

Congress of the United States

Washington, DC 20515

April 30, 2025

The Honorable Chuck Fleischmann
Chair
Subcommittee on Energy and Water
Development, and Related Agencies
House Appropriations Committee
2187 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Marcy Kaptur
Ranking Member
Subcommittee on Energy and Water
Development, and Related Agencies
House Appropriations Committee
2314 Rayburn House Office Building
Washington, D.C. 20515

Dear Chair Fleischmann and Ranking Member Kaptur,

As you work to craft the Fiscal Year (FY) 2026 Energy and Water Development and Related Agencies appropriations bill, we request the following report language to evaluate the technical and operational potential for demand response and load flexibility from large, energy-intensive facilities such as data centers. In particular, we encourage this study to evaluate the affordability and grid reliability impacts of such new loads, and the corresponding benefits of potential demand response and load flexibility programs.

As large facilities such as data centers look to interconnect with the grid, lawmakers must be aware of the reliability and affordability impacts that significant expansion of these energy-intensive loads may have on ratepayers. The United States' winter peak load is forecasted to grow by 21.5% over the next decade.¹ While significant uncertainty remains – particularly following the release of the Chinese firm DeepSeek, which claims to consume 10 to 40 times less energy than similar U.S. AI technology like Nvidia² – data centers are expected to account for the single largest growth segment, adding as much as 65 GW through 2029 and up to 44% of new U.S. electricity demand through 2028.³

This load growth is colliding with barriers to timely resource expansion that have and will continue to have reliability and affordability impacts on ratepayers. Transformer order lead times have grown to two to five years, up from less than one year in 2020, while costs have surged by 80%.⁴ More recently, lead times for gas turbines have reportedly reached four years. Due in part to these constraints, some utilities have quoted interconnection delays for new large loads ranging up to 7 to 10 years.⁵

¹ Tyler H. Norris, Tim Profeta, Dalia Patino-Echeverri, & Adam Cowie-Haskell, “Rethinking Load Growth: Assessing the Potential for Integration of Large Flexible Loads in US Power Systems”, Nicholas Institute for Energy, Environment & Sustainability, Duke University, accessed April 15, 2025.
<https://nicholasinstitute.duke.edu/sites/default/files/publications/rethinking-load-growth.pdf>

² Christa Marshall, “‘Game changer’? What ‘DeepSeek’ AI means for electricity”, E&E News by Politico, January 29, 2025, <https://www.eenews.net/articles/game-changer-what-deepseek-ai-means-for-electricity/>

³ *Supra*, note 1

⁴ *Id.*

⁵ *Id.*

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Load flexibility – the ability of end-use customers to temporarily reduce their electricity consumption from the grid during periods of system stress by using on-site generators, shifting workload to other facilities, or scaling back operations in favor of more urgent demand – represents one possible solution to minimizing the reliability and affordability impacts of new data centers and other energy intensive loads. Existing studies have shown that if new loads can be curtailed for 0.5% of their uptime, as much as 98 GW in new load could be integrated onto the existing grid.⁶

For this reason, we encourage the Subcommittee to include the following report language for the Electricity account within the Department of Energy:

Study on Demand Response and Load Flexibility - The Committee directs the Department, in coordination with the Federal Energy Regulatory Commission, relevant national laboratories, universities, relevant electric regulatory authorities, and other stakeholders, to evaluate the technical and operational potential for demand response and load flexibility from large, energy-intensive facilities such as data centers. This analysis should assess the affordability and reliability impacts of such energy-intensive loads under various energy mix scenarios; current barriers to participation in demand response and load flexibility programs; the potential grid and ratepayer benefits of flexibility programs, including reliability and affordability; and the role of interconnection procedures in enabling flexible load integration. The analysis shall consider how large load flexibility can improve utilization of existing generation and transmission infrastructure, accelerate the interconnection of new loads, and enhance system reliability and affordability. The Department is directed to publish findings and recommendations that can inform electric power system planners in the near and medium term.

Thank you for your consideration.

Sincerely,



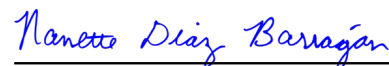
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Member of Congress



Kathy Castor
Member of Congress



Paul D. Tonko
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Nanette Diaz Barragán
Member of Congress

⁶ *Id.*

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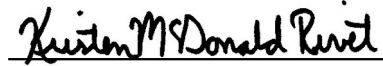
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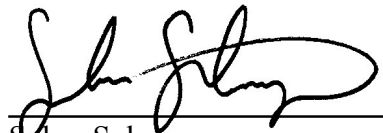
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