NERC COMPUTATIONAL LOADS: THREE PROPOSED STANDARDS FOR DATA-CENTER SITES

On **October 14, 2026**, NERC Project 2026-02 closed its final ballot on three proposed Reliability Standards, **CLO-001-1**, **CLO-002-1** and **CLO-003-1**, plus conforming revisions **FAC-001-5** and **FAC-002-5**. The NERC Board of Trustees is scheduled to consider adoption on **October 26, 2026**, and FERC has directed NERC to file by **December 31, 2026**; none of the standards takes effect until FERC approves it. On October 8 the Board approved Rules of Procedure revisions that add two registered entity types, the Computational Load Owner and the Computational Load Operator; those registry criteria remain pending FERC approval.

REGISTRATION · WHO IS IN SCOPE

Owners and operators of sites of 50 MW or more at 100 kV or above

- A **Computational Load Site** is "one or more buildings, structures, or installations at a single location 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 Bulk-Power System."
- The proposed registry criteria capture the **Computational Load Owner (CLO)**, which owns and maintains the site, and the **Computational Load Operator (CLOP)**, which operates it, where the site has a total connected Load of 50 MW or more supplied through equipment connected at 100 kV or above. One entity can be registered for both.
- The test is the voltage at which the supplying equipment connects to the Bulk-Power System, not the point of connection in an interconnection agreement. A material-impact finding can register a smaller site or exclude a larger one.
- The criteria take effect only after FERC approves them; NERC expects CLOs to be registered beginning in **2027**.

THE STANDARDS · WHAT THEY WOULD REQUIRE

Planning, operations, and recording

- **CLO-001-1, interconnection, studies, and modeling data.** The CLO coordinates on interconnection studies, submits modeling data on its planners' schedule (at least every 13 months), answers technical concerns within 90 days unless they agree to longer, and gives its Transmission Planner Model Verification within 365 days of in-service, 180 days of a change to dynamic response, and every 10 years.
- **CLO-002-1, operational data and communications.** The CLO and CLOP meet the data specifications their Transmission Operator, Balancing Authority, and Reliability Coordinator issue. The CLOP complies with Operating Instructions unless they cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements, says when it cannot comply, keeps Interpersonal Communication with its Balancing Authority and Transmission Operator, and trains operators to repeat back oral instructions, as it must in an Emergency.
- **CLO-003-1, protection coordination and disturbance monitoring.** The CLO keeps breaker-position event records and coordinates Protection System settings. The main power transformer's owner records faults and continuous disturbances at its high side or common point of connection. Each entity responsible for the data syncs it within 1 ms of UTC, keeps it 20 days, provides it within 15 days of a request, and restores a failed recorder within 90 days or files a Corrective Action Plan.

GENERATOR OWNERS · CO-LOCATED SITES

A data center connected through your plant brings duties too

- **CLO-001-1** applies to a Generator Owner that has a Computational Load Site interconnection or a fully executed study Agreement for one. It documents its site interconnection requirements, including coordination with the Transmission Owner and Distribution Provider, and makes them available within 45 days of that Agreement (R3), and coordinates with its planner on studies (R6).
- **CLO-003-1** R2 to R4 fall on whichever entity owns the main power transformer that steps the site down from transmission voltage: the CLO, a Transmission Owner, a Distribution Provider, or a **Generator Owner**. That owner also carries R5 to R8 for the data it records.
- **FAC-001-5 and FAC-002-5** leave every requirement unchanged. They add one exclusion: "end-user Facilities" and "third-party Facilities" no longer include Computational Load Sites subject to CLO-001, so those sites move under CLO-001-1. FAC-001-4 and FAC-002-4 retire immediately before the new versions take effect.

Jul 16, 2026
FERC directs NERC to file the standards by December 31, 2026, and expects the registry criteria then too (RD26-7-000).

Oct 8, 2026
NERC Board approves Rules of Procedure revisions adding the CLO and CLOP functions and their registry criteria, pending FERC approval.

Oct 9-14, 2026
Final ballot passes: CLO-001-1 82.33%, CLO-002-1 78.13%, CLO-003-1 82.69%, FAC-001-5 and FAC-002-5 95.51%.

Oct 26, 2026
Virtual NERC Board open meeting to consider adopting the standards and authorizing their filing.

Dec 31, 2026
FERC deadline for NERC to file the standards; FERC expects the registry criteria by the same date.

Sources: NERC Project 2026-02 final-ballot standards and implementation plans (October 2026); NERC Board of Trustees agenda packages (October 8 and October 26, 2026); NERC Rules of Procedure Appendix 5B (August 2026 posting); FERC order in Docket RD26-7-000 (July 16, 2026).

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WHEN COMPLIANCE WOULD START: EFFECTIVE DATE AND PHASE-IN

In the United States, each standard becomes effective on the **first day of the first calendar quarter after the effective date of FERC's order approving it**, unless FERC sets another date; other jurisdictions follow their own governmental approval. The CLO implementation plans then phase in compliance, counted in months from that effective date (for new CLO-003-1 sites, the later of 15 months or the in-service date). Until FERC acts, no date below is fixed.

CLO-001-1 · PLANNING

Nine months to full compliance

3 MONTHS · R7, R8

Planning Coordinators publish their definition of a **qualified change** and, with their Transmission Planners, set the modeling data requirements CLOs must meet.

6 MONTHS · R1 TO R3

Transmission Owners and Distribution Providers document their site interconnection requirements. A Generator Owner, and a Transmission Owner or Distribution Provider with no existing site interconnection, must have them within 45 days of a fully executed study Agreement.

9 MONTHS · R4 TO R6, R9 TO R11

Interconnection studies; study coordination by CLOs and by Transmission Owners, Distribution Providers, and Generator Owners; **modeling data**; responses to technical concerns; and **Model Verification**.

FAC-001-5 and FAC-002-5 take effect under the same rule, with no phase-in.

CLO-002-1 · OPERATIONS

Twelve months for CLO, CLOP, and communication duties

6 MONTHS · R1 TO R6

Transmission Operators, Balancing Authorities, and Reliability Coordinators write and distribute their data specifications for Computational Load Sites.

12 MONTHS · R7 TO R15

The CLO and CLOP meet those specifications; the CLOP follows **Operating Instructions**, keeps Interpersonal Communication, and trains its operators. Transmission Operators and Balancing Authorities keep Interpersonal Communication with each CLOP and report failures (R10, R12).

- **Extension for R8 to R15:** an entity with a site in service no later than 12 months after the effective date may request more time from its Compliance Enforcement Authority if circumstances beyond its control, such as supply chain delays for communication equipment, prevent it from establishing Interpersonal Communication capability and protocols.
- The request names the sites, a plan and timetable, and the circumstances and why they are beyond the entity's control. It is filed as soon as the problem is known and no later than **three months** before the compliance date; the Compliance Enforcement Authority decides whether to grant it.

CLO-003-1 · RECORDING AND PROTECTION

Up to 36 months for recording equipment

9 MONTHS · R9, R10

The CLO establishes and uses its Protection System settings coordination process.

36 MONTHS · R1 TO R8, EXISTING SITES

Sites in service (fully ready for their intended use, including a completed interconnection) on or before the effective date: event, fault, and disturbance recording.

15 MONTHS OR IN-SERVICE · R1 TO R8, NEW SITES

Sites in service after the effective date: the later of 15 months after the effective date or the in-service date.

- **NERC's example:** if CLO-003-1 became effective April 1, 2027, sites in service before then would comply by April 1, 2030; sites placed in service after April 1, 2027 and by July 1, 2028, by July 1, 2028; later sites, on their in-service date.
- An entity with a site in service no later than 12 months after the effective date may request an extension for R1 to R8 on the same terms, where supply chain delays for recording equipment, an inability to secure scheduled outages, or other circumstances beyond its control prevent installation.

Not yet in force

The standards take effect only after the Board adopts them (meeting October 26) and FERC approves them, and then on the effective and compliance dates above.

Registration in 2027

NERC expects CLOs to be registered beginning in 2027, once FERC approves the registry criteria the Board approved on October 8.

Mar 1, 2027

FERC deadline for NERC's workplan on further computational-load standards (Phase II).

Effective date

First day of the first calendar quarter after FERC's approval order takes effect, unless FERC sets another date; the months above count from it.

Sources: NERC Project 2026-02 implementation plans for CLO-001-1 (with FAC-001-5 and FAC-002-5), CLO-002-1, and CLO-003-1 (final ballot, October 2026); FERC order in Docket RD26-7-000 (July 16, 2026). This briefing is an educational summary and does not replace the standards.

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