November 21, 2025

Submitted electronically via FERC Online E-File

Chairman Laura V. Swett
Commissioners David Rosner, Lindsay S. See, Judy W. Chang, and David A. LaCerte
888 First Street, NE
Washington, DC 40426

RE: Advance Notice of Proposed Rulemaking ("ANOPR") Interconnection of Large Loads to the Interstate Transmission System

Docket No. RM26-4-000

Dear Chairman Swett, Commissioners Rosner, See, Change and LaCerte,

Thank you for seeking input from the public on the ANOPR on the Interconnection of Large Loads to the Interstate Transmission System. The Land Trust Alliance ("Alliance") appreciates the opportunity to submit comments on this potential grid reform.

Founded in 1982, the Land Trust Alliance is a nonprofit corporation and national land conservation organization based in Washington, D.C., that works to save the places people need and love by strengthening land conservation across America. The Alliance represents about 950 member land trusts nationwide. Alongside our members, we harness three fundamental aspects of the American ethos: volunteerism, community spirit and connection to the land.

The Alliance applauds FERC for addressing this critical and highly complex issue. Through our work to conserve America's lands and waters, the Alliance and its 950+ member land trusts are keenly aware of the competing land uses for large-scale generation, transmission and grid infrastructure projects. Unfortunately, governmental taking of lands, including already conserved lands, for the construction of transmission infrastructure, is the most frequent means of grid expansion, as opposed to co-location or other less impactful but equally effective alternatives. When a taking of conserved lands occurs, critical forest, farm, wetland and grassland areas are replaced with transmission infrastructure, resulting in a net loss of the benefits of forest, farm, wetlands and grasslands. Conserved lands are

lands that are owned by a land conservation entity for conservation purposes or by a private landowner, including working lands, and are subject to a conservation easement or conservation deed.

Conservation easements are a unique legal tool used to keep land in private ownership and on the tax rolls while preserving resources vital to the public interest. For private landowners, conservation easements are an opportunity to protect land from development and to keep working agricultural lands in production. Landowners also receive the added benefit of income from the sale of the easement or tax savings from the conveyance of the easement. Landowners and their successors retain the right to possess and use the land, consistent with the conservation purposes of the easement. Land trusts and government holders of conservation easements enter into a voluntary and legally binding agreement with the landowner, where the land trust holds a real property interest in that land and agrees to perpetually monitor and enforce the conservation easement's provisions. This constitutes a major financial commitment by a land trust. Because of the perpetual and costly nature of holding a conservation easement, land trust easement holders don't enter lightly into these agreements. Instead, land trusts have a thorough process for strategic conservation planning, evaluating and selecting conservation easements that are consistent with the land trust's conservation priorities and provide public benefit. Through this process, land trusts work in partnership with the landowner to identify the important resources for protection, understand the landowner's conservation goals and desired future uses of the land, and finally, create a plan that best meets the needs of the land trust, the landowner and the land itself. Such a partnership allows landowners to exercise their private property rights, ensuring that their land is conserved as they wish while also providing benefits like clean air, clean water and food security.

When a taking of conserved lands for transmission occurs, losses include, but are not limited to, food and fiber production, drinking water quality, carbon dioxide storage and sequestration, and habitat conservation. The taking is made even more egregious by the waste of the billions of taxpayer dollars that funded the acquisition of these conservation protections.

Fortunately, there are equally effective alternatives available that protect our nation's investment in conserved lands and in lands yet to be conserved but also of high conservation, ranching, forestry and agricultural value while also meeting our nation's energy generation and transmission needs. Interconnection procedures for large loads should be in accordance with the following purposes, which are discussed in greater detail below:

1. Conserved lands or lands of high conservation or agricultural value yet to be conserved are avoided in any generation or transmission infrastructure-related siting.
2. A substantive community outreach process is employed by the facility with the local community impacted by the facility, including but not limited to local land trusts.

3. In the powering of new large load facilities, existing grid transmission capacity is maximized such that the need for new transmission line buildout is minimized.
4. The actual energy performance data of the large load facility is reported to FERC and made public.
5. The large load facility demonstrates its use of water and energy conservation measures that, to the greatest extent practicable, minimize energy and water consumption, and in turn, minimize the strain on the grid.
6. Colocation is made a top priority and is paired with renewable energy sources.
7. Costs for transmission infrastructure upgrades related to large loads, such as data centers, are borne by the new large load facility, not pre-existing ratepayers.
8. Require, as a precondition for interconnection of a large load facility, and until such large load facility adds enough new generation capacity to cover its energy demand, that such facility must reduce its power use during peak load grid emergencies.

Discussion

a. The taking of conserved lands for transmission infrastructure negates the public investment and public benefits in conserved lands.

The expansion of grid infrastructure frequently results in the taking of conserved lands. These already conserved lands were selected for protection from development through an extensive and strategic conservation planning process targeting conservation priorities and the provision of public benefit. Through this strategic process, expert land conservation entities known as land trusts have worked with landowners to collectively conserve more than 61 million acres of land. These conserved lands have been recognized as critical forest, farm, ranch, wetland and grassland areas that provide benefits such as clean air, clean drinking water and food, and therefore need protection from conversion to other uses.

The public value of conserved lands is reflected in the billions of dollars in state and federal tax incentives and grants for land conservation. Such programs include the U.S. Forest Service Forest Legacy Program, U.S. Department of Agriculture Agricultural Conservation Easement Program, and the U.S. Department of Defense Readiness and Environmental Protection Integration Program. Farmers, ranchers, forest owners and others look to land conservation to both preserve their rural way of life and help fund their agricultural businesses.

States have also prioritized the preservation of conservation and agricultural lands by establishing state tax credit programs and grant programs. Forty-nine states have state enabling legislation allowing for the use of conservation easements in response to increased alarm at the rate that farmland, working forests and undeveloped lands are being converted to other uses.

In addition, Congress enacted Internal Revenue Code Section 170(h) and the accompanying Treasury regulations to provide significant tax benefits to individuals who

donate (or who receive a portion of the purchase price for the conservation easement and then donate the remaining value) a qualified conservation easement to tax-exempt organizations. These significant public investments in conservation demonstrate that protecting conserved lands is a shared priority nationwide.

These public investments create significant public benefits as well as economic and other returns, furthering the need to either (a) avoid conserved lands when siting generation or transmission infrastructure; or (b) where avoidance is not possible, adequately compensate for the damages to the conservation values. Ground disturbance is ongoing with transmission facilities and is not limited to the one-time installation. These facilities include roads and other infrastructure that significantly impact the ability of ranchers, farmers and others to use the land for their agricultural businesses.

The buildout of transmission infrastructure impacts the natural processes of land and water that provide direct and indirect benefits to humans, including water quality and quantity, pollution control, food production, flood risk reduction, biological diversity, and cultural services such as recreation. These benefits were quantified in a study examining the ecological and economic benefits of Colorado's tax credit incentive for donating lands for conservation using a conservation easement. The study estimated that in 2022, "the total cumulative public benefits of conservation easement [tax] credits to Colorado taxpayers is between $35 and $57 billion, or about $20 thousand per acre conserved. . . and $43 and $74 billion if recreation and tourism benefits are included (about $25,500 per acre conserved). . . ."[1]

Applying this macro-level valuation methodology to an actual taking of 18.41 acres of conserved shortgrass prairie, or grassland/herbaceous in the report, for a transmission line in Colorado, results in a total loss of $198,459 in ecosystem services provided by that conserved prairie. These losses are even greater when damages specific to the conservation values of the underlying property are evaluated. In a separate taking of similar acreage for transmission infrastructure, the resource economist hired by the entity responsible for protecting the property's conservation values concluded that damages to the conservation values would be between $2-4 million because of the property's specific and unique attributes, including the presence of black footed ferrets, a federally listed endangered species.

To protect conserved lands, their conservation values, the livelihoods derived from the land by the farm and ranch families, and the public investment therein, the Alliance urges FERC to implement rulemaking that avoids siting generation or transmission infrastructure on conserved lands. When avoidance is not possible, such projects should include funding for minimizing and offsetting damage to conserved lands; landowners should be paid in full for

[1] Seidl, A., Crossett, C., Greenwell, A, Bennett, D., and Menefee, M., 2023. Public return to private lands conservation in Colorado: The Conservation Easement Tax Credit Program. Colorado State University, Fort Collins, Colorado.

the disruption that the land loss causes; and FERC should mandate that all steps to minimize ongoing damage be taken.

b. FERC can best use its authority to support the deployment of large-scale transmission projects by identifying and advancing projects where public opposition is likely to be lessened.

To minimize public opposition and, in turn, accelerate large-scale transmission projects, FERC should seek to identify and advance transmission projects that avoid conserved lands and yet-to-be-conserved lands of high conservation or agricultural value. To ensure that these lands are not taken by condemnation and that the public investments and public benefits in conserved lands are preserved, land trusts are charged with ensuring the perpetual protection of conserved lands. The Alliance's 950+ member land trusts have voluntarily agreed to follow industry best practices for operating a land trust legally, ethically and in the public interest. These are known as Land Trust Standards and Practices ("Standards"). Standard 11(I) sets forth the guiding principles for defending conserved properties from condemnation. This Standard guides a land trust to take whatever steps are necessary to mitigate harm to the conservation values. The guidance to Standard 11(I) advises land trusts to defend the conserved lands in their portfolio and to take early action. Because of this guiding principle to defend and take early action, land trust members and affiliates are obligated to oppose transmission projects that will impact the lands they own and manage, especially when the degree or magnitude of the impact is not minimized or offset through the provision of comparable substitute conservation lands. For these reasons, the Alliance urges FERC to identify and advance projects that avoid conserved lands, which in turn will reduce public opposition to large-scale transmission projects.

c. FERC can optimize the existing grid by identifying and advancing projects that maximize the transmission potential of the existing grid without compromising public investment in conservation land.

Maximizing the transmission potential of the existing grid will improve grid distribution efficiency and meet demand growth while also minimizing harm to conserved lands and lands not yet conserved but of high conservation and agricultural value from the buildout of new transmission infrastructure. This is also in keeping with the president's "Winning the Race: America's AI Action Plan," which specifically prioritizes optimizing existing grid resources as much as possible.[2]

[2] "This involves implementing strategies to enhance the efficiency and performance of the transmission system. The United States must explore solutions like advanced grid management technologies and upgrades to power lines that can increase the amount of electricity transmitted along existing routes. Furthermore, the United States should investigate new and novel ways for large power consumers to manage their power consumption during critical grid periods to enhance reliability and unlock additional power on the system." Winning the AI Race: America's AI Action Plan (Executive Office of the President of the U.S., July 2025).

The Alliance encourages FERC to support the re-conductoring of existing transmission lines with higher-performance wires, which can rapidly increase transmission capacity at a low cost. Advanced conductors have been shown to reduce transmission losses between 10-30%[3], ensuring more of the energy we produce is provided to consumers. The Alliance also encourages FERC to support other ways to maximize the transmission potential of the existing grid, including grid-enhancing technologies, storage as transmission, conservation methods at the user end, realistic need projections and identifying underused interconnections.

In addition, the Alliance recommends the co-location of large energy users, such as data centers, together with existing energy generation sources to minimize the need for new transmission buildout. Co-location is a fiscally responsible approach as it both avoids harm to conserved lands and minimizes the costs of new transmission buildout. Where new energy generation sources are needed, the Alliance recommends the co-location of large-scale energy uses, such as data centers, with renewable energy and battery energy storage systems. Such siting will likely accelerate the speed of meeting our nation's energy demand, as renewable energy and storage are often quicker and cheaper to site and construct than other energy sources. As such, co-location of large energy users with onsite renewable energy generation will allow developers to meet the energy and data needs of America quickly and efficiently.

Other alternatives to maximizing existing grid resources include further FERC support for initiatives spurring the use of renewable energy-powered microgrids and virtual power plants to increase grid reliability and resilience while also allowing data centers to come online more quickly.

d. FERC rulemaking should financially incentivize collaborative efforts between transmission infrastructure planners and developers and local communities, including land trusts.

It is widely acknowledged that "[l]ocal efforts to oppose large infrastructure projects [are] increasing as, among other things, the country becomes more densely populated and land use assumes greater and greater importance. Proposed transmission lines in particular are frequently delayed for months or years as a result of public opposition, driving up costs to developers and, ultimately, to consumers."[4] FERC should develop rulemaking on how developers should meaningfully engage with the public on proposed AI data centers and related transmission infrastructure to address community concerns and reduce the costs and timelines for projects to be completed.

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[3] *SUPPORTING ADVANCED CONDUCTOR DEPLOYMENT: BARRIERS AND POLICY SOLUTIONS* https://www.2035report.com/wp-content/uploads/2024/05/5.3-Reconductoring-policy-report.pdf

[4] Americans for a Clean Energy Grid, *Recommended Siting Practices for Electric Transmission Developers* (2023) https://cleanenergygrid.org/wp-content/uploads/2023/02/Recommended-Siting-Practices-for-Electric-Transmission-Developers-February-2023-Americans-for-a-Clean-Energy-Grid.pdf .

More specifically, FERC should require or incentivize transmission infrastructure planners and developers to reach out to land trusts serving the communities they identified for development. Land trusts welcome the opportunity to share their extensive knowledge of the location of conserved properties and lands that are priorities for future conservation acquisition. Land trusts, as experts in reading the landscape, could facilitate the finding of an alternative siting location as well as assist in identifying mutually agreeable offset measures, such as funding for the acquisition of alternative conservation lands of equivalent quality and type.

e. Through its rulemaking, FERC should require or financially incentivize large energy users, such as data centers, to monitor, report and disclose energy performance data such that grid planning is properly informed.

The transmission planning process begins with the fundamental question of whether a new line is needed. To understand the extent of and location of grid expansion needs, transmission planners first need accurate, realistic (not inflated) projections of load growth from large users such as data centers. Overestimating load growth can lead to excessive transmission infrastructure, increases in ratepayers' electric bills and unnecessary harm to conserved lands, as discussed above. An uninformed planning process will result in a haphazard transmission infrastructure siting process, slowing down the goals of FERC.

One of the challenges to the accuracy of energy forecasting is a lack of transparency by large energy users, notably data centers, which currently provide little to no data on actual energy consumption. FERC can help with increasing the accuracy of energy forecasting by requiring large energy users like data centers to provide FERC with a baseline of current energy use, information that is then made publicly available. Without data on the actual energy usage of large energy users like data centers, grid planners can't determine what level of grid expansion is needed and where.

This uncertainty in energy forecasting is even more significant for data centers. This is demonstrated by London Economics International LLC ("LEI") in its 2025 report, *Uncertainty and upward bias are inherent in data center electricity demand projections*.

In this report, LEI LLC concluded that:

> [F]orecasts of electricity demand stemming from data center growth are beset with uncertainty — the extent and pace of data center demand growth remain highly uncertain, and the specific locations even more difficult to predict. For the reasons outlined in this report, LEI believes that not all the electricity demand growth associated with new data centers projected for the United States or for any given individual jurisdiction in the United States will necessarily materialize.

> The potential for overestimating electricity demand from new data centers has important implications for evaluating utility plans for generation and transmission capacity expansion, and in some cases, related proposals for new interstate gas pipeline infrastructure to serve new gas-fired electricity generation. Currently, many utilities are projecting substantial growth in electricity demand from potential data centers within their territories. These demand projections in turn can drive a significant portion of the utilities' generation capacity expansion plans, and, in some cases, prompt a projected need for additional firm transportation capacity on interstate gas pipelines. However, if the projected data center load fails to fully materialize, then the cost of these assets — whether power plants or pipeline infrastructure — would be borne by other utility customers.
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> Based on its analysis, LEI concludes that data center electricity demand projections remain highly uncertain and currently reflect a bias to overestimating growth in the number of data centers that will be built, and therefore also overestimating future electricity demand.

LEI concluded that current data center load growth estimates are even more unreliable because the estimates don't align with the reality of the global supply shortage of the semiconductor chips needed to operate a data center. To reach this conclusion, LEI "tallied projections of US data center electric load growth from independent system operators ("ISOs"), regional transmission organizations ("RTOs"), and balancing areas ("BAs") covering about 77% of US electric load. . . . LEI found that, if the ISO/RTO/BA demand outlooks are taken at face value, the US would need 90% of incremental global supplies from 2025-2030. This is simply unlikely to occur. The United States currently buys less than 50% of global semiconductor chips annually, and other countries are also seeing strong growth in data center development.

"This result indicates that growth in data center electric load in the United States will fall short of the ISO/RTO/BA tally, because there would not be enough AI chip capacity in the world to meet this demand. It supports the anecdotal evidence that data center developers are duplicating requests for electric interconnection."[5]

To prepare for electricity demand growth, FERC needs accurate load forecasts to guide its decision-making. For these reasons, the Alliance recommends FERC-led initiatives that result in industry disclosure of its data on energy use. These could include reporting incentives and requirements or stronger partnerships for better knowledge sharing. This will help to resolve the transmission planning obstacles that follow from the current data gaps on energy use.

[5] LEO Press Release, LEI Finds Headline US Data Center Energy Demand Could Not Be Supported By Projected Global Chip Supplies, https://www.londoneconomics.com/lei-finds-headline-us-data-center-energy-demand-could-not-be-supported-by-projected-global-chip-supplies/ (July 8, 2025)

f. The Alliance recommends that FERC give priority in its rulemaking to transmission infrastructure projects connected to, or that will connect to, large-scale energy users who employ water and energy conservation measures that to the greatest extent practicable, minimize energy and water consumption, and in turn, minimize the strain on the grid.

While uncertainty remains as to just how much electricity will be needed to power large energy users, there is general agreement that load demand growth will be significant. A single AI data center, for example, can require 50-100+ MW, enough energy to power approximately 16,400 homes.[6] FERC can help reduce energy demand strain on the grid through rulemaking that incentivizes or requires the implementation of initiatives and innovative technologies that increase data center energy and water use efficiency. Reducing energy demand reduces transmission costs, ratepayer costs and harm to conserved lands. Co-location with the large user would further reduce opposition and harm and reduce the costs of transmission and construction, which benefits all concerned.

To do this, the Alliance urges FERC to set ambitious goals for energy-efficient AI algorithms and software and to collaborate with the private sector to realize these goals. In addition, efficiencies in water use will lead to energy efficiencies and, in turn, less strain on the grid. For example, the cooling systems that help power large energy users are ripe for innovation in water usage efficiency and energy-intensive wastewater treatment. There are tremendous opportunities for federal and private-sector collaboration on research, development and innovation of water and energy-efficient systems.

By increasing energy and water use efficiency, not only will the operations of large load facilities such as AI data centers be more cost-effective and maintain America's global competitiveness, but it will also lessen the load on the nation's energy needs and transmission grid, passing savings along to all American consumers.

g. The Alliance recommends that costs for transmission infrastructure upgrades related to large loads, such as data centers, should be borne by the new large load facility and not by pre-existing ratepayers.

Placing the costs of upgrading transmission infrastructure on new large load users, such as data centers, and not on pre-existing customers, will likely reduce strain on the grid, as large load facilities would be incentivized to minimize their energy consumption. Less strain on the grid reduces the need for new transmission infrastructure, in turn protecting conserved lands from future condemnation actions. This also protects pre-existing ratepayers who are already struggling with rapidly increasing utility bills.

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[6] IEA (2024), What the data centre and AI boom could mean for the energy sector, IEA, Paris https://www.iea.org/commentaries/what-the-data-centre-and-ai-boom-could-mean-for-the-energy-sector , Licence: CC BY 4.0.

h. The Alliance recommends that FERC require, as a precondition for interconnection of a large load facility, and until such large load facility adds enough new generation capacity to cover its energy demand, such facility must reduce its power use during peak load grid emergencies.

To further capitalize on existing transmission capacity and reduce the need for excessive, costly, and time and land-consuming grid expansion, FERC should require any new large load facility to reduce power use during peak load grid emergencies until that user has added enough generation capacity to cover its own energy demand. These new large loads consume massive amounts of energy that is rapidly outpacing existing grid infrastructure. "Power used by data centers in advanced stages of planning in Pennsylvania, for example, jumped more than 40% to 20.5 gigawatts in the third quarter, up from 14.4 gigawatts previously, according to the utility PPL. That's equivalent to the power consumption of about 17 million U.S. homes."[7]

Demand flexibility allows for optimization of the existing grid and minimizes the need for new transmission buildout. This is highlighted in a recent report published by the Nicholas Institute for Energy at Duke University, which concludes that "the integration of flexible loads offers a promising, near-term strategy for addressing structural transformations in the US electric power system. By utilizing existing system headroom, regulators and market participants can expedite the accommodation of new loads, optimize resource utilization, and support the broader goals of reliability, affordability, and sustainability." [8] Requiring demand flexibility is also consistent with the White House's AI Action Plan, which recommends policy actions to "optimize existing grid resources as much as possible. . . . [including] new and novel ways for large power consumers to manage their power consumption during critical grid periods".[9] Lastly, demand flexibility is feasible for large loads as demonstrated by tech companies like Google entering into new utility agreements that incorporate demand flexibility.

[7] Kimball, Spencer, Skyrocketing Electricity Prices Fuel Political Backlash Against Tech Sector's AI Data Centers (Nov. 12, 2025) https://www.cnbc.com/2025/11/12/electricity-prices-data-center-ai-new-jersey-virginia-midterm-election.html

[8] Norris, T. H., T. Profeta, D. Patino-Echeverri, and A. Cowie-Haskell. 2025. Rethinking Load Growth: Assessing the Potential for Integration of Large Flexible Loads in US Power Systems. NI R 25-01. Durham, NC: Nicholas Institute for Energy, Environment & Sustainability, Duke University. https://nicholasinstitute.duke.edu/publications/rethinking-load-growth

[9] Winning the Race: America's AI Action Plan (White House July 2025)(https://www.whitehouse.gov/wp-content/uploads/2025/07/Americas-AI-Action-Plan.pdf)

Conclusion

We applaud FERC for addressing this complex topic and urge it to protect the public investment in conserved lands through the recommendations set forth herein. We also welcome any opportunity to meet with you and FERC staff to discuss this further. Thank you for your attention to this matter.

Sincerely,

Lori Faeth
Senior Director of Government Relations
Land Trust Alliance