PJM ALERT: Critical Summer Readiness Actions for Owners of Inverter-Based Resources

As we approach the summer season, **PJM Interconnection** and its members are actively preparing for anticipated peak operations. Several key factors will make inverter-based resource (IBR) performance a vital component of grid reliability:

Key Updates & Considerations:

- **Higher Load Forecast:** PJM is forecasting higher peak loads this summer than in previous years, increasing the demand for stable and responsive generation.
- **Lower Generation Supply:** Compared to prior years, overall generation supply is expected to be lower, making it critical for all generating resources, including IBRs – especially wind and solar – to operate optimally.
- **Essential Role of IBRs:** The performance of IBRs will be instrumental in maintaining grid reliability. **Ensuring voltage regulation and ride-through capabilities for voltage and frequency disturbances** will be necessary to support the grid during system faults or required transmission switching. Performing necessary inverter maintenance prior to peak periods and monitoring of equipment to prevent inadvertent tripping or reduction in output will also be critical.

Actionable Steps for IBR Owners

To ensure your resources are fully prepared and compliant, **verify that your systems adhere to the following standards and operational guidelines.**

Regulatory & Compliance Obligations

- **NERC Standard PRC-024, Attachment 1** – Adhere to reliability standards for voltage stability and ride-through settings.
- **IEEE 2800** – Maintain compliance with interconnection requirements for bulk power system-connected IBRs.
- **ISA/Tariff Schedule H Obligations** – Confirm that all contractual responsibilities with PJM are met to support grid reliability, voltage ride through and frequency ride-through.
- **PJM Manual M-14D, Attachment D; PJM Generating Unit Reactive Capability Curve Specifications and Reporting Procedures** – Maintain accurate reactive capability of resources and provide active voltage regulation to maintain resource-specific or PJM general voltage schedules on the transmission voltage levels.
- **PJM Manual M-14D, Attachment M: Wind and Solar Unit Dispatchability Check List** – Follow the operational requirements outlined to ensure safe and effective grid integration and control.

References & Lessons Learned From NERC

Grid operators and regulatory bodies have observed key lessons from past grid events involving IBRs. Owners should review the following reports and findings:

- NERC Odessa Disturbance Report (PDF) – Reviews a significant loss of generation event in ERCOT and provides recommendations for Generation Owners and industry actions
- NERC Inverter-Based Resource Performance Issues Reports (PDF) – Highlights reliability risks associated with IBRs and offers best practices for operational improvements

- NERC Lessons Learned on IBR Tripping Events – Reviews past inverter tripping incidents and mitigation strategies
  - Lesson Learned: Incorrect IBR Primary Frequency Response Logic Caused Negative ACE (PDF)
  - Lesson Learned: 540 MW of Wind Turbine Generation Loss due to Unexpected and Insufficient Ride-through Performance (PDF)

PJM operators will be closely monitoring system conditions and resource availability throughout the summer season. **Your cooperation in maintaining compliance, optimizing performance and supporting stability is essential to ensuring seamless operations during peak demand periods.**

For additional guidance or assistance with any questions, please contact PJM Member Relations at 610-666-8980 or custsvc@pjm.com.