

NERC BAL-002-3 Standard – Reserve Requirements

Dave Souder
September 17, 2025
RCSTF

- Stakeholders questioned the basis for securing real-time 30-Minute Operating Reserves equal to the most severe single contingency.
 - The 30-Minute Operating Reserve requirement is in addition to the existing real-time Synchronized Reserves (SR) product requirement.
- PJM Compliance with NERC Standard BAL-002-3 titled “Disturbance Control Standard – Contingency Reserve for Recovery from a Balancing Contingency Event” contains the basis for both real-time SR and 30-Minute Operating Reserves requirements:
 - <https://www.nerc.com/pa/Stand/Reliability%20Standards/BAL-002-3.pdf>

- NERC Standard Requirement R1 and R2 are the basis for carrying sufficient Synchronized Reserve
 - **R1:** The Responsible Entity experiencing a Reportable Balancing Contingency Event shall within the Contingency Event Recovery Period, demonstrate recovery by returning its Reporting ACE to at least the recovery value.
 - **R2:** Each Responsible Entity shall develop, review and maintain annually, and implement an Operating Process as part of its Operating Plan to determine its Most Severe Single Contingency (MSSC) and make preparations to have Contingency Reserve equal to, or greater than the Responsible Entity's Most Severe Single Contingency available for maintaining system reliability.

- NERC Standard Requirement R3 is the basis for carrying sufficient 30-Minute Operating Reserves for the purpose of “backfilling” the MSSC loss in order to restore SR in preparation for the next event.
 - **R3:** Each Responsible Entity, following a Reportable Balancing Contingency Event, shall restore its Contingency Reserve to at least its Most Severe Single Contingency, before the end of the Contingency Reserve Restoration Period, but any Balancing Contingency Event that occurs before the end of a Contingency Reserve Restoration Period resets the beginning of the Contingency Event Recovery Period.

- The default NERC Contingency Reserve Restoration Period is 90 minutes, which begins after the 15-minute Contingency Event Recovery Period ends. This 90-minute window allows a Balancing Authority to restore the necessary reserves to recover from a balancing contingency event.
 - **Replacement Reserve:** Resources used to replace designated Contingency Reserve that have been deployed to respond to a contingency event. Each NERC RE sets times for Contingency Reserve restoration, typically in the 60–90-minute range. The NERC default Contingency Reserve restoration period is 90 minutes after the Contingency Event Recovery Period.

https://www.nerc.com/comm/RSTC_Reliability_Guidelines/Reliability_Guideline_Template_Operating_Reserve_Management_Version_3.pdf

- PJM Operations utilizes 30-Minutes Operating Reserves to restore contingency reserves based on the minimum SR product duration of 30 minutes.
 - **PJM Manual 11 – Energy & Ancillary Service Market Operations, Section 4.5.1 Performance Verification:** All resources must maintain an output level greater than or equal to that which was achieved as of ten (10) minutes after the event for the duration of the event or thirty (30) minutes from the start of the event, whichever is shorter.

Presenter/SME:
David Souder

David.Souder@pjm.com



Member Hotline

(610) 666-8980

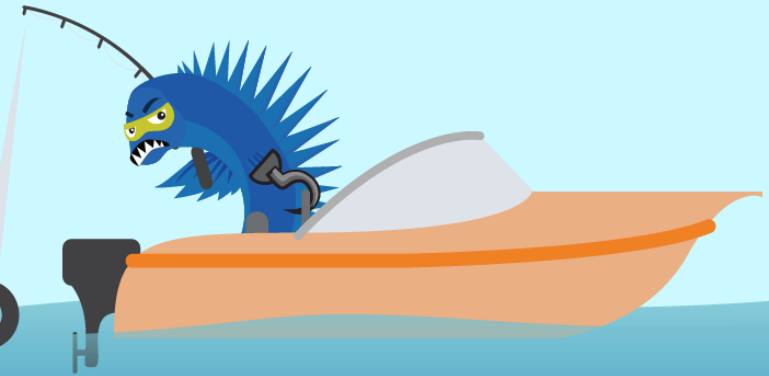
(866) 400-8980

custsvc@pjm.com

**PROTECT THE
POWER GRID**
**THINK BEFORE
YOU CLICK!**



**BE ALERT TO
MALICIOUS PHISHING
EMAILS**



Report suspicious email activity to PJM.
Call (610) 666-2244 or email it_ops_ctr_shift@pjm.com