so CSPs could avoid curtailed hours.
- From DY 2027/28, WPL is measured in a single hour, currently HE9.
- Existing methodology allows PJM to ignore up to 2 days where load is below 35% of the 5-day average.

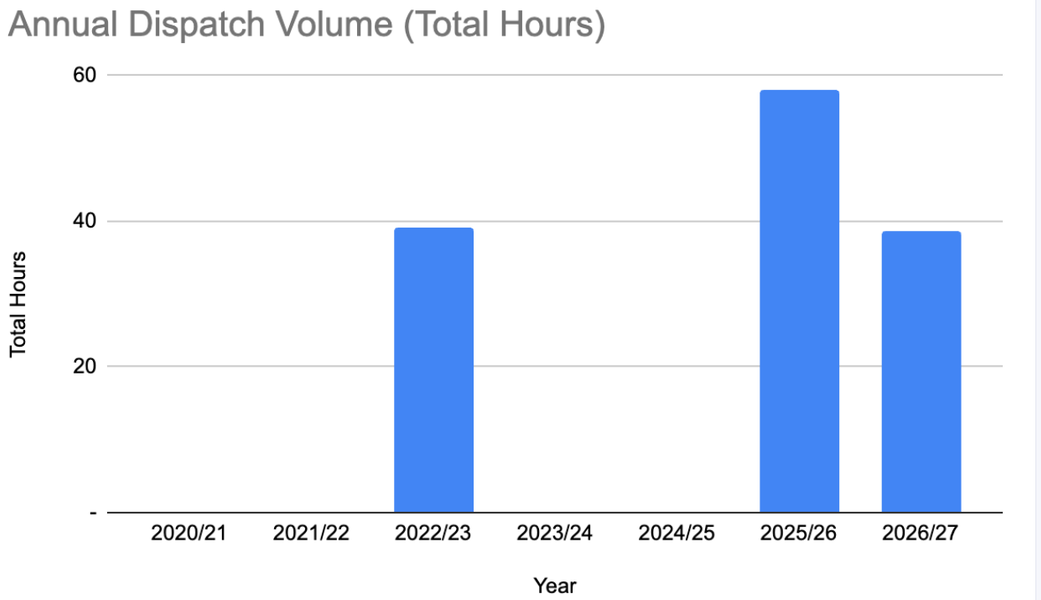
Principles

- CSPs believe it is in the best interest of all wholesale market participants for sites to curtail on high-load days when prices are high.
- DR penalties require sites enrolled in ELRP to respond to PJM dispatch signals.
- CSPs and sites participating in DR (economic or ELRP) should be kept whole for curtailing.
- Peak load, the upper threshold DR sites drop from, should not be eroded by CSPs responding to market conditions.

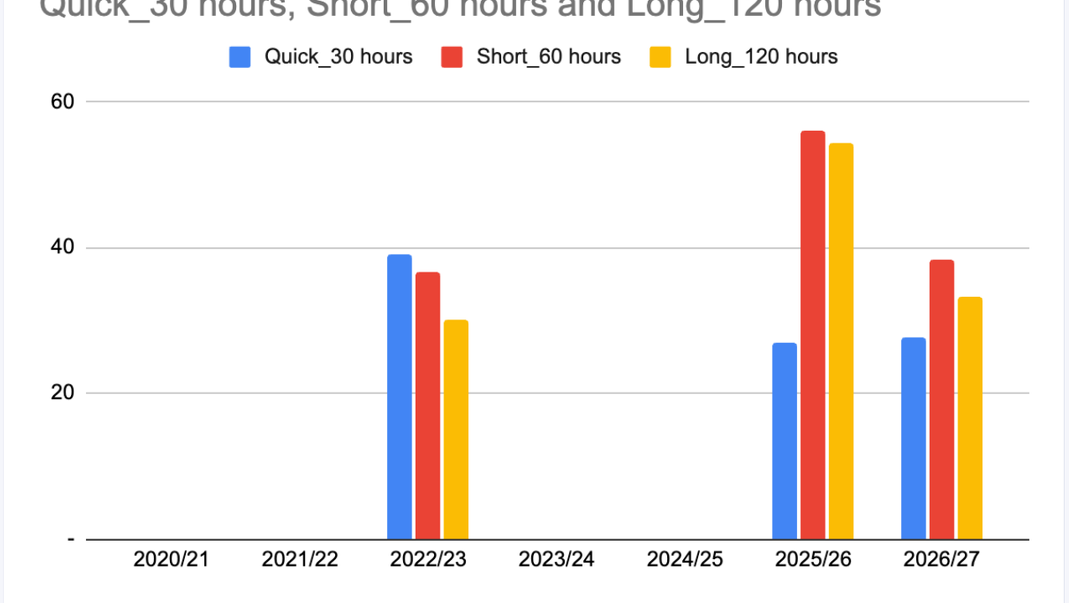
PJM Operators Are Increasingly Relying on Demand Response

Significant increase in pre-emergency and emergency calls on DR in the past two years.

All DR products: total hours dispatched



Hours dispatched by product



* 2026/27 is year-to-date: data includes dispatches from June 1 to October 30, 2026.

Two Core Demand Response Products

ENERGY

Economic Demand Response

Site agrees to curtail based on a pre-determined energy price.

CAPACITY

Emergency Load Response Program (Load Management)

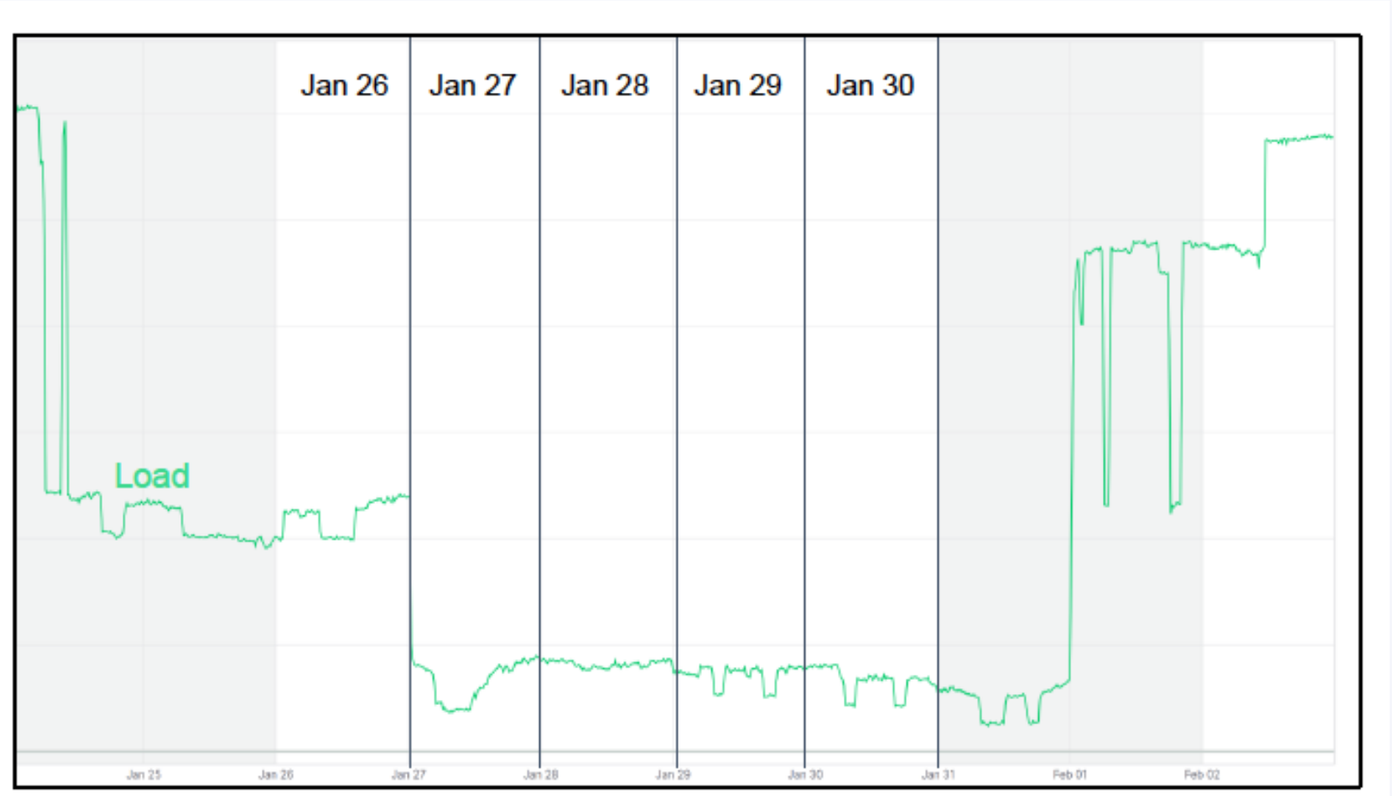
- Site agrees to reduce to a firm service level (FSL), measured as a drop from a predetermined peak (e.g., Winter Peak Load, or WPL).
- ELRP is an annual DR product, but the approaches used to calculate summer and winter peaks differ.

Clear Correlation Between High Prices and Load

Good probability economic DR sites will curtail on critical peak days.

Sample metered data from a customer site (right) shows:

- Metered load from January 25 to February 2
- Site curtails from January 27 to January 31
- Winter Peak Load days in 2026 were identified as January 27, 28, 29, 30 and February 9



PJM 25/26 WPL days and representative load samples

Data Shows ELRP Called on Summer Critical Peak Days

Data shows overlap between days when ELRP is dispatched and critical peak load. Summer has historically not been a concern for CSPs because an add-back approach is used.

Delivery Year	2022/23	2023/24	2024/25	2025/26	2026/27
ELRP Dispatch	6/14/2022: Pre-emergency 6/15/2022: Pre-emergency & emergency 6/16/2022: Pre-emergency & emergency	None	None	**6/23/2025: Pre-emergency** **6/24/2025: Pre-emergency** **6/25/2025: Pre-emergency** **6/28/2025: Pre-emergency** **6/29/2025: Pre-emergency** 7/28/2025: Pre-emergency 7/29/2025: Pre-emergency 8/11/2025: Pre-emergency	5/18/2026: Pre-emergency 5/19/2026: Pre-emergency **7/2/2026: Pre-emergency & emergency** 7/3/2026: Pre-emergency & emergency **9/1/2026: Pre-emergency** 9/17/2026: Pre-emergency & emergency 10/13/2026: Pre-emergency 10/14/2026: Pre-emergency
5CP Dates	6/20/2022 6/21/2022 6/22/2022 8/3/2022 8/8/2022	*Did not look up*	*Did not look up*	**6/23/2025** **6/24/2025** **6/25/2025** **6/28/2025** **6/29/2025**	7/1/2026 **7/2/2026** 7/15/2026 7/16/2026 **9/1/2026**

Day used to determine Critical Peak (5CP) and a day when ELRP was called

Reasonable to Expect ELRP Will Be Called on WPL Days

1 Limited overlap so far

Limited overlap in the past 5 years between PJM dispatch of ELRP, or synchronized reserves, on days identified as Winter Peak Load.

2 Rule change raises the stakes

Existing rules have accommodated the overlap to date. The change in WPL measurement with DY 2027/28 makes it increasingly difficult to exclude curtailed days from WPL.

3 Winter reliance will grow

Given PJM's capacity shortfall, it is highly probable ELRP will be increasingly relied upon in winter.

Delivery Year	2022/23	2023/24	2024/25	2025/26	2026/27
ELRP Dispatch	**12/23/2022: Pre-emergency** 12/24/2022: Pre-emergency	None	None	1/25/2026: Pre-emergency **2/9/2026: Synchronized Reserves**	*Data not available*
WPL Days	12/19/2022 12/20/2022 12/21/2022 **12/23/2022** 2/3/2023	*Did not look up*	*Did not look up*	1/27/2026 1/28/2026 1/29/2026 1/30/2026 **2/9/2026**	*Data not available*

Day when ELRP was dispatched and used to determine WPL