DIGITAL POWER NETWORK

**Digital Power Network Post-Conference Comments**
Docket No. AD25-8-000
Commissioner-Led Reliability Technical Conference
Comments of the Digital Power Network (DPN)

## Introduction

The Digital Power Network (DPN) is the largest coalition of Bitcoin miners and digital infrastructure providers, representing over 85% of the U.S. public Bitcoin mining hashrate. DPN advocates for policies that promote energy innovation, grid resilience, economic development, and the strategic role of digital assets in the 21st-century economy.

DPN appreciates the opportunity to provide additional information in response to topics discussed during the Federal Energy Regulatory Commission's Commissioner-led Reliability Technical Conference on October 21, 2025. These comments address key themes raised during the discussion, including grid reliability, flexible-load integration, cybersecurity, and the national-security importance of digital infrastructure.

## I. National Security and the Strategic Importance of Digital Infrastructure

In his opening remarks, NERC President and CEO Jim Robb underscored the national-security significance of data centers. The Digital Power Network (DPN) expands this perspective to include Bitcoin mining and AI development as critical components of the nation's digital infrastructure. Both industries are indispensable to sustaining U.S. economic strength and technological leadership, and FERC should formally recognize their strategic importance to national competitiveness and security.

The United States currently hosts nearly 40% of global Bitcoin mining hashrate, a position that enables meaningful regulatory oversight and downstream economic benefits. Bitcoin miners provide computing power that secures the network and protects trillions in digital assets worldwide. As Bitcoin and AI operations increasingly converge, their dual-use facilities reshape grid dynamics by flattening peaks, enhancing flexibility, and strengthening transmission resilience.

Recognizing flexible digital infrastructure as a strategic asset class would ensure FERC policies promote reliability, affordability, and global competitiveness. Accordingly, FERC should prioritize expedited interconnection processes and guaranteed access to affordable, reliable power for critical digital facilities.

## II. Grid Reliability, Flexibility, and Emerging Load Characteristics

Grid reliability and the characteristics of emerging loads were central themes throughout the conference. NERC's *2024 State of Reliability Report* found the Bulk Power System (BPS) to be "highly reliable and resilient," while cautioning that vulnerabilities from extreme weather and emerging load types, including AI and cryptocurrency facilities, are growing. The *2025 ERO Reliability Risk Priorities Report* echoed these findings, highlighting grid transformation as a critical risk area and calling for greater diversity, coordination, and expedited processes across the system.

While digital infrastructure has often been cited as a potential stressor on the grid, it is equally important to recognize the ways in which these large, flexible loads can strengthen reliability and accelerate modernization.

Bitcoin and AI operations present distinct but complementary load profiles. Bitcoin miners can curtail within seconds, responding to grid conditions or price signals in real time, effectively acting as shock absorbers. AI data centers, by contrast, maintain firm, mission-critical loads but experience volatility tied to computational intensity. When integrated, these dual-use facilities balance one another, miners absorb excess energy during low-demand periods, while AI workloads provide steady baseload utilization. The result is a flatter load profile, reduced volatility, and improved overall system reliability.

Moreover, digital-infrastructure operators are not passive consumers; they are active partners in grid investment and modernization. Bitcoin miners fund new generation through interconnection agreements and behind-the-meter projects, often co-locating with wind, solar, hydro, and battery storage. AI hyperscalers increasingly support firm generation, including nuclear. Together, these investments diversify the generation mix, enhance resilience, and address the challenges of aging infrastructure.

Flexible-load data centers further optimize energy use through distributed energy resources (DERs) and virtual power plants (VPPs), reducing reliance on inefficient peaker plants and helping to stabilize the grid.

To support this evolution, FERC should:

- Modernize load-modeling guidance to reflect the behavior of flexible digital loads.
- Require RTOs and ISOs to incorporate flexible-load participation into planning models.
- Acknowledge digital-infrastructure investments that enhance generation diversity and reliability.
- Recognize the reliability benefits of dual-use facilities and flexible digital infrastructure.
- Include curtailment capability and load flexibility as accredited reliability attributes.

### III. Improving Forecasting and Modeling for Emerging Loads

Accurate forecasting and modeling are essential for integrating new types of digital infrastructure into the grid. Yet, traditional models often fail to capture the real-time dynamics and operational diversity of emerging large loads, including dual-use facilities that combine AI and Bitcoin computing. Improved coordination between load-serving entities, system operators, and utilities is critical to achieving this.

Throughout the conference, participants highlighted persistent modeling challenges. Legacy systems struggle to reflect the flexibility of modern digital loads, limiting the ability of system operators to anticipate demand swings or capture rapid curtailment behavior. FERC and NERC should therefore promote innovative, data-driven modeling frameworks that reflect how these facilities actually operate.

Demand-response programs are a vital tool in this transition. To make them effective, FERC should work with system operators and utilities to improve communication, metering, and AI-enabled forecasting. According to the Energy Systems Integration Group, operators often lack sufficient post-event data after emergency load-shedding events, hindering accurate capacity planning and the design of meaningful incentives for demand-response participation.

As distributed energy resources (DERs) and virtual power plants (VPPs) expand, these technologies present an opportunity to strengthen reliability, but only if supported by a modernized, well-coordinated data environment. Enhanced information-sharing between utilities and operators, particularly after curtailment or load-shedding events, will be essential. With robust demand-response and VPP programs, DERs can begin functioning as dispatchable baseload resources, ensuring that retiring traditional generation does not threaten reliability.

Ultimately, improving forecasting and modeling will help deliver more reliable and affordable power, enabling utilities to predict and manage load swings rather than reacting to them. To advance these goals, FERC and NERC should:

- Support demand-response programs that align price sensitivity with predictability.
- Encourage dual-use AI–Bitcoin facilities to manage ramp rates and mitigate demand swings.
- Recognize and accredit flexible-load facilities for their reliability contributions.

### IV. Addressing Large Load Demands through Behind-the-Meter and Colocation

Digital-infrastructure providers are directly addressing challenges of resource adequacy and transmission congestion while simultaneously supporting new energy development. The sector has met its growing demand by pursuing both off-grid and grid-connected colocation agreements. Many Bitcoin miners locate in regions with abundant stranded or curtailed energy, operating off-grid to avoid imposing new costs on ratepayers. These arrangements strengthen local economies while requiring no additional transmission upgrades, ensuring that the bulk power system remains insulated from rapid demand swings.

Throughout the conference, participants highlighted the importance of alternative energy sourcing, including behind-the-meter, colocation, and hybrid microgrid approaches, as legacy baseload resources retire and permitting delays constrain new builds. In this context, distributed energy resources (DERs) and virtual power plants (VPPs) are becoming indispensable tools for maintaining grid balance. Bitcoin miners and other flexible operators should be recognized for their role in economically stabilizing generation resources by consuming surplus power during low-demand periods and curtailing when supply tightens.

In many cases, data centers and miners co-locate directly with generation assets awaiting interconnection, providing steady revenue streams that keep these projects viable while they await grid connection. This model enhances overall resource adequacy by bridging the gap between project financing and interconnection.

Additionally, miners frequently invest directly in new generation, including renewable and firm resources, through Power Purchase Agreements (PPAs) and capital partnerships. These arrangements fund new capacity while expanding available supply for local communities and utilities.

FERC's ongoing review of PJM's challenge to the Talen Energy, AWS nuclear colocation agreement underscores the need for flexible, standardized frameworks to support these innovative partnerships. Whether through funding new generation, advancing microgrid development, or enhancing transmission resilience, Bitcoin miners and flexible digital infrastructure operators are proactively addressing resource adequacy and helping modernize the nation's energy system.

To enable continued growth of flexible baseload resources, FERC should:

- Accelerate interconnection processes for digital infrastructure co-located with small-scale generation.
- Approve and standardize colocation frameworks between DERs and digital facilities.
- Preserve regulatory flexibility for data centers choosing to operate with off-grid resources.
- Recognize colocation as a proven strategy for mitigating grid volatility and enhancing reliability.

### V. Cybersecurity and Critical-Infrastructure Protection

NERC's proposed Critical Infrastructure Protection (CIP) standards for low-impact Bulk Electric System (BES) assets represent a meaningful advancement in national cybersecurity. The new requirements to enhance remote authentication, encryption, and continuous threat detection will improve both the integrity and reliability of the U.S. power system.

The Digital Power Network (DPN) strongly supports these measures and underscores the broader importance of decentralization, a foundational principle of Bitcoin, as a security model for national infrastructure. Decentralization not only secures digital assets but also provides a physical and operational blueprint for strengthening critical energy systems. Just as gold reserves are geographically dispersed to reduce systemic risk, distributed generation and computing mitigate vulnerabilities by minimizing exposure to localized disruptions. This architecture reduces regional overreliance and strengthens resilience to both cyber and physical threats, ensuring that essential digital and energy systems remain robust in the face of evolving risks.

## VI. Large-Load Integration, Tariff Policy, and Interconnection Reform

Best practices for integrating large loads were a central theme throughout the conference, reflecting the unprecedented pace at which emerging digital infrastructure is connecting to the Bulk Power System. This rapid growth introduces both new opportunities and new reliability challenges for an aging transmission network and legacy operational models. NERC's Large Load Task Force (LLTF) has correctly identified coordination failures and data gaps between utilities and system operators as key barriers to efficient integration.

At the same time, tariff structures must evolve to reflect the diversity of load types. Some utilities, citing fears of transmission "overbuild," have implemented 20-year minimum contracts and minimum-payment clauses—despite clear indicators that national electricity demand from data centers, electrification, EVs, and semiconductor manufacturing will continue to expand.

As discussed in previous sections, off-grid and colocation models have emerged as innovative ways for operators to manage transmission risk and insulate consumers from stranded-asset exposure. The real systemic threat lies not in digital-infrastructure growth, but in discriminatory or inflexible tariff designs that deter investment and risk pushing critical U.S. computing capacity offshore.

*Tariff Fairness and Affordability*

Bitcoin miners and AI developers already shoulder significant interconnection and upgrade costs. Tariff frameworks must therefore distinguish between firm and flexible load types, recognizing the distinct system impacts of each. Blanket "data-center" classifications risk grouping small, flexible facilities with hyperscale operators, creating competitive disparities and discouraging innovation at the edge.

Equitable tariffs should reward flexibility, responsiveness, and grid services, rather than penalize new load participation.

*Flexibility and Curtailment Policy*

During the conference, Commissioner See raised an important question: should flexibility be mandatory? DPN strongly cautions against making curtailment a condition of interconnection. Flexibility should remain voluntary and incentive-driven, not compulsory. PJM's recent proposal to impose mandatory curtailment on large loads was met with broad stakeholder opposition due to the investment uncertainty and operational risk it would introduce. Such frameworks would discourage capital formation, undermine long-term planning, and risk driving data-center investment to more predictable regulatory environments abroad.

*Policy Recommendations*

To foster pro-growth, reliability-enhancing interconnection frameworks, FERC should:

- Encourage tariff structures that recognize the reliability contributions of flexible loads.
- Reject mandatory curtailment requirements that introduce unnecessary operational risk.
- Distinguish between firm and flexible load types in all tariff classifications and interconnection policy design.

**VII. Accelerating Infrastructure Build-Out and Colocation Opportunities**

A consistent theme throughout the conference was the need to accelerate energy infrastructure build-out to accommodate rapidly growing large loads. Commissioners repeatedly asked what FERC can do to reduce interconnection backlogs and streamline permitting for both generation and load.

The Department of Energy's Advanced Notice of Proposed Rulemaking (ANOPR) provides a constructive roadmap for addressing these challenges, particularly for facilities exceeding 20 MW, and DPN strongly supports its key provisions, which would:

- Integrate interconnection study processes for colocated data centers and their associated generation resources.
- Enable expedited interconnection for facilities agreeing to flexible-load arrangements or curtailment participation.
- Extend the "option to build" authority currently granted to generators, allowing data centers and digital-infrastructure operators to construct their own network upgrades when appropriate.

Together, these measures would reduce interconnection delays, lower costs, and enhance coordination between energy developers and digital-infrastructure providers. More importantly, they would align regulatory processes with the realities of the modern grid, where generation and flexible load are increasingly co-located, digitally managed, and mutually reinforcing.

By accelerating infrastructure build-out and enabling colocation, FERC can help ensure that the next generation of digital and energy infrastructure is built in America, advancing reliability, competitiveness, and national security.

### VIII. Managing Uncertainty, Community Engagement, and Defining Large Loads

Throughout the conference, Commissioners raised important questions about how to manage uncertainty and define large loads within evolving interconnection frameworks. DPN supports requiring developers to rescind duplicative or speculative interconnection applications, preventing utilities from allocating resources to so-called “ghost loads.” This will improve queue efficiency, reduce planning uncertainty, and ensure that legitimate projects can advance more rapidly.

A second major source of uncertainty stems from community opposition, which frequently delays or derails projects. Such delays not only harm developers but also waste limited resources from agencies involved in siting, permitting, and environmental review.

Addressing this challenge requires early, transparent engagement with local stakeholders. Utilities and developers should collaborate to communicate project benefits, such as job creation, tax revenue, and grid modernization, and to proactively dispel misconceptions. Modernizing zoning frameworks and introducing bottom-up permitting reforms will be essential to the sustainable siting of both data centers and generation facilities.
Finally, the definition of a “large load” should remain regionally adaptive. Thresholds must account for system size, load profile, and local grid conditions, rather than a universal megawatt standard. A one-size-fits-all approach would ignore regional diversity and could unintentionally slow deployment or misclassify flexible facilities.

By modernizing queue management, strengthening local engagement, and adopting context-sensitive definitions, FERC can foster a more predictable, transparent, and efficient process for integrating large loads into the U.S. grid.

### IX. Conclusion

The Digital Power Network (DPN) appreciates the Commission’s continued focus on the reliability challenges, and the corresponding opportunities, presented by emerging large loads. The rapid growth of digital infrastructure, including both Bitcoin mining and AI data centers, represents not just a technological evolution but a national security and reliability imperative.

When supported by modernized, innovation-oriented policy frameworks, these facilities can enhance grid flexibility, strengthen resource adequacy, and accelerate domestic energy innovation.

Accordingly, DPN respectfully recommends that FERC:

1. Recognize flexible digital infrastructure as a reliability resource within the Bulk Power System.
2. Streamline interconnection procedures for colocated and dual-use facilities that pair generation and load.
3. Promote decentralized, consumer-protective, and innovation-friendly tariff structures that reflect the operational diversity of modern digital loads.

By advancing these measures, FERC can ensure that digital infrastructure continues to strengthen, rather than strain, the U.S. electric system, while securing America's leadership in both energy and computation.