Before the
National Telecommunications and Information Administration
Department of Commerce
Washington, DC 20230

In the Matter of	)	
	)	
Request For Comments on Bolstering Data Center Growth, Resilience, and Security	)	Docket Number NTIA–2024–0002
	)	
	)	

COMMENTS OF THE UTILITIES TECHNOLOGY COUNCIL

The Utilities Technology Council (UTC) hereby submits its comments in response to the Request for Comment issued by the National Telecommunications and Information Administration (NTIA) regarding the challenges surrounding data center growth, resilience, and security in the United States.[1] UTC's comments respond to the questions posed regarding power for data centers, particularly as they relate to utility communications and related security issues. Data centers are an emerging issue for electric utilities, which also raises the potential for new demands on utility communications systems and overall operational security. UTC recognizes the pivotal role that data centers play in supporting the nation's technological growth, particularly as demand for computing power increases due to the development of critical and emerging technologies such as Artificial Intelligence (AI). Electric utilities will experience significant increases in power demand from data centers, and there are also additional security issues raised by data centers as well. UTC provides its recommendations to ensure that data center growth is sustainable, resilient, and secure from the perspective of utility providers.

[1] National Telecommunications and Information Administration, Department of Commerce, *Request For Comments on Bolstering Data Center Growth, Resilience, and Security*, Docket No. NTIA–2024–0002 (Sept. 04, 2024).

I. Introduction

UTC is the international trade association for the telecommunications and information technology interests of electric, gas and water utilities and other critical infrastructure industries.[2] UTC's members include all kinds of utilities from large combination electric, gas and water investor-owned utilities that may serve millions of customers across multi-state service territories to smaller rural electric cooperatives and public power utilities who may serve only a few thousand customers in rural areas or isolated communities. All of these members own and operate extensive communications systems that they use in support of their core operations, such as supervisory control and data acquisition (SCADA) and distribution automation systems, to remotely monitor and control utility infrastructure and ensure the safe, secure and efficient delivery of essential services to the public at large. These communications systems are designed, built and maintained to high standards for reliability and resiliency, because they must continue to operate during emergencies and they must provide coverage into remote areas as well as population centers. They also must meet strict standards for reliability and security.

UTC advocates for policies that promote and protect utility mission critical communications systems. It is pleased to provide its comments in response to NTIA's Request for Comments in this proceeding and its members are directly affected by it. Utilities provide electric power to support data centers, and in turn they rely on their communications systems to support the safe, secure and efficient delivery of these electric services. Therefore, UTC urges the NTIA to develop policies to promote and protect utility mission critical communications systems that support their core operations and protect utility personnel in the field, particularly during emergency response and restoration in the aftermath of hurricanes, wildfires, earthquakes

[2] *See* www.utc.org.

and other catastrophic events. In turn, this will promote the delivery of electric services to data centers, thus enabling their operations and advancing overarching national policy goals and maintain technological leadership internationally in the development of artificial intelligence.

II. Utility Mission Critical Communications Systems Support the Delivery of Sufficient Power to Meet Increasing Demand for Electricity by Data Centers.

Utilities will likely face increasing demand for power from a growing number of data centers. "Current trends suggest that global demand for data center capacity could rise at an annual rate of between 19 and 22 percent from 2023 to 2030 to reach an annual demand of 171 to 219 gigawatts (GW)," and even higher estimates predict that demand will rise by 27 percent to reach 298 GW. Given that current demand is nearly 60 GW, there is the potential for a power supply deficit, and in order to avoid that deficit, utilities will need twice the data center capacity built since 2000 to be built in less than a quarter of the time.[3] This is the first time since the early 2000s that utilities have experienced such a high increase in demand. Data center deployment is a significant factor of this near-term electricity demand growth, and the Electric Power Research Institute (EPRI) estimates that data centers could grow to consume up to 9% of U.S. electricity generation annually by 2030, up from 4% of total load in 2023.[4]

In its Request for Comment, the NTIA recognizes that "[t]he continued growth of the U.S. data center industry hinges on resilient supply chains, access to power, trusted Information and Communications Technology and Services (ICTS) equipment, and a skilled workforce, among other factors." Moreover, it recognizes that "[t]he increase in demand is incentivizing

[3] McKinsey & Company, "AI power: Expanding data center capacity to meet growing demand" (Oct. 29, 2024), *available at* https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/ai-power-expanding-data-center-capacity-to-meet-growing-demand.

[4] Department of Energy, "Clean Energy Resources to Meet Data Center Electricity Demand" (Aug. 12, 2024), *available at* https://www.energy.gov/policy/articles/clean-energy-resources-meet-data-center-electricity-demand, *citing* : EPRI, "Powering Intelligence: Analyzing Artificial Intelligence and Data Center Energy Consumption," 2024.

data center developers and utilities to maximize utilization of existing power grid infrastructure and water usage, with some data center operators pursuing alternatives to the grid, such as on-site energy generation and power grid infrastructure."[5] NTIA recognizes that the successful development of data centers and Artificial Intelligence depends on access to sufficient and reliable electrical power.

Therefore, UTC urges NTIA to develop policies that promote utility communications systems to help ensure utilities are able to provide the enormous amounts of electric power necessary to support the increasing needs of data center developers and hyperscalers. Utilities will face significant challenges in providing the power, communications capacity, infrastructure, and security necessary to sustain the increasing growth of data centers. Key challenges include balancing energy supply and demand, managing infrastructure upgrades, securing supply chains, ensuring cybersecurity resilience, and navigating regulatory hurdles. For all these reasons, UTC urges NTIA to consider these challenges carefully and collaborate with utilities to address utilities' needs and associated risks in order to support national technological progress and continued growth of data centers and Artificial Intelligence.

The following additional comments address certain specific issues raised in the Request for Comment and provide recommendations to address these issues.:

1. **Energy Demand and Grid Connectivity**

   Concerns:
   Data centers are energy-intensive, and the projected growth in computing demand could lead to increased stress on power grids. Utilities must manage the challenges of providing

[5] Request for Comment at 4.

reliable, uninterrupted power to these facilities, mainly as data centers may require both on-grid and backup power sources.

Recommendations:

- NTIA should work closely with utilities to plan for increased energy demand from data centers and support investments in grid infrastructure to accommodate this growth.
- Encourage collaboration between data centers and utilities to integrate renewable energy sources into the grid, ensuring sustainability and reliability.
- Support the development of demand response programs that enable data centers to participate in reducing grid load during peak demand.

2. **Supply Chain Vulnerabilities**

Concerns:

The growth of data centers depends on access to critical IT and OT components, such as semiconductors, networking equipment, and fiber optic cables. Any disruptions in these supply chains could delay data center development, affecting utilities' ability to plan for energy distribution.

Recommendations:

- NTIA should support policies that strengthen domestic supply chains for critical infrastructure components, reducing reliance on foreign suppliers and minimizing disruptions.
- Encourage utilities and data centers to adopt best practices for securing their supply chains, particularly in sourcing trusted equipment and materials.

3. **Workforce Challenges**

Concerns:

Like the data center industry, the utility sector faces a shortage of skilled workers, particularly in cybersecurity, network engineering, and energy infrastructure management. These shortages could hinder utilities' ability to support data center growth.

Recommendations:

- Encourage partnerships between utilities, data centers, and academic institutions to develop workforce training programs focused on the skills necessary to meet the demands of both sectors.
- Support federal and state-level initiatives that offer incentives for workforce development in critical infrastructure areas, particularly in rural or underserved regions where data center growth is expanding.

4. **Security Considerations**

Concerns:

As data centers increasingly serve as critical infrastructure, they become prime cyberattack targets. Ensuring the physical and cybersecurity of the energy supply to these centers is crucial for maintaining national security.

Recommendations:
- NTIA should collaborate with utilities and data center operators to enhance cybersecurity measures that protect the power grid and data center operations.
- Promote the development of national standards for securing data centers, particularly for those supporting critical sectors such as healthcare, finance, and government operations.

5. Environmental and Sustainability Challenges

Concerns:
The increased power consumption of data centers will inevitably lead to higher greenhouse gas emissions unless sustainability measures are implemented. Utilities will need to balance the rising energy demands of data centers with environmental regulations and sustainability goals.

Recommendations:
- Support federal initiatives that encourage data centers to use renewable energy, including integrating solar, wind, and other green energy sources into data center operations.
- Collaborate with utilities to explore innovative energy efficiency solutions, such as advanced cooling technologies, that reduce data centers' carbon footprint.

6. Infrastructure and Permitting Challenges

Concerns:
Expanding grid infrastructure to support new data centers will require utilities to navigate complex local, state, and federal permitting processes. Delays in permitting could hinder the timely development of data center projects.

Recommendations:
- Streamline permitting processes for infrastructure projects related to data center growth to ensure utilities can keep pace with industry demands.
- Encourage federal and state agencies to provide guidance on best practices for expediting infrastructure development while ensuring environmental and regulatory compliance.

Conclusion

The Utilities Technology Council appreciates the opportunity to comment on data center growth, resilience, and security challenges. We urge NTIA to adopt policies that promote and protect utility mission critical communications systems, and foster collaboration between data centers and utilities to ensure sustainable, secure, and resilient growth. By addressing these key challenges while protecting critical infrastructure and providing reliable power for future generations, we can support the nation's technological advancement.

Respectfully,

UTILITIES TECHNOLOGY COUNCIL

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