Calculation of Winter Peak Load For Curtailed Load Sites

Problem / Opportunity Statement

In 2025, PJM stakeholders and FERC[1] approved changes to Annual Demand Response to ensure it is a product that is available to PJM to provide load reduction during winter reliability hours. Specifically, the availability window for Annual Demand Response was expanded to 24 hours, and the basis of the calculation of Winter Peak Load (WPL) was changed from using the highest customer load on each of the 5 coincident peak days to using the load in one specific hour of the day (currently 9 AM) across the five coincident peak days in the winter. In addition, reliability risk has shifted from summer to winter, increasing the probability of winter dispatch.

The changes to Annual Demand Response will be implemented in delivery year 2027/2028 and based on WPL measured in the previous two delivery years.

An unforeseen consequence of these changes is a high likelihood that demand response sites will be dispatched by PJM, and load will be curtailed during the hours used for WPL determination, leading to artificially low WPL values, and ultimately this will limit the total amount of load reduction that PJM can dispatch on critical winter days. While there is an exclusion process for up to 2 days that are less than 35% of the 5-day average, the recent change allows only consideration of the load at HE 0900 rather than the highest load in the day. Since the HE 0900 has the highest likelihood of dispatch, the current method is no longer adequate. This concern has been proven by dispatches during the 25/26 WPL Baseline period, which occurred in 4 of 5 of the WPL hours for many sites.

If a site has been dispatched by PJM and is curtailed during the hour that PJM measures load to calculate WPL (currently hour ending 9 AM) on a day that PJM determines is winter peak day, there is a need to determine what the peak load would have been but for PJM's dispatch.

[1] ER25-1525, Proposal to Extend Demand Resource Availability Window and Revise Calculation of Demand Resource Winter Nominated Value