

Renewable Dispatch

Detailed instructions and process steps are available in M34, Section 6

Problem / Opportunity Statement

Renewable resources or Intermittent Resources have steadily become a sizable portion of the PJM generation mix with many more projects on the horizon. The influx of renewables has led to some new operational issues and impacted existing issues. There is a greater reliance on the ability to accurately dispatch renewable resources in real-time and forecast near-term changes in resource output. As the number of renewable resources grows, it becomes increasingly difficult to manually manage the dispatch. Treatment and expectations also vary by resource type like solar, wind, and hydro.

Under the current dispatch of renewables, the following challenges/inefficiencies ensue:

1. Varying curtailment methodology and communication. Curtailment does not exist for all renewable resource types.
2. Inconsistent performance when following curtailments and/or basepoints. Difficult for PJM dispatch to rely on renewable dispatch for constraint control.
3. Bid in parameters (eco limits, forecast, unable to follow dispatch) not in alignment with real-time capabilities. Lack of timely updates leading to dispatch based on outdated information.
4. Limited usage and effectiveness of farm specific forecast information in PJM tools.

The rate of renewable penetration has outpaced the status quo. PJM sees an opportunity to improve several main aspects – a method of dispatch that covers all renewable resources, clear guidance and expectations on following PJM dispatch instructions, and streamlined data exchange. Looking to increase reliability of renewable resources during real-time operations, especially with usage in constraint control and balancing.