

Manual 20A Resource Adequacy Analysis

Section 2.3 Simulated Output of Resources

Limited Duration Resources, Combination Resources and Demand Resources. For Limited Duration, Combination and Demand Resources, the simulated performance (and recharging of resources) is mainly derived by using a simulated dispatch heuristic in each Load Scenario. For Limited Duration Resources and Combination Resource, an EFORD value is used to decrease the maximum amount of megawatts that a resource can output in each hour (and also the maximum amount of megawatts that each resource can re-charge in an hour). For example, if a 100 MW ICAP Limited Duration Resource has an EFORD equal to 5%, then the maximum hourly output of such resource in the simulation will be $100 \text{ MW} \times (1-5\%) = 95 \text{ MW}$.

Demand Resources have a seasonal performance window in accordance with PJM Manual 18: PJM Capacity Market. If the simulated hour in the model requires Demand Resources to be dispatched in an hour that falls outside of the seasonal performance window, the amount of Demand Resources dispatched in the hour is assumed to be zero. If the simulated hour falls within the seasonal performance windows established for Demand Resources, then the amount of Demand Resources available to be dispatched in the hour is calculated as the Nominated Demand Resource Value (a constant value for an entire Delivery Year as forecasted in the most recent PJM Load Forecast) times F, where F is defined as the ratio of simulated hourly load (in MW) to 50/50 peak load (in MW). This approach to estimate the amount of available DR within the seasonal performance window is rooted on the assumption that Demand Resources have a Firm Service Level (FSL), which means that such resources must reduce their megawatt consumption to a specified firm level regardless of their megawatt consumption at the time of the dispatch.

Effective with the 2027/28 Delivery Year, Demand Resources are no longer subject to seasonal performance windows with a predefined limited set of hours, and are therefore available to be dispatched in all hours within the model. If the simulated hour falls within the Summer, then the amount of Demand Resources available to be dispatched in the hour shall follow the calculation described above. If the simulated hour falls within the Winter, then the amount of Demand Resources available to be dispatched shall be calculated as the Nominated Demand Resource Value times F, where F is defined as the ratio of the estimated reduction capability of Demand Resources in the hour (in MW) relative to the Nominated Demand Resource Value. For such calculation, the estimated reduction capability of Demand Resources in each hour shall be determined based on the aggregate hourly metered load profiles that are provided in support of Winter Peak Load values and the corresponding winter Firm Service Levels from recent Demand Resource Registrations.