
Powering the Future



Reconciling Interests in
AI Energy Policy and Regulation



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I. AI Expansion and Energy Demands in the United States

The global race to dominate artificial intelligence (AI) development has driven the rapid expansion of energy-intensive data centers across the United States. Generative AI queries require 10 times more electricity than a traditional internet search, requiring vast computational power that requires heightened energy use.¹ However, this usage is unevenly distributed, with some states, such as Virginia, potentially seeing nearly half their electricity used by AI data centers by 2030.²

This surge in demand for energy infrastructure has outpaced existing regulatory frameworks, many of which were designed before the unique energy pressures of AI computing emerged.³ Attempts to update energy regulations have stalled due to a lack of consensus among key stakeholders and aggressive lobbying by Big Tech companies, resulting in a policy vacuum that has contributed to tensions between economic growth, environmental sustainability, and equitable energy access.⁴ Left unaddressed, these tensions threaten to deepen environmental inequalities, inflate utility costs, and weaken public trust in the regulatory process and confidence in the future of AI development.

Four primary stakeholder groups shape this emerging landscape: individual community members, Big Tech companies, public utility commissions (PUCs), and environmental sustainability advocates. Community members are concerned with balancing the economic benefits of hosting a local data center against the risks of rising utility prices, environmental degradation, and economic overreliance on a single sector. Public utility commissions must simultaneously ensure affordable energy for residents and provide reliable, competitively priced power to attract and retain large-scale data center investments. Big Tech companies, prioritizing innovation and private profit, advocate for minimal regulation to maintain America's global AI competitiveness, even at the expense of local environmental concerns. Meanwhile, environmentalist NGOs emphasize the urgent need to prioritize sustainability and protect local resources over short-term economic gains.

To address these concerns, this paper recommends a multi-pronged regulatory approach anchored in the authority of the Federal Energy Regulatory Commission (FERC), which oversees interstate energy infrastructure and market practices. Specifically, it recommends mandating minimum energy efficiency standards for AI data centers, requiring community benefit agreements to ensure local investment, incentivizing renewable energy sources, and strengthening public input requirements for PUC decisions related to data center projects. Reconciling stakeholder perspectives through these mechanisms offers a path to sustainable AI innovation that balances national technological ambitions with local environmental and economic needs.

1) Jane Accomando, Neeraj Arora, Andrew J. Gray, et al, "The Intersection of Energy and Artificial Intelligence: Key Issues and Future Challenges," Morgan Lewis, August 12, 2024, Accessed April 21, 2025, <https://www.morganlewis.com/pubs/2024/08/the-intersection-of-energy-and-artificial-intelligence-key-issues-and-future-challenges>.

2) Ibid.

3) Kenneth Sercy, "Data Center Energy Demand: Renovating While We Live Here - Niskanen Center," Niskanen Center, February 25, 2025, Accessed April 21, 2025,

4) Bram Vranken, "Big Tech Lobbying Is Derailing the AI Act," Corporate Europe Observatory, November 24, 2023, Accessed April 21, 2025, <https://corporateeurope.org/en/2023/11/big-tech-lobbying-derailing-ai-act>.

II. Analyzing Stakeholder Perspectives

Stakeholder 1: Individual Citizens and Community Members

We can construct “the individual” as a stakeholder because community members in areas with AI data centers share core concerns about the AI energy nexus. These shared concerns are revealed through public opinion polls and local impact analyses. The critical concern for individuals is ensuring that they and their community realize the economic benefit of expanding AI data centers, such as increased local jobs and economic output, while keeping utility costs low and ensuring energy consumption is sustainable.

Energy concerns are particularly salient. 80% of Americans living in states significant to AI development expressed concern about data center water and energy use.⁵ These concerns lead to reservations about the building of data centers; only 35% of Americans would vote in favor of a data center in their own community.⁶ This resistance stems from fears about the massive amounts of electricity and water required to operate the facilities. In the short term, high data center energy use leads to ballooning utilities costs and aesthetic disruption, and in the long term, puts the sustainability of local resources required for life at risk.⁷ Less than one in ten Americans believe the economic benefits of an AI data center would outweigh these concerns.⁸

As a result of the political power of public opinion, community members living in areas with growing AI data centers hold significant power and credibility in the eyes of FERC. Elected officials are incentivized to adopt regulatory policies when aligned with a substantial majority of voters. As a majority of community members express concern about the environmental and economic impacts of AI energy demands, their perspectives carry substantial weight in shaping regulatory action. As expressed by the AI Policy Institute, “federal policymakers are political actors ... politicians are incentivized to support AI slowdown policies due to the strong majority of voters supporting slowdown and regulation.”⁹ Thus, individuals have indirect but meaningful influence over regulatory outcomes through voting, public advocacy, and community action.

A just resolution from the individual’s perspective would involve FERC policies mandating that AI center development be buffered by local employment mandates, community benefits through tax reductions or educational incentives, and pledges to use renewable energy sources.¹⁰ Similar policies incentivizing sustainable energy practices have proven

5) HostingJournalist Editorial Team, “Survey: 93% of Americans Support AI Data Centers, but Not Locally,” HostingJournalist, February 24, 2025, Accessed March 28, 2025, <https://hostingjournalist.com/news/survey-93-of-americans-support-ai-data-centers-but-not-locally#:~:text=A%20survey%20shows%2093%25%20of,%2C%20economic%2C%20and%20infrastructure%20concerns.>

6) Ibid.

7) Nathan Eddy, “Public Concerns Over AI Data Centers Grow as Demand Surges – Report,” Data Center Knowledge, March 4, 2025, Accessed March 28, 2025 <https://www.datacenterknowledge.com/ai-data-centers/public-concerns-over-ai-data-centers-grow-as-demand-surges-report>.

8) Daniel Colson, “New Poll Reveals Overwhelming Support to Rein in AI’s Use of Public Data, Shows Concern over AI Job Displacement and Energy Consumption,” AI Policy Institute, May 19, 2024, Accessed March 28, 2025 <https://theaiipi.org/poll-biden-ai-executive-order-10-30-7-2-4-2-2-2/>.

9) Ibid.

10) HostingJournalist Editorial Team, “Survey: 93% of Americans Support AI Data Centers, but Not Locally.”

effective in other industries, such as manufacturing. The landmark Inflation Reduction Act (IRA) of 2022 spurred the growth of clean energy in manufacturing while incentivizing wage increases and career development programs through tax credits, grants, and loans, ultimately creating over 90,000 American jobs.¹¹ Additionally, Community Benefits Plans (CBPs) — planning tools developers are required to submit that outline plans to confer benefits to populations affected by a project — are an application requirement for all funding and loan applications through the IRA and Bipartisan Infrastructure Law.¹² Moreover, over half of Americans nationally support measures like taxing the electricity usage of AI companies to fund grid upgrades, illustrating the appetite for equitable, forward-looking policy solutions.¹³

The policy priorities of the individual, which center community economic empowerment and environmental accountability, create varying degrees of tension with other key stakeholders and contribute to the current inaction on AI energy regulation. The greatest tension arises when examining the priorities of Big Tech giants, which view the energy required for AI development as a justified cost in pursuit of innovation and profit, and regulation as a hindrance to this end. The values of Big Tech incentivize scaling AI models and data centers and lobbying for reduced oversight. In the event of an environmental tipping point, Big Tech companies can outsource to a different location with further resources, while community members alone will experience the water shortages, rising energy costs, and the degradation of their environment. In this case, sustainability NGOs may experience rueful political vindication but remain dejected in their limited capacity to create immediate change.

Environmental NGOs and sustainability advocates are generally most aligned with the needs of the individual. Their focus on long-term sustainability aligns with community concerns about preserving local resources and minimizing harm from industrial projects. However, a slight tension arises when environmentalists underemphasize the economic aspirations of communities: job opportunity and economic growth (often tied to increased funding for public services such as roads and schools) join environmental integrity as a crucial component of public health. Meanwhile, public utility commissions occupy a conflicted space: while these commissions aim to protect individuals from excessive costs and ensure reliable service, the prerogative to regulate rates in a way that is conducive to political and economic success (and thus AI center development) can supersede long-term environmental and community impacts. As a result, PUCs may not be willing to, for example, mandate Big Tech companies pay higher prices for electricity.¹⁴

Ultimately, the tensions between the individual and other stakeholders, particularly Big Tech and, to a lesser extent, PUCs and environmental NGOs, are perhaps the largest

11) Fact Sheet: How the Inflation Reduction Act's Tax Incentives Are Ensuring All Americans Benefit from the Growth of the Clean Energy Economy," U.S. Department of the Treasury, October 20, 2023, Accessed March 28, 2025, <https://home.treasury.gov/news/press-releases/jy1830#:~:text=Provides%20a%20bonus%20credit%20of%2010%20percent,retirement%20of%20a%20coal%2Dfired%20electric%20generating%20unit.>

12) Andrew Yllescas, "Energy Justice in Community Benefit Agreements and Plans," Initiative for Energy Justice, November 6, 2024, Accessed March 28, 2025, <https://iejusa.org/energy-justice-in-community-benefit-agreements-and-plans/>.

13) Colson, "New Poll Reveals Overwhelming Support to Rein in AI's Use of Public Data."

14) Pam Radtke, "Power for Data Centers Could Come at 'staggering' Cost to Consumers," Floodlight, March 11, 2025, Accessed April 21, 2025, <https://floodlightnews.org/power-for-data-centers-could-come-at-staggering-cost-to-consumers/>.

contributing factor to slow regulatory response to the challenges posed by AI-driven energy demand. This friction forces a confrontation where the perceived negative externalities of unchecked data center expansion become untenable; communities protest,¹⁵ vote for representatives against Big Tech expansion,¹⁶ and compel regulatory bodies to implement policies that serve their needs iteratively. The lived experience and organized advocacy of individuals is perhaps the strongest impetus for overcoming the inertia of established interests and compelling regulatory bodies like FERC to adopt equitable, consensus-based AI energy policies.¹⁷

Stakeholder 2: Big Tech Companies

“Big Tech” refers to giants in the technology industry, such as Google, Amazon, Microsoft, and Meta, that dominate sectors like AI, cloud computing, and digital services. Key priorities for Big Tech include AI strategy and staying on top of evolving regulatory frameworks.¹⁸

Big Tech companies view regulation as a double-edged sword; while necessary in principle, it often introduces compliance costs and delays that slow innovation cycles critical to maintaining competitive advantage in a fast-moving AI marketplace. As Big Tech prioritizes global market dominance and scalability, it supports agile, consistent, and context-specific regulation to support expansion and limit compliance burdens.

For many years, Big Tech has rejected “Taylorist” management techniques — an industrial-era management philosophy endorsed by Congress that frames enforced standardization as a requirement for successful innovation.¹⁹ Former Google Executive Chairman Eric Schmidt warns, “There’s no one in government who can get it [AI oversight] right.” While Mr. Schmidt recognizes the need for behavioral expectations, his solution is, “I would much rather have the current companies define reasonable boundaries.” Instead, Big Tech supports “agile management,” which “embraces transparency, collaboration, and responsiveness rather than hierarchical dictates.”²⁰

For these reasons, Big Tech companies have been on a “crusade” against increased AI energy regulation since the beginning of the decade.²¹ The official posture of Big Tech companies is that AI is integral to human progress, promising to enhance efficiency, solve complex problems, and improve overall quality of life. From Big Tech’s perspective, energy consumption is required to realize the benefits of AI, and heightened use of resources now will allow for increased resource efficiency in the future. Additionally, AI is

16) J. David Goodman, “Amazon Pulls out of Planned New York City Headquarters,” The New York Times, February 14, 2019, Accessed March 28, 2025, <https://www.nytimes.com/2019/02/14/nyregion/amazon-hq2-queens.html>.

17) Tom Wheeler, “The Three Challenges of AI Regulation,” Brookings, October 10, 2024, Accessed April 21, 2025, <https://www.brookings.edu/articles/the-three-challenges-of-ai-regulation/>.

18) “2025 Technology Industry Outlook,” Deloitte Insights, February 20, 2025, Accessed March 28, 2025, <https://www2.deloitte.com/us/en/insights/industry/technology/technology-media-telecom-outlooks/technology-industry-outlook.html>.

19) Wheeler, “The Three Challenges of AI Regulation.”

20) Ibid.

21) Ergon, Cugler, “Big Tech’s Global Crusade Against Regulation,” The Progressive Magazine, January 31, 2025, Accessed March 28, 2025, <https://progressive.org/latest/big-techs-global-crusade-against-regulation-cugler-20250131/#:~:text=Big%20Tech%20used%20financial%20and,accountability%20for%20election%2Drelated%20disinformation>

increasingly being used in the energy sector to improve grid reliability and optimization.²²

Big Tech has immense federal regulatory influence through lobbying powers, close private and public partnerships, and proximity to elite policy-making circles. Big Tech also holds de facto economic power because of its integral role in the U.S. economy; these companies drive vast portions of the nation's digital infrastructure, create millions of jobs, and contribute significantly to GDP through their innovation and global reach. Threats from Big Tech are credible, so U.S. regulators take them seriously. In 2022, Big Tech stopped multiple bipartisan bills aimed at curbing anti-competitive behavior from reaching the Senate floor.²³

When the White House requested feedback on its AI plan last month, the country's most influential tech giants named several factors necessary for a just resolution: a federal preemption of state AI laws to promulgate a consistent regulatory framework, industry-driven and sector-specific compliance regulations, regulations based on how AI tools are integrated into operations rather than on the technology itself, and federal investment in AI workforce training.²⁴ More consistent regulations help streamline business practices, reduce uncertainty, and enable Big Tech to scale its technologies and infrastructure more efficiently.

However, significant tensions exist between Big Tech and other key stakeholders, particularly sustainability advocates and local community members, that contribute directly to the current regulatory gridlock. The stakeholders most at odds with Big Tech are sustainability advocates. While sustainability advocates emphasize the need for responsible resource usage, reduced emissions, and long-term ecological health, Big Tech is willing to prioritize rapid innovation and profit at the expense of the environment. While environmental NGOs may decry the current state of Big Tech and sustainability, there are venues through which Big Tech companies can promote better energy practices, such as leveraging AI deployment for decarbonization and expanding AI's role in clean energy optimization; however, this requires regulation.

The mismatch in policy timelines further exacerbates these tensions. According to sustainability advocates, national law-making makes interweaving clean energy and industry-driven regulations harder. According to Harvard Professor Lie Xie, "It is untenable for an industry with such fast-evolving dynamics to be constrained in a regulatory framework that evolves over decades. So, regulatory [state-level] reform should be an important starting point." Xie notes that, for example, there is a federal policy bottleneck in regards to energy transmission lines: the U.S. must exponentially increase transmission lines to integrate renewable resources into the grid and move energy throughout the nation, a process that takes ten to 12 years, but leading AI chipmaker Nvidia updates the

22) Accomando, Arora, Gray, et Al, "The Intersection of Energy and Artificial Intelligence: Key Issues and Future Challenges."

23) Emily Birnbaum, "Big Tech Divided and Conquered to Block Key Bipartisan Bills," Bloomberg, December 20, 2022, Accessed March 28, 2025, <https://www.bnnbloomberg.ca/big-tech-divided-and-conquered-to-block-key-bipartisan-bills-1.1861611>.

24) Benjamin M. Ebbink and Danielle H. Moore, "Big Tech Calls for National AI Regulation to Stop Patchwork of State Laws: What Employers Need to Know," Fisher Phillips, March 19, 2025, Accessed March 28, 2025, <https://www.fisherphillips.com/en/news-insights/big-tech-calls-for-national-ai-regulation.html>.

software of its AI chips every few months.²⁵ Texas provides a unique case study, as its grid operates independently from the eastern and western U.S. grids, avoiding federal regulation. This independence allowed Texas to build the Competitive Renewable Energy Zones (CREZ) project in the 2000s, bringing vast wind energy from West Texas to the east. In other parts of the U.S., sustainability advocates believe a coordinated federal-state-local regulatory framework will be needed to support similar projects, which is in direct opposition to Big Tech's desire for a consistent federal framework.²⁶

The tension between Big Tech and other stakeholders significantly shapes the current landscape of AI regulatory policy, characterized by a struggle for influence in an industry that advocates for minimal intervention, while sustainability advocates, community members, and the public push for more robust oversight. This dynamic results in slow and often fragmented progress, with regulatory actions frequently struggling to keep pace with the rapid advancements in AI, as powerful industry lobbying dilutes the implementation of stricter controls that might impact business models. This inherent conflict creates a challenging environment for establishing comprehensive and effective AI governance, leaving many stakeholders feeling that the current approach is insufficiently addressing the potential risks and harms associated with the technology.

Stakeholder 3 - Public Utility Commissions

Public Utility Commissions (PUCs) are state-level bodies that regulate the companies that manage public utilities like electricity, gas, water, and telecommunications. Because these resources are considered critical infrastructure, the companies that manage them lie somewhere between government function and business. The mission of PUCs is to balance the needs of consumers and utility companies: ensuring safe and reliable utility service at reasonable rates, protecting the public interest, furthering economic development, and fostering new technologies and competitive markets in an environmentally sound manner.

PUCs' core viewpoint on the AI energy issue is grounded in balance: they aim to support economic growth tied to AI-driven utility expansion while ensuring that the costs of new energy demands do not unduly burden consumers. PUCs are responsible for regulatory frameworks that ensure fair competition, protect consumers, promote sustainable energy solutions, and recognize the potential benefits of AI in optimizing grid management and energy efficiency. As rapid AI development drives an unprecedented surge in electricity needs, PUCs have become more cautious in approving new power purchases, given that these costs are typically passed along to residential and business customers.²⁷ PUCs recognize both the promise of AI in optimizing grid management and the risks of unchecked energy consumption, positioning them as a kind of "radical moderate" within the AI energy debate.

25) Cayla Jett, "Ai, Energy Demand, and Regulators: A Conversation with Le Xie," The Salata Institute, January 14, 2025, Accessed March 28, 2025, <https://salatainstitute.harvard.edu/ai-energy-demand-and-regulators-a-conversation-with-le-xie/>.

26) Cayla Jett.

27) Ai in the Utility Industry," Utility Dive, December 7, 2018, Accessed March 28, 2025, <https://www.utilitydive.com/news/ai-in->

Their investment in the issue is deep: PUCs must simultaneously protect consumer interests, enable utilities to meet rising demand, and adapt state infrastructure to future energy needs. Yet the weight they place on different priorities depends on political and regional contexts, and a significant prerogative of PUCs is to exercise autonomy to make decisions tailored to their state's specific needs and circumstances. As a result, PUCs have structured their role in the AI energy regulatory space differently. In Georgia, for instance, individual commissioners have directed the state's largest utility, Georgia Power, to add solar and biomass to its portfolio, allowing the state to climb to seventh in the country for utility-scale solar. Alternatively, in Maryland, a gas industry executive nominated by the governor withdrew his candidacy for the state's public service commission after outcry from environmental groups.²⁸ Thus, political partisanship shapes PUC decisions; in areas where voters (individuals) generally prioritize economic growth, PUCs may support data center expansion more zealously, while in regions where environmental or consumer protection is a higher concern, PUCs may push for stricter regulations to protect local communities.

PUCs have substantial power over AI-related energy regulation at the state level, with immense credibility in the eyes of FERC, the national regulator. Although FERC oversees interstate electricity markets and transmission, much of the on-the-ground decision-making about grid expansion, utility rate-setting, and renewable integration falls to PUCs. In fact, according to an article by Grist, they may have an inordinate amount of power: "No single person or body of government is in the driver's seat — the humble, arcane, and largely out-of-sight utility commissions are in control of the grid and its future. So whether the country meets this newly rising demand for electricity in a climate-friendly way or by prolonging the fossil fuel industry's dominance will largely be up to the 200 or so regulators who sit on state utility commissions."²⁹

For PUCs, a just resolution would involve expanding their regulatory frameworks to encourage innovation in energy sustainability while maintaining financial responsibility tailored to the unique needs of their states. Some states, like Colorado, have already begun this shift; by expanding PUC mandates to explicitly incorporate equity and environmental considerations into decision-making, state legislatures have empowered commissions to require utilities to submit equity plans and evaluate projects' long-term social impacts. Such reforms could ensure that AI energy expansion benefits all communities and does not exacerbate existing inequalities.

For PUCs, a just resolution would involve expanding their regulatory power to allow them to create policy that is not only financially responsible but innovative, encompassing sustainability prerogatives appropriately tailored to the needs of the state they represent. While PUCs often have the authority to consider factors beyond price and reliability, many hesitate to do so. State legislatures can expand this scope, as Colorado did by directing its commission to directly address equity and minimize the negative impacts of energy decisions in its policy. The commission's staff called this shift a "new decision-

28) Emily Jones and Mehta Gautama, "The Race for Clean Energy Is Local," Grist, November 8, 2024, Accessed March 28, 2025, <https://grist.org/elections/utilities-commission-psc-election-power-grid-decarbonization/>.

29) Ibid.

making paradigm.”³⁰ Since gas and coal plants disproportionately harm marginalized communities, these changes could significantly influence decisions about the use of such facilities in powering AI data centers.

PUCs’ role often places them in tentative alignment with community members and environmental NGOs, especially regarding concerns about rising utility costs and long-term resource protection. However, tensions persist. Because PUCs feel political and economic pressure to attract major corporate investment, including Big Tech data centers, they may allow for more flexible permitting, rate structures, and lax green energy requirements that frustrate sustainability advocates. Community members may feel sidelined when decisions favor large-scale infrastructure growth over local environmental or affordability concerns, and environmental advocates may view PUCs as “reluctant regulators” too willing to accommodate Big Tech’s expansionist aims at the expense of sustainability goals. Although Georgia’s PUCs are prioritizing green energy to meet AI energy demands, even if Georgia Power built a copy of the world’s largest solar farm (7 million panels) and added three typical nuclear reactors, it would still fall short of its required energy forecast for 2026.³¹ This would mean non-renewable sources would be required to support AI expansion nonetheless.

These internal and external tensions contribute directly to the slow, fragmented development of coherent AI energy regulation. As each PUC crafts policies tailored to its state’s unique political, economic, and environmental landscape, the national regulatory picture becomes increasingly uneven. However, as PUCs balance tensions and adopt specific policies, their states serve as a testing ground for the broader (ie federal) applications of such policies. If the outcomes are positive, demonstrating effective balance between innovation, consumer protection, and sustainability, this model can influence FERC by providing a proven framework to guide national regulations. Conversely, if the policy leads to negative outcomes, it may serve as a cautionary example, prompting federal authorities to intervene or adopt alternative approaches.

Stakeholder 4: Sustainability Advocates and Environmental NGOs

Sustainability advocates and environmental NGOs view the expansion of data centers and AI infrastructure as a major threat to environmental sustainability due to high energy consumption and strain (ecological, cultural, financial, etc) on local systems. Their key viewpoint is that without stringent oversight, AI’s energy demands will exacerbate environmental degradation, depletion of natural resources, and increase damaging pollutants (such as noise, light, and chemicals). These groups advocate for stricter regulatory oversight, renewable energy mandates, and increased transparency from corporations on their environmental practices.

While advocates recognize the potential for AI to contribute to sustainable solutions, they remain skeptical of the term “sustainable AI” and may perceive the concept as oxymoronic. As green business expert Andrew Winston points out, AI’s current energy

30) Ibid.

31) Andrew Winston, “Will AI Help or Hurt Sustainability? Yes,” MIT Sloan Management Review, July 11, 2024, Accessed March 28, 2025, <https://sloanreview.mit.edu/article/will-ai-help-or-hurt-sustainability-yes/>.

demands—already equivalent to the entire capacity of U.S. solar farms—are poised to rise even further, potentially matching Japan’s total electricity consumption by 2026.³² Sally Radwan, Chief Digital Officer at the United Nations Environment Programme (UNEP), echoes these concerns, warning that some of the current data on the environmental impact of AI is “concerning” and that “we need to make sure the net effect of AI on the planet is positive before we deploy the technology at scale.”³³ For many environmental advocates, the risks are already clear and demand immediate action. For more radical sustainability advocates, that scale has already arrived.

Sustainability advocates have a mix of power and limitations when addressing energy and environmental issues. They wield significant soft power through public opinion, media campaigns, and grassroots organizing, which can apply pressure on policymakers and regulatory bodies. Sustainability advocates have shaped environmental policy for decades through strategic litigation, regulatory petitions, public awareness campaigns, and forging coalitions that pressure lawmakers to adopt stronger environmental protections. In 2023, Our Children’s Trust supported youth plaintiffs in the landmark case *Held v. Montana*, which resulted in the first-ever court ruling that found a state government’s fossil fuel policies violated citizens’ constitutional rights to a clean environment.³⁴ Insure Our Survival and other climate justice organizations successfully pressured major insurance companies like Swiss Re, Munich Re, and Allianz to limit underwriting for certain oil and gas projects through coordinated letter-writing campaigns and physical protests.³⁵

Some advocacy organizations hold concrete political and legal power, such as the UNEP, which can sanction environmental crimes through climate litigation.³⁶ However, this power is used sparingly, limited to gross offenses, and has never been levied against the United States. The influence of many NGOs is also highly dependent on the political climate and the priorities of the administration in power. This inherent risk is now more salient than ever — the Environmental Protection Agency has canceled more than 400 environmental justice grants totaling \$1.7 billion under this administration.³⁷

In the eyes of FERC, sustainability advocates have moderate credibility, particularly when they bring data-driven research and technical expertise to the table. Established organizations such as the Environmental Defense Fund (EDF) and the Union of Concerned Scientists (UCS) provide valuable insights that FERC considers during rulemaking and policy evaluations. Advocacy groups actively participate in FERC’s

32) Andrew Winston, “Will AI Help or Hurt Sustainability? Yes.”

33) “AI Has an Environmental Problem. Here’s What the World Can Do about That,” UN Environmental Protection Agency, September 21, 2024, Accessed March 28, 2025, <https://www.unep.org/news-and-stories/story/ai-has-environmental-problem-heres-what-world-can-do-about>.

34) “Montana Youth Win,” Our Children’s Trust, Accessed April 22, 2025, <https://heldvmontana.ourchildrenstrust.org/>.

35) Keerti Gopal, “To End the Fossil Fuel Era, Activists in London Target the Insurance Industry,” Inside Climate News, November 30, 2024, Accessed April 22, 2025, <https://insideclimatenews.org/news/30112024/london-activists-target-insurance-industry-fossil-fuels/>.

36) “Environmental Law and Governance,” UN Environmental Protection Agency, Accessed April 20, 2025, <https://www.unep.org/topics/environmental-law-and-governance>.

37) Nada Hassanein, “Trump Has Canceled Environmental Justice Grants. Here’s What Communities Are Losing,” Stateline, April 14, 2025, Accessed April 21, 2025, <https://stateline.org/2025/04/14/trump-has-canceled-environmental-justice-grants-heres-what-communities-are-losing/>.

notice-and-comment procedures, contributing expertise on environmental impacts, grid modernization, and equitable energy transitions. However, their credibility can be challenged by perceptions of ideological bias, particularly among commissioners who may prioritize economic or grid reliability concerns over aggressive climate action. Furthermore, the extent to which FERC values sustainability advocates' input often shifts depending on the political composition of its leadership.

UNEP suggests a just AI energy policy as requiring standardized procedures for measuring the environmental impact of AI, regulations that require companies to disclose the direct environmental consequences of AI-based products and services, efficiency mandates that reduce energy demand while recycling water and reusing components where feasible, and greening data centres by using renewable energy and offsetting their carbon emissions.³⁸ Green business advocates suggest tax credits as a necessary incentive for this, and state transition be coupled with economic support and retraining programs for workers displaced by the shift to clean energy, ensuring that no communities are left behind in the pursuit of a sustainable energy future. For environmental justice and equity-oriented advocates, historically marginalized communities should be prioritized in the process, directing clean energy investments and benefits toward communities disproportionately harmed by pollution and climate change.

Environmental NGOs are most aligned with community members concerned about local environmental degradation and rising utility costs, as both groups prioritize protecting local resources and holding Big Tech accountable for its energy consumption. They also share some alignment with PUCs in advocating for effective energy consumption regulation and promoting renewable energy integration. However, tensions arise when PUCs prioritize economic development over environmental protections or approve energy contracts that favor tech corporations. The greatest conflict, however, exists between sustainability advocates and Big Tech companies, whose profit-driven expansion of AI infrastructure directly conflicts with sustainability goals.

Although sustainability advocates contribute valuable data and raise public awareness, Big Tech's arsenal of lobbying power and economic influence frequently dominates policy outcomes. Concepts of ideal sustainability regulation clash with the tech industry's immediate energy needs and influence. This imbalance marginalizes the voices of sustainability advocates, leading to regulatory frameworks prioritizing continuity and market growth over substantial environmental safeguards, ultimately resulting in policy stagnation and regulation that leans towards the status quo. Ultimately, while sustainability advocates drive important conversations about ecological responsibility and long-term risk, the current political and economic dynamics favor incremental change rather than the systemic reforms they seek.

38) UN Environmental Protection Agency, "AI Has an Environmental Problem. Here's What the World Can Do about That."

III. Recommendations for Equitable AI Energy Regulation

There is a salient need to address the AI energy policy vacuum. As hundreds of utility companies sell electricity at wholesale prices and the biggest players span across states, the Federal Energy Regulatory Commission (FERC) holds significant jurisdiction over managing this demand. Drawing from the tensions and priorities highlighted across key stakeholders — community members, Big Tech companies, public utility commissions (PUCs), and environmental sustainability advocates — this section proposes a comprehensive “twin transition” strategy. This framework treats clean energy advancement and AI development not as opposing goals, but as mutually reinforcing imperatives that must progress in tandem. This twin transition policy should:

- 1) Require fair cost burden-sharing with large load interconnections;
- 2) Provide green transmission incentives;
- 3) Institute local workforce development standards in regional transmission planning;
- 4) Create a collaborative state and local task force;
- 5) Institute reporting and transparency requirements to measure and hold regulated entities accountable for their environmental impacts.

Below is a discussion of how each recommendation addresses stakeholder perspectives, and its benefits, costs, and feasibility.

Fair Burden Sharing with Large Load Interconnections

AI data centers require significant interconnections to the grid. FERC should implement standardized cost allocation methodologies requiring large energy consumers, particularly AI data centers, to directly contribute to the costs of grid upgrades triggered by their interconnection demands. FERC should encourage AI companies to participate in a demand response model where data centers reduce their electricity consumption during peak hours by providing financial incentives such as grants, preferential market rates, or reduced interconnection fees.

This recommendation directly addresses community members’ concerns about rising utility prices by ensuring they are not subsidizing corporate expansion. While the short-term compliance and utilities costs to Big Tech companies will increase, this policy does not unduly stifle growth, and the benefits of preserving long-term grid reliability, easing community tensions, and promoting more efficient energy will outweigh these initial burdens. It also addresses sustainability advocates’ concerns by promoting efficient and responsible energy use. Given FERC’s existing authority over interconnection procedures and demand response programs,³⁹ this policy is highly feasible.

Green Transmission Incentives

39) “Reports on Demand Response and Advanced Metering,” Federal Energy Regulatory Commission, December 6, 2024, Accessed April 21, 2025, <https://www.ferc.gov/power-sales-and-markets/demand-response/reports-demand-response-and-advanced-metering>.

As data center loads grow, they impact regional transmission planning. FERC should leverage its oversight of this planning process to incentivize the development of transmission infrastructure needed to bring renewable energy to load centers. Incentives can include grants and streamlined approval processes for renewable-focused transmission projects. Additionally, FERC oversees the rules of wholesale electricity markets, and should design these rules to incentivize the use of energy from renewable energy sources by implementing favorable pricing structures.

This step would help bridge tensions between sustainability advocates, who demand a transition to clean energy, and Big Tech, which seeks energy reliability and affordability. Although transmission expansion is capital-intensive and often faces permitting hurdles, FERC's existing role in transmission policy reform positions it well to promote these changes. Modernizing transmission is a long-term investment, but a critical one, ensuring that AI innovation does not entrench fossil fuel dependence.

Local Workforce Development

This recommendation involves embedding local workforce development and community economic benefits into the interconnection and transmission project approval process. When creating regional transmission plans, FERC reconciles state and federal energy policies and should emphasize the importance of workforce development goals within its planning processes alongside technical and economic considerations. When reviewing interconnection requests, FERC should require companies to submit plans demonstrating commitments to local job creation and skills training programs. FERC should also give preference to projects that demonstrate a greater commitment to community investment.

This initiative directly addresses concerns raised by community members and PUCs regarding equitable economic benefits, while offering Big Tech a way to build goodwill in regions hosting data centers. Although it would impose additional costs and obligations on AI companies, tying infrastructure growth to workforce development aligns with federal trends under legislation like the Inflation Reduction Act and is therefore politically and administratively feasible.

Collaborative federal and state task force

To address the fragmented regulatory landscape between federal and state levels, FERC should convene a formal federal-state task force on AI energy regulation. This task force would include FERC policymakers, PUC commissioners, and other key energy officials to develop model regulatory frameworks, share best practices, and promote consistency across jurisdictions. During task force meetings, FERC should highlight the benefits of enhanced PUC regulatory scope in the interest of prioritizing sustainability and equity considerations alongside financial considerations in utility projects.

This recommendation directly addresses the prerogative for PUCs to have increased authority to implement innovative policy. It works towards the aim of sustainability, ultimately supporting the perspectives of environmental NGOs and providing responsive, tailored solutions for community members. Additionally, the task force works towards

a consistent regulatory framework, a key goal of Big Tech companies. It is also philosophically aligned with the agile management philosophy of Big Tech companies, as it highlights transparency and collaboration rather than hierarchical dictates. While organizing and maintaining such a task force would require sustained effort and administrative resources and still requires buy-in from state PUCs, it builds on FERC's collaborative history with regional transmission organizations and is highly plausible within its existing operations.

Reporting and transparency requirements

FERC oversees accounting, financial reporting, and the conduct of regulated companies. To address AI's growing environmental impact, FERC should establish standardized procedures for measuring these effects and require companies to disclose the direct environmental consequences of AI-based products and services.

This recommendation directly responds to concerns from sustainability advocates and community members by ensuring that AI's environmental impacts are measured and disclosed, while avoiding heavy-handed operational restrictions that would alienate Big Tech. By requiring transparency, it holds Big Tech accountable for its energy usage and environmental footprint without directly restricting it, empowering stakeholders to advocate for informed policy decisions that reflect both ecological and community interests. Compliance costs would be relatively minor for large corporations, especially compared to the broader public benefits of informed policymaking and community empowerment. Expanding FERC's reporting requirements in this way is consistent with its current financial and operational oversight role and would be administratively achievable with moderate adjustments.

Taken together, these recommendations present a balanced, realistic path forward that acknowledges the fundamental tensions among stakeholders without attempting to eliminate them entirely. Community members would see protections against unfair cost burdens, tangible local economic benefits, and greater environmental transparency. Big Tech companies would retain clear avenues for expansion, albeit with fairer cost-sharing and accountability measures. PUCs would receive the tools and collaborative infrastructure necessary to manage the complex new challenges posed by AI growth. Sustainability advocates would see meaningful progress toward integrating renewable energy and environmental responsibility into AI-related infrastructure decisions. Some trade-offs are inevitable—most notably requiring Big Tech to shoulder a greater share of financial and environmental responsibility—but these trade-offs are necessary to ensure long-term economic, social, and ecological viability.

Moreover, this twin transition framework is highly plausible within FERC's current statutory mandate. While it would stretch FERC's traditional focus slightly to incorporate stronger sustainability and transparency goals, it would not require fundamental legislative restructuring. The strategy would also position FERC as a proactive leader in shaping the evolving AI energy landscape, rather than reacting after tensions escalate. By adopting this twin transition policy, FERC can strategically leverage its existing authority to ensure that AI development and clean energy goals progress in tandem, ultimately fostering a balanced energy future that addresses the needs of all key stakeholders. ●