



Comments regarding PJM's updated ELCC accreditation methodology

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From: Linea Energy

Company Background

Linea Energy is a renewable energy independent power producer with over 7 GW of projects under development, including solar and battery energy storage projects in PJM. In light of recent ELCC Senior Task Force (ELCCSTF) discussions and the anticipated voting window after July 25, we submit the following comments on PJM's proposed ELCC accreditation methodology, with a focus on implications for energy storage resources.

Areas of Support

Weather Alignment and Winter ICAP Adjustments: Within the PJM package, we endorse the allowance of higher Winter ICAP for Unlimited and Variable Resources as well as the alignment of weather days used to calculate both resource performance and forecasted load. This alignment creates more consistent and accurate reliability assessments.

Historical Data Treatment: We strongly support the IMM's proposal to remove Winter Storm Elliott and the 2014 Polar Vortex from historical performance data. These outlier events do not reflect current operational commitments and infrastructure improvements, and their inclusion artificially inflates perceived system risk. While PJM's proposal to weight recent years more heavily is directionally helpful, it does not fully resolve this issue. We recommend either excluding extreme weather events outright or implementing a more transparent methodology for adjusting their influence to avoid overstating reliability risk and distorting accreditation outcomes.

Critical Issues with Energy Storage Modeling

Energy storage plays an increasingly vital role in ensuring grid reliability, especially during tight system conditions. However, the current ELCC methodology does not adequately capture storage's unique operational characteristics and value proposition.

Storage Dispatch Optimization

We echo concerns raised by REV Renewables at the ELCCSTF meeting on May 8 regarding the modeling and operation of storage resources. **Storage dispatch must be optimized during Loss of Load Expectation (LOLE) events** to accurately reflect reliability contributions. As mentioned in the Vistra proposal discussion, there is merit in exploring class-specific outage calculations that could better differentiate storage performance characteristics from traditional thermal generation.



Storage-Specific Recommendations for Current Reform Package

Given the July 15 voting deadline and implementation timeline constraints, we urge immediate consideration of the following storage-specific improvements that can be incorporated without delaying the 2027/28 BRA:

Dispatch Optimization Requirements

- **Strategic dispatch modeling:** Account for storage dispatch at less than 100% of ICAP during anticipated multi-day events to preserve energy for critical periods
- **Duration-based resource ordering:** As articulated in the Vistra package, 4-hour or longer duration energy storage resources may prove more consistently available than Demand Response Resources during extended reliability events and should be reordered accordingly in the dispatch stack

Class-Specific Performance Analysis

Building on the Vistra proposal's concept of separating weather-dependent and resource-specific outage rates, storage resources warrant distinct treatment given their fundamentally different operational characteristics compared to thermal generation. Storage outages are rarely weather-dependent in the same manner as gas-fired generation.

Lessons from Winter Storm Elliott

The Winter Storm Elliott event provides a crucial case study for storage optimization. During this event, energy storage was dispatched before the peak reliability period, leaving resources unavailable when system stress was greatest. This suboptimal dispatch pattern failed to maximize reliability benefits and demonstrates why **ELCC ratings must account for storage's fast-ramping, flexible nature and its ability to reduce unserved energy, not simply its energy duration.**

Long-Term Recommendations for Future ELCC Design

While recognizing PJM's 2028/29 BRA timeline for comprehensive reforms, we strongly recommend prioritizing the following enhancements in future phases of ELCC design:

Performance-Based Metrics

- **State-of-charge management:** Evaluate storage resources based on their demonstrated ability to maintain adequate state-of-charge ahead of forecasted reliability events
- **Response characteristics:** Incorporate performance metrics beyond energy delivery, including ramp rate (MW/minute), response time (seconds), and operational flexibility
- **Forecast responsiveness:** Implement metrics that reward storage resources demonstrating the capability to adjust charging patterns based on day-ahead reliability forecasts



Integration with Evolving Market Services

- **Ancillary service valuation:** Explore whether ramping products and real-time response services can feed into ELCC valuation, especially as PJM modernizes its ancillary service framework
- **Frequency response capabilities:** Credit storage resources for their ability to respond within seconds to frequency deviations, which provides significant reliability value not captured in current methodologies

Strategic Energy Management

- **Reserve maintenance:** Credit storage that maintains sufficient energy reserves during high-risk periods, including extreme weather events and peak demand days
- **Multi-day event preparation:** Recognize storage resources that demonstrate strategic energy management across extended reliability events

Conclusion

The current methodology's limitations in capturing storage value may inadvertently discourage investment in resources that are increasingly critical for system reliability. With voting expected to open on July 25, we urge the task force to prioritize storage-specific improvements that can be implemented for the 2027/28 delivery year while laying the groundwork for more comprehensive reforms in the 2028/29 package.

These refinements will better reflect storage's unique operational value and ensure the capacity accreditation framework sends accurate investment and dispatch signals. Proper valuation of storage resources is critical not only for fair market outcomes but also for incentivizing the deployment of flexible resources that enhance overall grid reliability during the challenging supply conditions PJM faces in the coming delivery years.

Thank you for your consideration of these comments. Please feel free to reach out with any questions regarding our recommendations or their implementation.