

NERC Primer for Computational Loads

Overview

This primer is meant to help data centers, crypto-mining facilities, and other entities that use significant energy for computational processes (“computational load entities”) better understand the following:

1. NERC and its mission
2. Why NERC is addressing computational load entities
3. The steps that NERC is taking to address computational load entities
4. How computational load entities can engage in NERC’s stakeholder processes

Stakeholders can reach out to [Zach Greene](#), manager of strategic engagement, for more details.

NERC and Its Mission

The North American Electric Reliability Corporation (NERC) is a not-for-profit, international regulatory authority dedicated to effectively and efficiently reducing risks to the reliability and security of the bulk power system (BPS). To accomplish its goals, NERC works with owners, operators, and consumers as well as federal, state, and provincial regulators across North America to develop and enforce mandatory Reliability Standards, monitor the grid, train personnel, and assess risks to ensure that the grid remains reliable and secure today and in the future.

Why NERC Is Addressing Computational Load Entities

An increasing number of data centers, cryptocurrency mining facilities, and other computational load entities are connecting to the BPS. These entities present unique reliability challenges for the electric grid. For example, NERC has observed several challenges resulting from computational load entities around timing, data collection and forecasting, and modeling. Through extensive analysis, report development, and engagement conducted to date, NERC has determined that it must act now to support the integration of new computational loads in a manner that maintains a reliable and secure BPS.

The Steps NERC Is Taking to Address Computational Loads

NERC is advancing three concurrent workstreams to support the mitigation of risks from computational loads: 1) Registration, 2) Reliability Standards, and 3) Technical Insights.

Registration

NERC maintains a list of entities that are subject to mandatory Reliability Standards. This list is known as the NERC Compliance Registry, and entities on the list are referred to as registered entities. Accordingly, “registration” refers to the process that NERC uses to identify entities that should be on this list.

To become a NERC registered entity, entities are assessed on whether they meet the criteria that characterize entities that are impactful to BPS reliability. NERC registers entities that meet the criteria within these definitions, and registered entities must comply with applicable Reliability Standards.

Given the BPS risks posed by certain types of computational load entities, **NERC is developing new registry criteria for these entities**. During criteria development, NERC posts the proposed criteria for public comment. The initial draft criteria for computational load entities are posted on the [Proposed Changes to Rules of Procedure](#) webpage, and initial stakeholder feedback on the proposed criteria was due by May 15, 2026, as part of a 45-day comment period. NERC will

review comments and revise the criteria as necessary. NERC is on track to post revised registry criteria for another formal comment period in late summer.

After the public comment period, NERC's Board of Trustees (Board) has the authority to approve the registry criteria, after which NERC files the criteria with the Federal Energy Regulatory Commission (FERC) for approval. NERC is aiming to file the registry criteria with FERC before the end of 2026. Registration of new computational load entities would begin after FERC approval.

This **informational package** provides a 101 for new NERC registered entities.

Reliability Standards

One tool used by NERC to provide for the reliability and security of the BPS is the development of **Reliability Standards**. Standards define reliability requirements for planning and operating the North American BPS. An entity must meet the requirements in a standard if that entity is 1) registered with NERC on the NERC Compliance Registry and 2) if its entity type is explicitly referenced in that standard. Reliability Standards are developed using an industry-driven development process that is open to everyone affected by grid reliability. This public process is transparent, demonstrates a consensus for each standard, fairly balances the interests of all stakeholders, provides reasonable notice and opportunity for comment, and enables timely standards development.

NERC launched Project 2026-02 on March 16, 2026, to develop a foundational Reliability Standard addressing computational loads. The **standard authorization request** (SAR), which is the formal document used to propose the development of a standard, was posted for a 30-day formal comment period on April 1, 2026, with comments due by April 30. NERC's Standards Committee approved the drafting of standard(s) on May 20, 2026.

Following a process similar to all standards projects, a "standard drafting team" (SDT) will lead the drafting of computational load entity standard(s) over the course of the next several months. All SDT meetings are public, and anyone can contribute to the process.

The SDT will release draft(s) of the standard(s) for comment and balloting. Anyone can comment on these drafts (if they have a Standards Balloting System account, referenced in Section 4 below), and each entity can participate in the balloting process by voting on the draft. Once a standard hits a certain approval threshold, it passes and goes to the Board. After Board approval, a standard is filed with FERC for approval.

Technical Insights

NERC has conducted extensive analysis on emerging large loads over the past several years, which underpins the actions to develop registration criteria and standards for computational load entities. Technical insights include the following:

- Efforts undertaken by **NERC's Large Loads Working Group** (formerly the Large Loads Task Force), including its two white papers:
 - ***Characteristics and Risks of Emerging Large Loads***
 - ***Assessment of Gaps in Existing Practices, Requirements, and Reliability Standards for Emerging Large Loads***
- Incident reports covering **customer-initiated load reductions by data centers** and **crypto-mining facility load-loss events**.
- A **Level 3 Essential Action Alert** issued in May 2026, urging seven near-term mitigation actions that current registered entities should take to address critical reliability risks from the integration of computational loads.

Registered entities must respond to the alert by August 3, 2026. This deadline only applies to currently registered entities, not the new entities that may be incorporated under the new registration criteria. However, computational load entities may see elements within the alert flow down to them.

- **NERC's Level 2 Industry Recommendation Alert**, which gathered data from NERC's registered entities related to the interconnection of large loads.
- A **Reliability Guideline: Risk Mitigation for Emerging Large Loads**, published in May 2026. The guideline is intended to supplement, rather than replace, any existing or new Reliability Standards, and it is voluntary and non-binding. The focus is on improving modeling practices, analyses, coordination, data collection efforts, real-time monitoring, and event analysis.
- NERC's **Emerging Large Loads Technical Conference** and other convenings.

NERC continues to review the impacts and mitigation options associated with the integration of computational load entities (as well as other emerging large loads) onto the BPS. For computational loads, the Large Loads Working Group has a full work plan for 2026 that includes white papers and the development of new SARs. This working group is open to any interested stakeholder, and anyone is able to participate on and contribute to its work products.

How Computational Load Entities Can Engage in NERC's Stakeholder Processes

This **checklist** provides detailed instructions and tutorials for the actions that computational load entities should take to ensure that their voices can be heard in the process. Actions on the checklist include the following:

- **Sign up for an ERO Portal account.** Then **contact us** and ask to join NERC listservs and receive information about the three workstreams.
- **Create a Standards Balloting System (SBS) account**, which is necessary to comment on standards projects.
- **Join the Registered Ballot Body** (through the SBS system) to vote on standards.
- **Join the relevant Ballot Pool for a specific standard** (when the pool is open) to vote on that standard.
- Consider **becoming a NERC member** to participate in NERC governance activities.

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Checklist for Computational Load Entities

Sign Up for an ERO Portal Account for Information

- **Why:** Get added to NERC mailing lists and resources, as well as NERC datastores and applications. Receive email notifications to stay up to date on all computational loads information.
- **How:** Go to <https://portal.nerc.net/> and click "Register." Once your account is confirmed, reach out to [Tech Groups](#) to request being added to the "NERC-info" (our comprehensive mailing list), [the computational loads standard project \(2026-02\)](#), [Large Loads Working Group](#), and/or [Load Modeling Work Group](#) listservs.
- **When:** *As soon as possible.*

Create a Standards Balloting System (SBS) Account for Commenting on Standards, Definitions, and Associated Documents

- **Why:** This portal will allow you to provide official [comments](#) on [Standard Authorization Requests \(SAR\)](#); it is also the first step to joining the Registered Ballot Body.
- **How:** Go to <https://sbs.nerc.net/> and click "login/register" to create a "contributor" account; use this [tutorial](#) for support.
- **When:** *As soon as possible.*

Join the Registered Ballot Body for Voting

- **Why:** As a member of the Registered Ballot Body, you will be eligible to join ballot pools for relevant Reliability Standards and vote on them. Only one person from each entity, per segment, can join (i.e., only one person can join Segment 7 – Large Electricity End Users). Your input matters.
- **How:** Go into your Standards Balloting and Commenting System (SBS) account and follow this path: "Users" > "My User Profile" > "Click here to request additional credentials" > choose "Voter" and provide supporting evidence; use this [tutorial](#) for support.
- **When:** *As soon as possible, preferably by June 30, 2026.*

Join Relevant Ballot Pools for Voting

- **Why:** As a member of the Registered Ballot Body, you will be eligible to join ballot pools and vote on relevant standards. Your input matters.
- **How:** Use the "Ballots Events" link on the SBS dashboard page; use this [tutorial](#) for support.
- **When:** During a specified time once the draft standard is published for comment and ballot; you must join when the pool is initially formed.

Learn More About NERC

- Learn more about NERC and our mission [here](#). Access the Large Loads Action Plan page [here](#).

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There are other opportunities for stakeholder engagement within NERC, such as becoming members of a standing committee, but those do not have the same pressing deadlines. NERC plans to deploy additional educational content for computational load entities in the future, and this will cover other engagement options.

NERC is committed to ongoing engagement and collaboration with computational load entities as the process unfolds. Stakeholders are encouraged to contact NERC with questions, comments, or requests for more information.