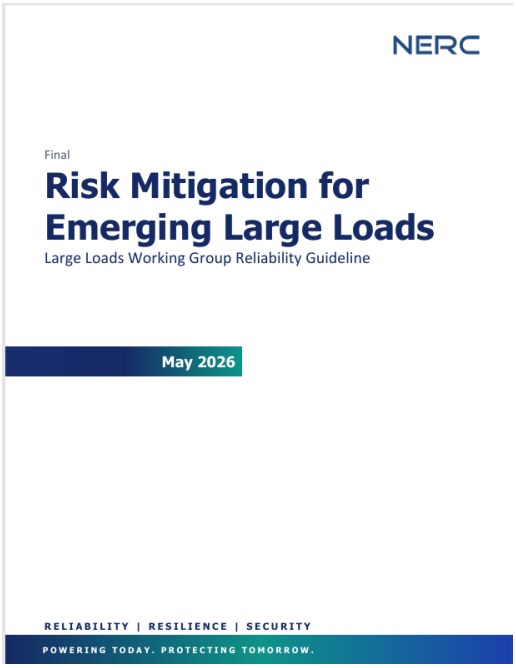
Recent NERC Action Regarding Large Load

On May 1, 2026, NERC released its Reliability Guideline: Risk Mitigation for Emerging Large Loads



Key Points:

- Provides a comprehensive review of large load reliability risks and mitigation steps.
- Identifies accountabilities for addressing reliability risks.
- Appendix A provides an overview of the reliability risks and identifies the registered entities that are leading, coordinating, monitoring, providing or specifying requirements.
- This Guideline is an interim step because standards have not yet evolved to a point of usefulness.
    - This will take some time.
- NERC is separately undertaking a rules of procedure change effort to create a new functional entity – Large Load Entity – based on the following definitions:
    - *"Computational Load" means Load comprised of electric power demand from information technology equipment, such as servers, storage, and networking hardware.*
    - *"Computational Load Entity" means the end-user or the entity that hosts end-users that receives electric power for Computational Load.*

Appendix A: High-Level Recommendations

Category	Recommendation	LLE	DP	TO	TP	PC	TOP	BA	RC
Data Collection and Modeling	Provide steady-state, dynamic, and other data	P	L	L	SR	SR			
	Install high-speed FR, DDR, and SER	L	C	C					
	Provide high-speed recording data for post-event analysis	P	C	C	C	C	SR	SR	SR
	Provide updates to modeling data (as-built)	P	L	L	SR	SR			
	Provide real-time electrical measurements	P		P			SR	SR	SR
	Provide near-term demand forecasts	P		C				SR	SR
	Perform model quality assessment, model verification, model validation	L			SR	SR			
Interconnection	Collect data and share with relevant entities	C	L	L	SR	SR	SR	SR	SR
	Study reliability impacts of new large load	C	C	C	L	L	M	M	M
	Periodic near-term studies for collective impact of new large loads	C	C	C	L	L	M	M	M
	Comprehensive commissioning process for large loads	C	C	C	C	C	SR	SR	SR
	Develop EMT screening criteria where needed	M	C	C	SR	SR			M
Long-Term Planning	Study reliability impacts of new large load	C	C	C	L	L	M	M	M
	Resource adequacy analysis considering unique risks of large loads	C	C	C					
Operations and Balancing	Verify communications (phone communications, telemetry, etc.)	C					SR	SR	SR
	Integrate into operational systems (forecasting, outages, day-ahead studies)	C					SR	SR	SR
	Conduct commissioning tests of the large load	C		C			SR	SR	SR
	Post-commissioning testing and verification	C					SR	SR	SR
	Provide real-time electrical measurements	P		P			SR	SR	SR
	Provide near-term demand forecasts	P		C				SR	SR
	Specify data requirements for large loads real-time analysis and monitoring	C					SR	SR	SR
	Prepare for largest expected load contingency (CILR, ramping, or other)	C			C	C		SR	SR
	Minimize variability via large load facility software mitigations	L						SR	SR
	Respond to operating instructions	L					SR	SR	SR
	Event analysis	C			L	L	L	L	L
Stability	Define disturbance performance criteria based on studies	C	C	C	C	SR	C	C	SR
	Study and mitigate risks from CILR events	C	C	C	L	L	M	L	L
	Design and operate facilities to follow disturbance performance criteria	L	C	C	SR	SR	C	C	SR
	Study, mitigate, and monitor oscillations from large loads	C	M	L	L	L	C	M	SR
Power Quality	Study, mitigate, and monitor power quality risks from large loads	C	M	L	L	C	C		C
Physical and Cyber Security	Holistic risk assessment	L							
	Implement security-by-design practices	L							
	Study and plan for operational interdependency between utility and large loads	C	C	C	C	C	C	C	L
	Implement physical security considerations	L							
	Implement cyber security considerations	L							
Resillience	Monitor any large loads involved in manual load shed, UFLS, and UVLS	C	C	C			L	L	
	Consider integration of large loads into UFLS and UVLS schemes	C	L	L			L	L	

C = Coordinate L = Lead M = Monitor P = Provide SR = Specify Requirements

On May 4, 2026, NERC release its Alert Level 3: Essential Action to Industry Computational Load Modeling, Studies, Instrumentation, Commissioning, Operations, Protection, and Control

NERC

Essential Action to Industry

Computational Load Modeling, Studies, Instrumentation, Commissioning, Operations, Protection, and Control

Initial Distribution: May 4, 2026

The purpose of this Level 3 NERC Alert is to ensure Essential Actions are taken by registered entities to address the risks posed by existing and new computational loads[1] interacting with the bulk power system (BPS), inclusive of computational load interconnecting with collocated generation.[2]

NERC issued a previous Level 2 Alert Industry Recommendation: *Large Load Interconnection, Study, Commissioning, and Operations*[3] that discussed the recommended practices that NERC deemed necessary to address the emerging risks from large loads. In the responses provided to the Alert, NERC found that entities generally did not have sufficient processes, procedures, or methods to address risks associated with computational loads. This contrasts with the robust historical experience with traditional non-power electronic non-computational load. As seen in the public report, NERC found specific deficiencies with the treatment of computational loads. Examples of this load include artificial intelligence training, cryptocurrency mining, and traditional data center uses.

As stated in the public report, NERC determined a set of immediate actions that registered entities should take to reduce the risk to the BPS that warrant issuance of this Level 3 alert. These actions relate to the modeling, study, installed fault recording or instrumentation, commissioning, operation, protection, and control of computational load.

NERC issues this Level 3 Alert for entities to implement specific changes[4] to handle critical risks. Additional actions are discussed as part of NERC's Large Loads Action Plan and include the draft registry criteria[5] and Standard Authorization Request (SAR) for computational load[6] posted on NERC's website on April 1, 2026. Responses will also help

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[1] NERC is currently working to register a "Computational Load Entity" for these loads. Currently, this would include loads that are 20 MW and greater, connected at 60kV, and contain more than 1 MW of IT Load. More information is available on NERC's Rules of Procedure webpage.
[2] Colocation with generation is one significant way computational load is interacting and using the BPS.
[3] See *Aggregated Report on NERC Level 2 Industry Recommendation: Large Load Interconnection, Study, Commissioning, and Operations* to see the results of the previous Level 2 Alert.
[4] As indicated in the public level 2 alert report, entities that do not have and do not expect to integrate computational loads within two years may not find it useful to implement these Essential Actions. These Essential Actions are for those entities that have or could expect to have computational loads or that may include these loads in the next two years. This includes entities that do not have computational load in their territory but could feasibly receive a request for one. Entities should implement these Essential Actions prior to receiving a computational load interconnection request.
[5] More information is available on NERC's Rules of Procedure webpage.
[6] More information is available on the Project 2026-02 webpage.

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Key Points:

- Level 3 Alerts require certain actions to be undertaken and to be reported on.
- The reporting date is August 3, 2026
- There are 7 Essential actions identified.
- There are 33 questions that must be responded to by the indicated registered entities.
    - All registered entities belonging to the TP, PC, TO, BA, RC, and TOP functional groups are required to acknowledge receipt of this Alert and respond, as applicable.
    - All registered entities covered by this Essential Action are required to provide an approved response as defined as the questions: