



TEXAS RE

August 2026 NERC Update

NSRF Meeting

**Mark Henry
August 27, 2026**

NERC Standards Development Update for FERC Order 901

Milestone 2 – Approved; added FERC directives

- PRC-028-1, PRC-029-1, and PRC-030-1

[Project 2025-05](#) – Ride-through Revisions PRC-029-2

- Version and Implementation Plan passed final Ballot on August 7
- Compliance Monitoring and Enforcement Program (CMEP) Practice Guide: [PRC-029-1 Enforcement Discretion](#) posted on August 10. *Implementation of Frequency and Voltage Ride-through Requirements for IBRs* still in draft.

Milestone 3 – Approved by FERC in February 2026

[Project 2020-06](#) – Verification of Models and Data for Generators

- [RSAW](#) posted for MOD-026-2

[Project 2021-01](#) – System Model Validation with IBRs

- [RSAW](#) posted for MOD-033-3

[Project 2022-02](#) – Uniform Modeling Framework for IBR

- RSAWS still in draft: MOD-032-2, TOP-003-8, IRO-010-6

Small Group Advisory Sessions (SGAS) on IBR-Related Standards Effective in 2026 and 2027
PRC-028-1, PRC-029-1, PRC-030-1, and MOD-026-2
General Session, August 10: Recording to be Posted



Milestone 4 – Drafting underway

[Project 2025-03](#) – Order 901 Operational Studies

- Standards: TOP-003-9, FAC-011-5
- Version and Implementation Plan passed Ballot on August 7
- Final ballot date TBD
- [Webinar Recording](#) from July 28, 2026

[Project 2025-04](#) – Order 901 Planning Studies

- Standards: TPL-001-6
- Final ballot passed, July 23 – headed to NERC Board



□ Standard [Project 2022-04 EMT Modeling](#)

- Initial ballot, October 1 – November 21, 2025, for FAC-002-5, Facility Interconnection Studies
- SDT revising FAC-002 to address comments from initial ballot. After finalizing these redlines, work on MOD-032 will begin, with planned concurrent ballots for revisions to FAC-002 and MOD-032 in September
- Drafting team met on August 24, but project is ON HOLD
- Related, NERC EMTWG has [several supporting efforts](#) underway in 2026
- [2026 Workshop: Annual Electromagnetic Transient Simulation – August 19-20, Rockville, MD](#)

□ Standard [Project 2023-01 EOP-004 IBR Event](#)

- Approved at June NERC Board, [approved by FERC](#) on June 26
- NERC event analysis program's threshold remains at 500 MW – but it is up for review this year



NERC

Recommendations for OEMs, Generator Owners and Transmission Planners:

1. Commissioning Process Flow
2. Site-Specific Commissioning Plan Development
3. As-Built Installation Evaluation
4. Commissioning Tests
5. Post-Commissioning Monitoring
6. Post-Commissioning Model Validation and Verification
7. Periodic Tests and Verification
8. Special Scenarios – Complex Plant Control Architectures and Failure Modes

(Draft)

Reliability Guideline: Commissioning Best Practices

For BPS-Connected Inverter-Based Resources

June 2026

[June Public Comments in Review](#)



(Draft)

White Paper: IBR Equipment EMT Model Validation

Inverter-Based Resource Performance Subcommittee

June 2026

[Posted for Public Comments](#)
August 4, 2026 to September
3, 2026

- Chapter 1** : Fundamentals of IBR Equipment Model Validation
 - Equipment Models and Hierarchical Control.....
 - Equipment Model Validation
 - Continuous Model Validation Throughout Equipment Life
- Chapter 2** : Equipment Model Validation Tests
 - Inverter Tests
 - Power Plant Controller Tests for Equipment Model Validation
- Chapter 3** : What to Expect in Model Validation Reports.....
 - 3.1 Guidelines for IBR Equipment Documentation and Reporting
 - 3.2 Measurements for Model Validation.....
 - 3.3 Characteristics of Good Model vs. Measurement Comparison
- Chapter 4** : Guidance on Criteria and Engineering Judgment.....
 - 4.1 Introduction
 - 4.2 Industry Overview
 - 4.3 Understanding Sources of Errors in CHIL
 - 4.4 Error Metrics for Model Validation
 - 4.5 Defining Analysis Time Windows
 - 4.6 Quantitative Acceptance Criteria

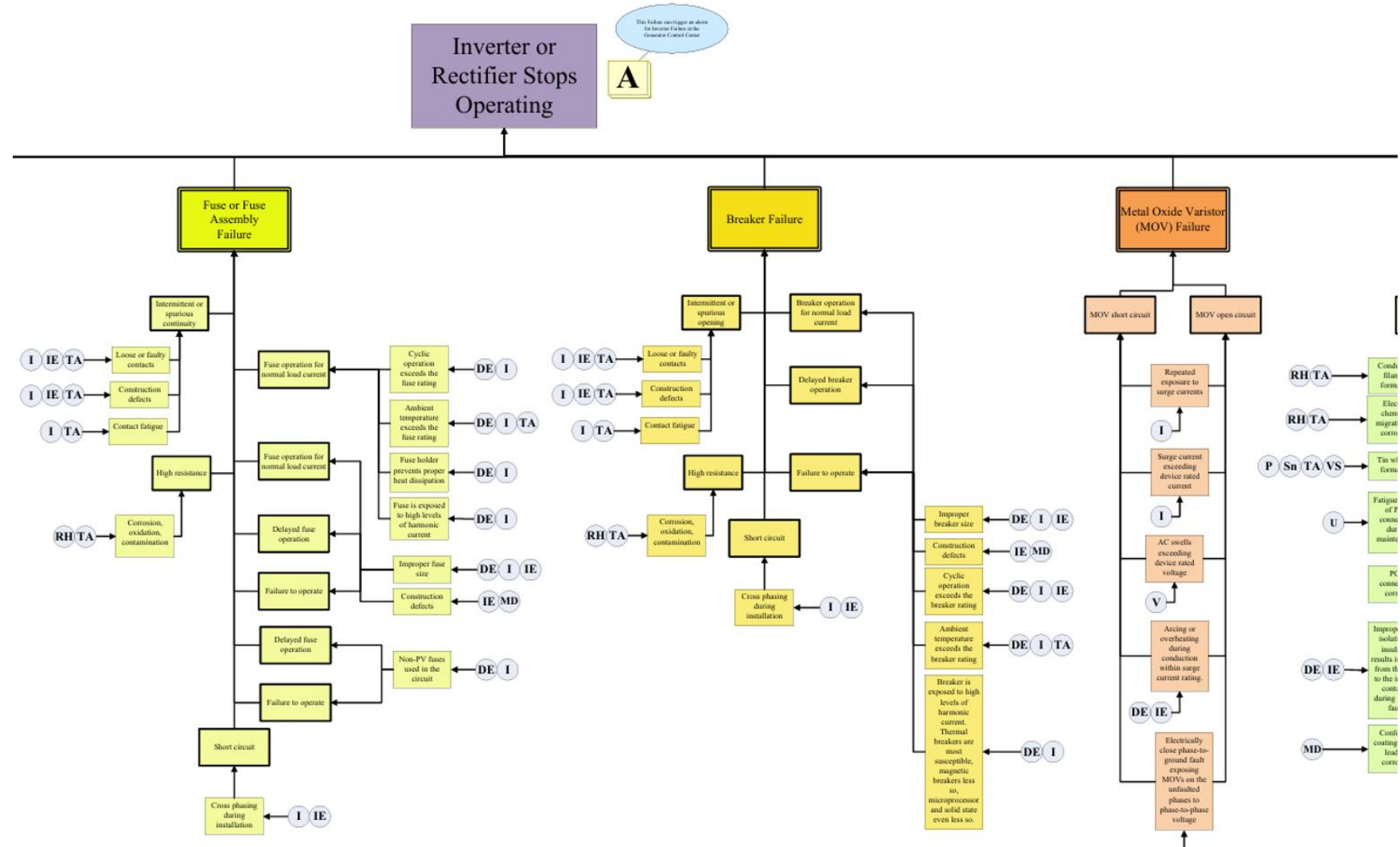
Large Inverter Failure Modes Diagram

Produced by industry team at NERC Event Analysis Subcommittee's Failure Modes and Mechanisms Task Force

Available on request – information@texasre.org

Many others available for:

- Medium (String) Inverters
- Wind Turbine Cold Weather
- Various Substation Components





NERC Large Loads Action Plan: 2026-2027 Status Update

Q3 2026

- Host a webinar on the Level 3 Alert (July 8)
- Publish the Data Center Load Modeling Technical Reference (July, *subject to RSTC approval*)
- Responses due: Level 3 Alert (August 3)
- Post ROP registry criteria for comments (August)
- Post glossary and standard(s) for comments (August)
- Organize a Data Center Load Modeling Workshop (September 15-16)

Q4 2026

- Post registry criteria, glossary and standard(s) for additional comment period, (October 21, *if needed*)
- Request Board approval of registry criteria, glossary, and standard(s) (December 5)
- File registry criteria, glossary, and standard(s) (December 31, *subject to Board approval*)

Q1-4 2027

- Draft and file additional applicable Reliability Standards, *as needed*

- A [recording](#) of NERC’s webinar from July 8 on the Level 3 Essential Action Alert for Large Computational Loads (LCLs) is posted; responses in review for report to FERC this Fall
- [Data Center Load Modeling Technical Reference](#) posted on Aug. 3; virtual [workshop](#) set for afternoons on Sept. 15-16, 2026
- FERC issued [Order RD26-7-000](#) to NERC in July to produce Reliability Standards for computational loads by year end, and report on additional needs by March 2027
- Revised [Standards](#) & [registry criteria](#) posted for comments/initial ballot on Aug.19 – Sept. 18

Computational Load Definition in new posting

Computational Load Site – One or more buildings, structures, or installations that:

1. Primarily contains information technology infrastructure used for:
 - Creating, executing, and delivering software applications and services;
 - Artificial intelligence training, deployment, and delivery;
 - Cryptocurrency mining; or
 - Other computational activities at a data center; and
 2. Is supplied through electrical equipment that is connected to the BPS
- **Registration only applicable for Computational Load Sites greater ≥ 50 MW that is connected at a voltage ≥ 100 kV from one or more points of connection**
 - **Computational Load Owner (CLO) – The entity that owns and maintains a Computational Load Site.**
 - **Computational Load Operator (CLOP) – The entity that operates a Computational Load Site.**





- **Draws upon FAC-001, FAC-002, MOD-032, MOD-026**
- **Lays out requirements for interconnection processes and studies along with data provisioning for modeling**
- **Interconnection requirements and processes**
 - Computational Load specific interconnection requirements shall be developed by Transmission Owners/Distribution Providers/Generation Owners (TO/DP/GOs). This shall cover coordinated studies, and procedures for notification of a new interconnection or qualified change.
- **Interconnection studies**
 - Each Transmission Planner/Planning Coordinator (TP/PC) shall study the interconnection of new Computational Loads, and those seeking to make a qualified change. CLOs shall cooperate with this effort.
 - Studies shall include steady-state, short-circuit, and dynamics studies.
 - TO/GO/DPs shall coordinate on interconnection studies as needed.
 - PCs shall define a qualified change and make the definition publicly available.



Planning Modeling Data

- **PC/TPs shall develop steady-state, dynamics, and short circuit modeling data requirements and reporting procedures for Computational Loads. The data shall include, at a minimum:**
 - Parameters, settings, and capabilities related to tripping, Ride-through, and Disturbance recovery;
 - The amount or percentage of information technology infrastructure; and
 - The expected use(s) or behavior(s) of the information technology infrastructure
- **Data updates must occur at least every 13 months, and upon one of the following events (does not reset the 13-month clock):**
 - A post-commissioning modeling change corresponding to the as-built Computational Load Site (intended to capture any changes during commissioning)
 - A qualified change as defined by the PC
- **CLOs shall provide documentation of Model Verification for modeling demonstrating that the configurable, site-specific parameters of the model(s) are representative of the design and settings of the in-service equipment for each site to the TP**



- **Draws upon TOP-003, IRO-010, TOP-001, IRO-001, COM-001, COM-002**
- **Lays out requirements for operational data provisioning, operational communications, and interpersonal communications**
- **Operational Data**
 - Each TO/BA/RC shall maintain documented specification(s) for the data and information for Computational Load Sites necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. They shall also provide the data to entities that need it. CLOs/CLOPs are required to provide to specified data.
- **Operating Instructions – CLOs are required to comply with operating instructions from the TO/BA/RC**
- **Interpersonal Communications**
 - Each TO/BA shall have Interpersonal Communication capability with CLOPs in its area and vice-versa
 - Detection of Interpersonal Communication capability failure is required by TO/BA/CLOP
 - CLOPs shall do initial training for oral two-party, person-to-person Operating Instructions, and then follow the instructions



CLO-003 Computational Load Protection Coordination & Disturbance Monitoring

- Draws upon language in PRC-028 and PRC-027
- Requires monitoring for Computational Loads and protection coordination
- **Monitoring**
 - Each CLO shall have **Sequence of Event Recording (SER)** for circuit breakers associated with equipment it owns including bus(es), and, as applicable, the main power transformer(s), on-site generation, shunt static and dynamic reactive device(s)
 - Each CLO/TO/DP/GO that owns the main power transformer(s) that supplies a Computational Load Site shall have **Fault Recording (FR)** on the high-side of the main power transformer or common point of connection – all three phases. The specifications for the fault recorder are also provided
 - Each CLO/TO/DP/GO that owns the main power transformer(s) that supplies a Computational Load Site shall have **Dynamic Disturbance Recording (DDR)** on the high-side of the main power transformer or common point of connection – per phase on all three phases. The specifications for the DDR data are also provided
 - The entity responsible for the SER/FR/DDR is responsible for time synchronization and for providing the data to upon request
 - If a SER/FR/DDR device fails, the capability shall be restored and a Corrective Action Plan submitted
- **Coordination**
 - Each CLO shall establish a process for developing new and revised Protection System settings for Computational Load Sites

Proposed Implementation Plan

CLO-001	Applicability	Requirements	Implementation
Interconnection Process & Requirements	TO, DP, GO	R1, R2, R3	Reg Approval → Next Quarter → +6 Months
Qualified Change & Modeling Data Specifications	TP, PC	R7, R8	Reg Approval → Next Quarter → +3 Months
Study Coordination	TP, PC, TO, DP, GO, CLO	R4, R5, R6	Reg Approval → Next Quarter → +9 Months
Provision of Modeling Data & Data Verification	CLO	R9, R10, R11	Reg Approval → Next Quarter → +9 Months

CLO-002	Applicability	Requirements	Implementation
Operational Data Specifications	RC, BA, TOP	R1, R2, R3, R4, R5, R6	Reg Approval → Next Quarter → +6 Months
Provision of Operational Data	CLO, CLOP	R7	Reg Approval → Next Quarter → +12 Months
Adherence to Operating Instructions*	CLOP	R8, R9	Reg Approval → Next Quarter → +12 Months
Interpersonal Communications*	TOP, BA, CLOP	R10, R11, R12, R13	Reg Approval → Next Quarter → +12 Months
Oral Communication Protocol & Training*	CLOP	R14, R15	Reg Approval → Next Quarter → +12 Months

*Deadline extension possible under certain circumstances for R8-R15

CLO-003	Applicability	Requirements	Implementation
Protection Coordination	CLO	R9, R10	Reg Approval → Next Quarter → +9 Months
SER, FR, and DDR Monitoring Equipment**	CLO, TO, GO, DP	R1* – R8	Reg Approval → Next Quarter (Effective Date) Sites In-Service Prior to Effective Date +36 Months Sites In-Service After Effective Date +15 Months

*SER data in R1 is only applicable to CLO

** Deadline extension possible under certain circumstances for R1-R8



NERC Large Load Working Group Update

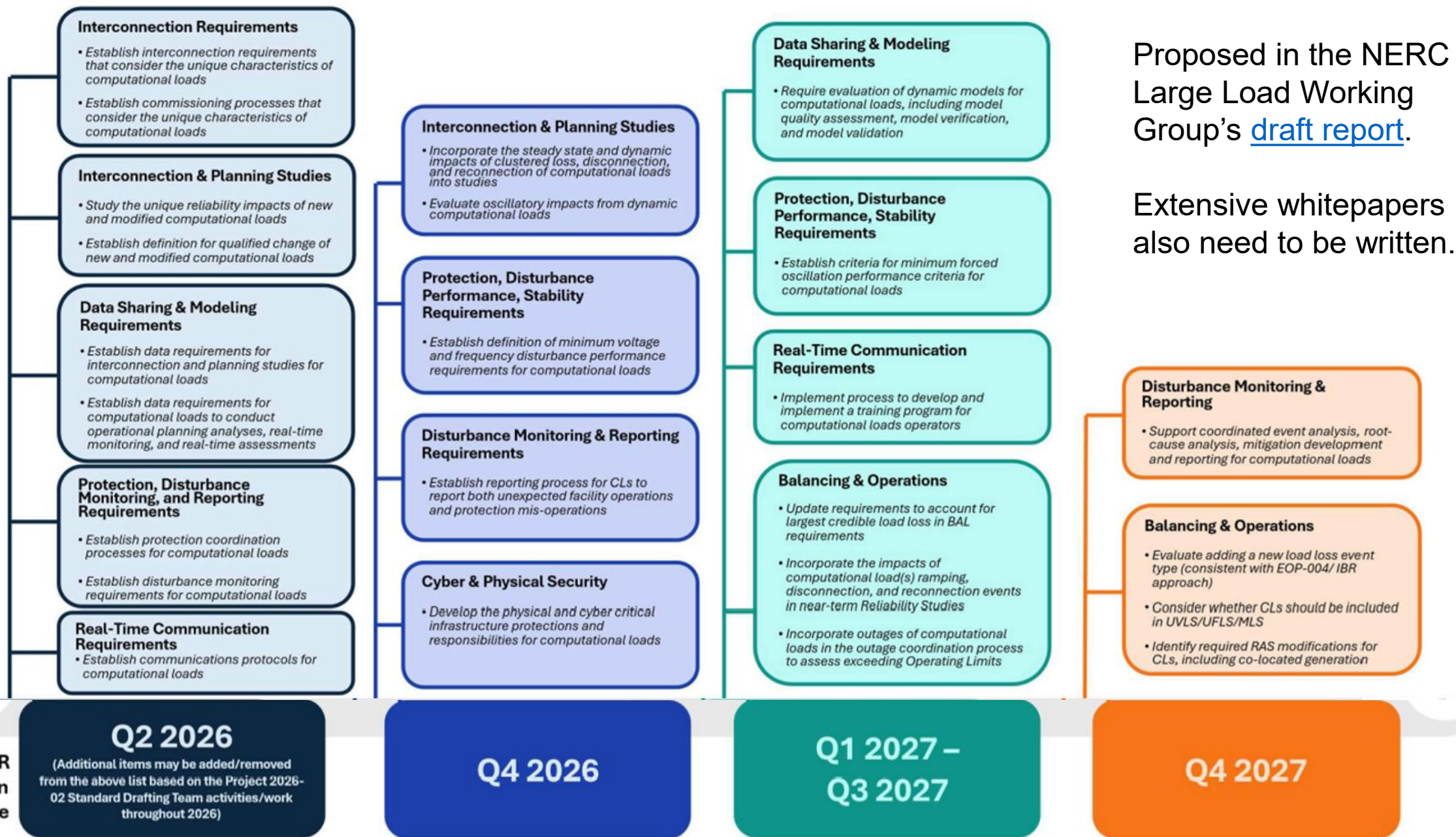
- **A Disturbance Performance whitepaper which recommends interconnection-specific FRT requirements, and nationwide VRT requirements. The VRT portion recommends adopting the ERCOT VRT requirements with modifications.**
- **A Studies and Simulation whitepaper (joint with LMWG and EMTWG).**
- **A Standard Authorization Request (SAR) for Computational Load disturbance performance (FRT/VRT/PFAPR).**

Recently Completed – SAR Roadmap to address gaps and reliability issues identified by the LLWG

On the horizon:

- **Additional SARs, Reliability Guidelines, and Whitepapers following the recommendations in the SAR Roadmap and RSTC direction. Finalized SARs are anticipated by the end of 2026 in coordination with NERC.**

SAR/SIR Future Development Roadmap for Computational Loads





On July 22, 2026, roughly 3.8 GW of data center load reduced demand in Dominion following a fault on their system that was cleared as expected.

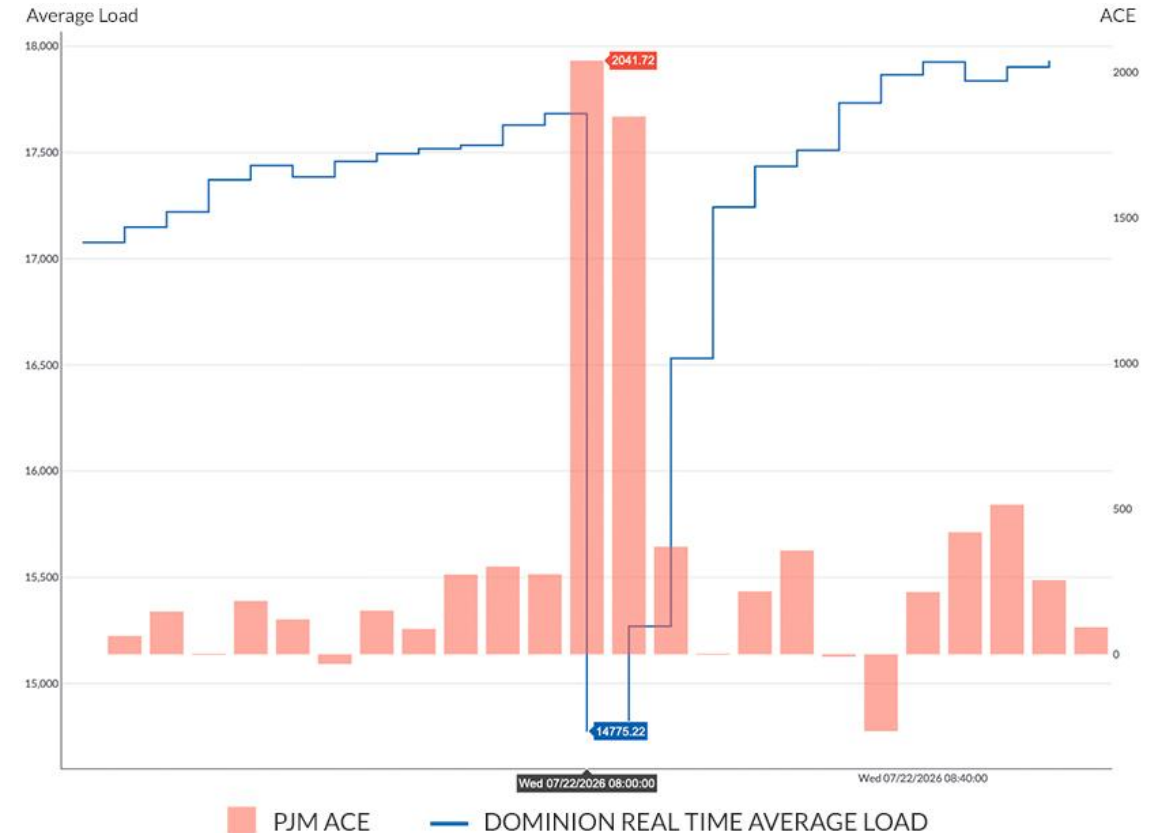
Whitepaper

- Customer-initiated load reduction (CILR) events have been seen across North America. CILR was identified as a risk in LLWG whitepapers. The [Large Load Disturbance Performance – Impact Analysis and Ride-Through Recommendations](#) white paper provides recommendations for disturbance performance requirements. Its comment period is open till August 28.

SAR

This SAR will focus on establishing minimum voltage and frequency, and post-fault active power recovery performance criteria for computational loads during and after defined voltage and frequency disturbances.

July 22, 2026, Dominion Event



Questions?



Project 2026-02 Computational Loads

□ Goal: Deliver Reliability Standard Requirements that...

1. Are essential actions that ‘move the needle the most’
2. Can be most effectively delivered on the targeted Phase 1 timeline (2026)

□ Strategy:

1. Set the Foundation:

- Focus on the core, process-related items in Phase 1 (set the foundation)

2. Don't Start from Scratch

- Leverage existing process-related frameworks & concepts for integrating elements onto the BPS

3. Enable Industry Flexibility in an Evolving Time

- Allow flexibility on process specifics, do not include technical specifics that are still evolving and/or may have regional variances

Key Takeaway: These new Standards utilize existing language and only make changes where necessary to support Computational Loads. The former represents the latest available drafts.