DATA CENTERS

BI-WEEKLY UPDATE

September 24, 2025

FRESH COAST
Climate Solutions

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CATEGORIES OF NEWS UPDATES

Bi-weekly, Fresh Coast summarizes the latest data center industry news and assesses potential impacts across key categories for Joyce Foundation

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Investments*

Article/Link	Summary	Potential Impact
OpenAI & Oracle's $300B Agreement	**9/10/25 (National):** OpenAI and Oracle made a $300 billion agreement to develop a network of AI data centers throughout the United States over the next five years. More than half of the funding needed for this agreement was secured from the Project Stargate initiative, and it is backed by additional partners such as SoftBank and G42. The project includes new facilities in Texas and future sites in the United Arab Emirates.	**Medium** – Risk of prioritizing increased computing power and economic growth over environmental and social impacts
Blackstone's $1B 620MW Natural Gas Plant in PA	**9/16/25 (PA):** Blackstone will acquire the 620 MW Hill Top Energy Center in Pennsylvania for almost $1 billion. This is a notably higher price per kilowatt than other recent gas plant deals. The investment is part of Blackstone's $25 billion plan to expand Pennsylvania's digital and energy infrastructure.	**Medium** – Reinforces reliance on fossil fuels; dedicated power for DC; potential hydrogen integration in the future
ComEd 260MW Stream Substation in Illinois	**9/11/25 (IL):** ComEd began construction on a 260 MW data center substation to support Stream's new Elk Grove data center campus near Chicago, Illinois. In 2027, the substation is scheduled to be operational and power the 1.2 million sq ft facility. The campus will feature three buildings, high-efficiency hybrid cooling, renewable energy access, and strengthened connectivity. This will be Stream's third data center campus in the area, joining existing facilities of 15 MW and 32 MW.	**Medium** – Clustering data centers takes advantage of existing infrastructure but also requires upgrades; Steam projects emphasize efficient, clean tech
Microsoft's $7.3B in WI	**9/17/25 (WI):** Microsoft is expanding in Wisconsin with a $4B data center project set for Mount Pleasant. This project brings Microsoft's total state investment to $7.3B. The new facility will use advanced Nvidia GPUs, serve as a key hub for AI computing, and utilize pre-paid infrastructure to stabilize energy costs.	**Medium** – Risk of prioritizing increased computing power and econ growth over environ and social impacts
$1B Ohio Data Center	**9/9/25 (OH):** Hamilton, Ohio, is moving forward with plans for a $1 billion 320,000 sq ft data center expected to create over 100 jobs. Officials say that the facility will be powered by the city's utility and will rely on natural gas and hydroelectric energy. Concerns remain about heavy energy demands and potential environmental consequences.	**Medium** – Risk of prioritizing increased computing power and econ growth over environ and social impacts
$800M IN Data Center Continues Development	**9/6/25 (IN):** Indiana's Michigan City Common Council has approved resolutions to advance Project Maize. This is an $800 million data center planned for a vacant industrial site. The redevelopment will reuse existing infrastructure, upgrade with local utilities, and create both construction and permanent jobs. Michigan City is being positioned as an emerging hub for digital infrastructure.	**Medium** – Risk of prioritizing computing power/econ development over environ/ social impacts; but brownfield revitalization

Technology

Article/Link	Summary	Potential Impact
Lightpath's Fiber Build for PA's Data Centers	**9/7/25 (PA):** Lightpath is constructing 130 miles of fiber for AI in Eastern Pennsylvania to support the region's expanding hyperscale data center market. The fiber network will link the Susquehanna area to major hubs like Northern Virginia and New York City. This results in lower latency and higher capacity connectivity and leverages local nuclear, hydroelectric, and renewable energy sources. The network will feature dark fiber, high-speed wavelengths up to 800 Gbps, Ethernet, as well as Internet services for hyperscalers, enterprises, governments, and wireless providers. Completion of the fiber network is expected in 2026.	**High** – Regional econ growth, risk of prioritizing advanced+ faster computing over environmental and social implications
Microsoft & Equinor's Carbon Capture Value Chain	**9/16/25 (US, Northwestern Europe):** Microsoft and Equinor have partnered to expand CO_2 capture, transport, and storage efforts in the U.S. and Northwestern Europe. Microsoft aims to strengthen their carbon management capabilities by using digital tools to track carbon molecules and purchasing carbon removal credits. Microsoft's data centers are highly energy intensive. By investing in large-scale carbon capture and storage technology Microsoft can offset emissions and align with net-zero and water conservation goals.	**Medium** – partnership aims to advance carbon removal tech; promise of reduced carbon footprint; requires demonstration/validation
Capstone Green & MG4AI's Modular Microgrid Power	**9/13/25 (National):** Capstone Green Energy and Microgrids 4 AI (MG4AI) have partnered to develop modular, AI-ready microgrid-powered data centers. Capstone's microturbines (which can run on natural gas, biogas, or propane) will pair with MG4AI's containerized compute pods and liquid cooling systems to create grid-independent computing. This approach targets hyperscale workloads below 20MW and aims to reduce energy and cooling costs while AI while AI infrastructure deployment accelerates.	**Medium** – Grid indepen-dent tech could improve grid reliability, lower operational costs; increased emissions compared to integrating renewables; requires R&D
Eaton's Energy Spike Detection Solution	**9/15/25 (National):** Eaton has introduced a method to detect sudden energy demand spikes (called AI power bursts) that are caused by high-performance AI computing in data centers. Using its Power Xpert (PXQ) quality event analysis system, Eaton can now identify subsynchronous oscillations (SSOs). SSOs are energy fluctuations that can damage equipment, trigger outages, and overheat infrastructure. This system helps operators proactively manage energy spikes, to ensure safer and more reliable operations. This is part of Eaton's broader "grid-to-chip" strategy.	**Medium** – New real-time analytics for energy-intensive workloads can avoid equipment/operational problems; enhance grid reliability
NYC's First Quantum Computer	**9/15/25 (NY):** Oxford Quantum Circuits recently deployed New York City's first quantum computer at Digital Realty's Manhattan data center. This marks a milestone in combining quantum and AI computing capabilities. Partners Nvidia and Digital Realty are backing the project. This is one of the world's most powerful quantum machines and is expected to serve finance and AI industries, with commercial access set for 2026.	**Medium** – Tech collab brings econ and innovation benefits, risk of prioritizing faster computing over environ/ social impacts, requires R&D

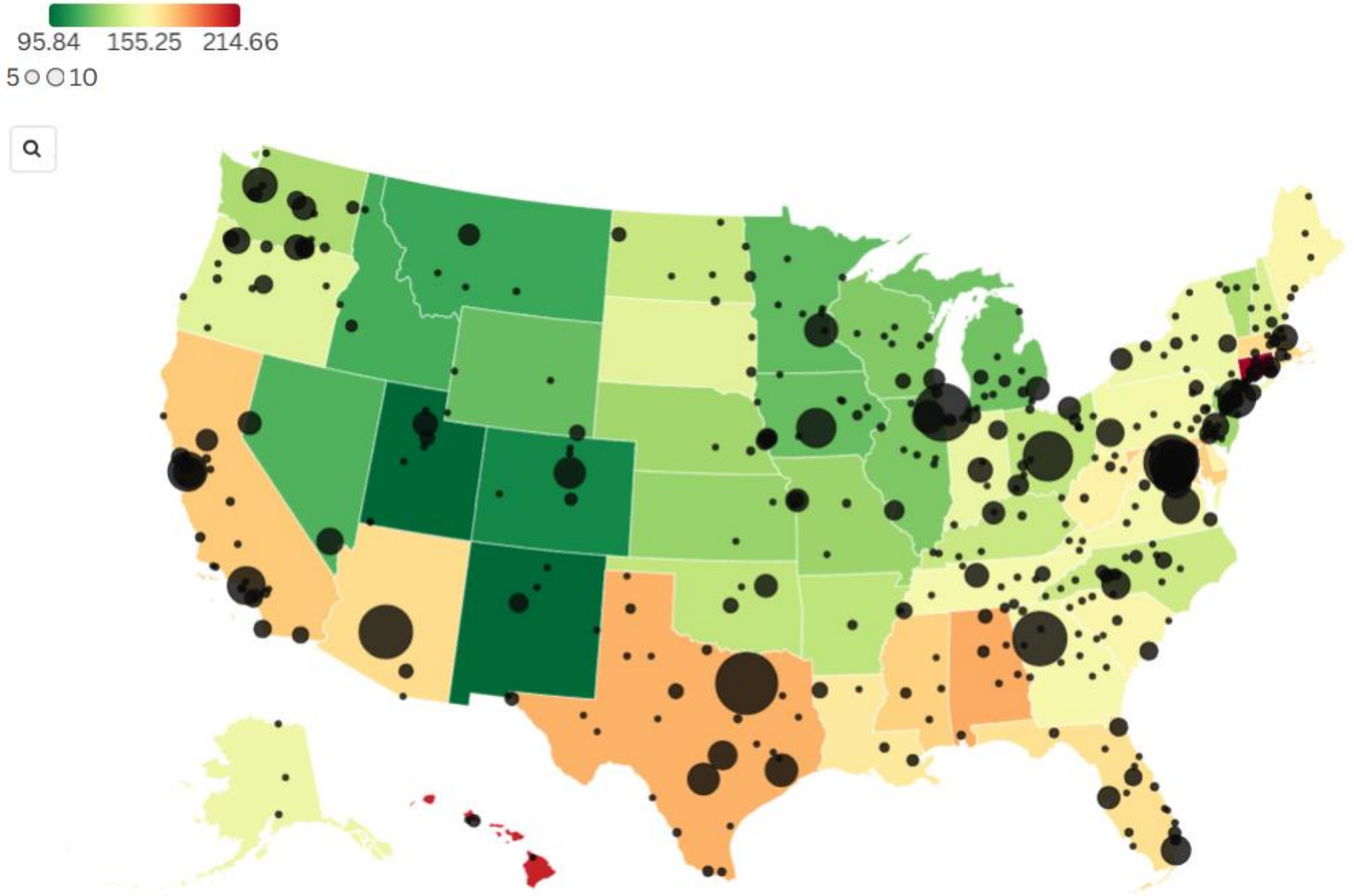
Legislation

Article/Link	Summary	Potential Impact
Impact of DOE Emergency Orders	**9/12/25 (National):** The U.S. Department of Energy's increasing use of emergency authority under the Federal Power Act to keep fossil fuel plants running is raising concerns. This could potentially undermine long-term grid planning. Critics argue this shift from short-term crisis response to ongoing intervention could distort energy markets, weaken trust, and create a "moral hazard" where plant owners rely on federal bailouts instead ofmore reliable practices.	**High** – Keeping coal plants running may stabilize short-term power supply but risks long-term grid reliability, delays transition to clean energy
Ohio Regulator Rejects New Rate Structure for Large Data Centers	**9/8/25 (OH):** Ohio regulators recently rejected efforts by Amazon, Google, and other major data center developers to overturn a new rate structure that requires large facilities to pay for at least 85% of their projected energy needs (even if they actually consume less). The Public Utilities Commission of Ohio upheld the plan to ensure data centers, not residential or small business customers, cover the costs of infrastructure upgrades. 12-year rules also mandate financial proof of viability and exit fees for cancellations.	**High** – Ohio pre-payment protects ratepayers; encourages accurate power forecasts; discourages overbuilding; may mean developers look elsewhere
How Will PA Lawmakers Respond to AI Growth?	**9/15/25 (PA):** Lawmakers in PA face pressure to balance economic growth with rising energy costs and environmental protections. AI data centers are driving electricity demand, contributing to higher bills for residents across the PJM grid. Legislators are considering bills on permitting, tax incentives, and infrastructure costs. Governor Josh Shapiro's "Lightning Plan" promotes new energy generation and streamlined permitting, however, potential negative implications (gridlock, water use, emissions, etc.) could slow policy development. The Pennsylvania Public Utility Commission and PJM Interconnection are exploring model tariffs and self-supplied power requirements to mitigate costs.	**High** – Pennsylvania revisiting policies to balance economic development and mitigate unintended consequences; enviro risk mitigation may require more evaluation
IN Governor Seeks Lower Utility Rates	**9/8/25 (IN):** Governor Mike Braun of Indiana asks major utilities (including NiSource, Duke Energy, and AES) to lower electricity rates due to sharp increases seen in residential bills. Analysts expect that NiSource's plan to launch a new generation company to serve data centers and other large energy customers will move forward despite these requests.	**Medium** – IN noting higher costs due to data centers; seeking to make adjustments utility ratemaking; requires more fair cost evaluation
Indianapolis Council to Vote on Google's DC	**9/9/25 (IN):** Indianapolis officials are deciding whether to rezone 468 acres of land in Franklin Township, Indiana for Google's "Project Flo" data center campus (which would include four buildings). While supporters highlight potential tax revenue growth from the current $40,000 to over $10 million annually, residents and protestors have voiced concerns about higher energy costs, water use, pollution, and local quality of life impacts.	**Low** – Rezoning in IN would boost tax revenue and promote econ growth/job creation; but local pushback and sustainability concerns

Research

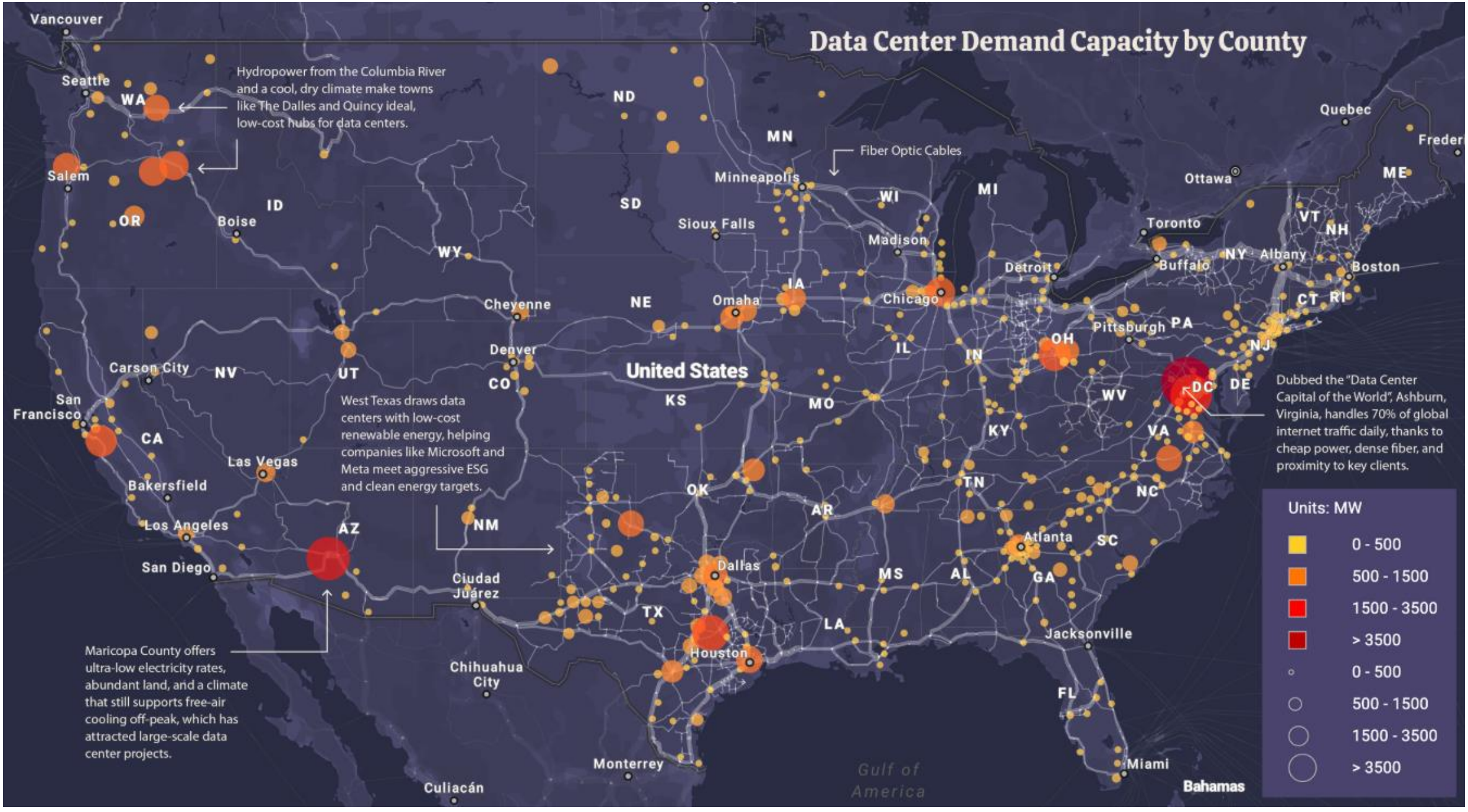
Article/Link	Summary	Potential Impact
Scholars Propose New Electricity System Rules	**8/28/25 (National):** Law professors Alexandra Klass (University of Michigan) and Dave Owen (UC Law San Francisco) Francisco) argue that traditional electricity rules aren't suitable for the boost in demand from data centers. They suggest creating a new customer category for these facilities, requiring them to be more flexible in how and when they consume power. The professors warn that without regulatory changes, utilities may build too many expensive fossil fuel plants, leaving customers stuck with higher bills and more emissions.	**High** – Academic study argues for new category of business with new rules to enable flexible, stable grid loads and fair costs
Electric Grid Growing Fast, Utility-Scale Solar to Lead	**9/10/25 (National):** The Energy Information Administration's (EIA) Short-Term Energy Outlook found that the U.S. electric grid is expanding faster than expected, driven by rising electricity demand from data centers. Total energy generation is projected to grow 2.3% in 2025 and 3% in 2026, which exceeds earlier forecasts. Utility-scale solar leads the expansion, expected to produce 33% more electricity than in 2024. Wind, hydropower, and nuclear generation are also expected to rise. Natural gas generation is forecasted to decline by 3% in 2025 due to increased fuel prices.	**High** – EIA forecasts faster electric power expansion; largely renewables and nuclear growth, with nat gas decreasing due to higher fuel prices (despite new NG plants)
Solar Power for Data Center Electricity Efficiency	**9/4/25 (National):** Rice University researchers have designed a solar-assisted system that can boost electricity recovery from data center waste heat by 60–80%, while also cutting costs and improving efficiency during peak sun hours. The system combines solar thermal collectors with an organic Rankine cycle to repurpose heat that would have been wasted. This offers a scalable and cost-effective way to reduce data center energy demand.	**Medium** – New heat recovery system could achieve greater energy efficiency, lower costs, and improve carbon footprint; requires RD&D and validation
AI for Building Energy Retrofitting	**9/17/25 (National):** A Michigan State University study found that large language models can recommend effective building energy retrofits but struggle to optimize costs and speed. This could limit their usefulness in real-world applications. This has broader implications for data centers, where energy efficiency and retrofitting decisions are critical to managing operating costs and meeting sustainability goals.	**Medium** – Further &D needed of AI models to support decarb + prioritize and reduce long-term costs/enhance financial feasibility
Map of States with the Most Data Centers	**8/30/25 (National):** An analysis by Newsweek highlights the rapid expansion of data centers across the nation. 4,005 facilities are currently registered. Virginia leads the nation (663 centers), followed by Texas (384 centers) and California (318 centers). Water demand for cooling servers is intense, for example, Texas data centers are projected to use 49 billion gallons of water in 2025, which is almost the equivalent of the daily water usage of 1,000 households per midsize facility. Rising energy consumption by data centers could contribute to higher electricity bills (Texas and California reported avg bills over $170/month). *Map is pictured on the next slide* (See also, Visual Capitalist data center map analysis; map/GIS model from NREL's Speed to Power initiative)	**Medium** – National growth with DCs; risk of prioritizing growth over environ/social impacts, policymakers look to balance econ/tech dev w/community needs/costs

Map Showing the Number of Data Centers in Each State



Sources: DataCenterMap, EnergyBot

Newsweek, "Map Shows States With The Most Data Centers As Electricity Bills Rise" (8/30/2025)



Routley, Nick. "Data Center Demand Capacity by County" Visual Capitalist (9/20/2025); See also NREL's Speed to Power Initiative with GIS map

Sustainability

Article/Link	Summary	Potential Impact
Microsoft to use 2.8M gal of Lake Michigan Water	**9/17/25 (WI):** Microsoft's Mount Pleasant data center in Wisconsin is expected to draw 2.8 million gallons of water from Lake Michigan annually in 2026. Potential expansion could increase that total to over 8.4 million gallons of water per year. Records were released after a lawsuit against the city of Racine for delaying public disclosure. Microsoft claims new designs will minimize reliance on municipal water for cooling, but environmental advocates remain concerned about long term impacts.	**Medium** – Precedent for Great Lakes freshwater use being established; community concerns over water use, wastewater discharge, low transparency; community pushback on resource mgmt
Cities Taking Action for Data Center Concerns	**9/13/25 (MO):** St. Charles and St. Louis, Missouri, are pausing new data center projects amid growing concerns over their water and energy demands, infrastructure strain, and potential environmental impact. St. Charles enacted a one-year moratorium after residents opposed "Project Cumulus." St. Louis leaders are supporting a temporary halt to develop stricter land use and environmental rules before allowing future development.	**Medium** – Local govts issue pauses/moratoria in order to understand and establish requirements to balance econ benefits and enviro/comm impacts
CenterPoint Energy's Geothermal Pilon in MN	**9/16/25 (MN):** CenterPoint Energy is advancing its first geothermal network pilot project in Minnesota. They have hired Resource Innovations and Salas O'Brien to help with site selection and feasibility studies. The system would use underground heat pumps paired with low-carbon electricity to lower emissions. This is part of CenterPoint's five-year plan under Minnesota's Natural Gas Innovation Act (which also includes projects in renewable natural gas, green hydrogen, and hybrid heating systems).	**Medium** – Geothermal + renewables pilot to decarbonize and improve operational efficiency; aligns with net-zero and renewable energy targets
Environ Concerns for WI Data Center	**9/11/25 (WI):** Residents of Caledonia, Wisconsin, voiced strong opposition to the proposed "Project Nova" which would rezone 244 acres of farmland for data centers near the Oak Creek Power Plant. Concerns focused on heavy water use, loss of agricultural land, threats to the rural environment, lack of transparency from the developer, and minimal perceived community benefit, despite potential future local tax revenue promises.	**Low** – Community pushes back on project due to high water demand, farmland loss, and lack of transparency
Environmen-tal Groups Raise WI Data Center Concern	**9/16/25 (WI):** Environmental groups in Wisconsin are shining a light on the resource demands of upcoming AI data centers, including Microsoft's $3.3 billion campus in Mount Pleasant and Vantage Data Systems' Port Washington site. According to Clean Wisconsin, these two facilities could require nearly 3.9 GW of electricity and hundreds of thousands of gallons of water. This is enough energy to power approximately 4.3 million homes (which is ~2x the number of housing units in the state). Legal efforts are underway to force disclosure of projected water usage.	**Low** – Growing awareness of energy and water impacts of data centers; communities are voicing opposition; legal efforts to force disclosure

Other Industry News

Article/Link	Summary	Potential Impact
TVA's 6GW Small Nuclear Agreement	**9/2/25 (TN):** The Tennessee Valley Authority (TVA) partnered with ENTRA1 Energy to develop up to 6 GW of small modular nuclear reactors (the largest planned SMR deployment in the U.S.). ENTRA1 will build and own six nuclear energy plants across TVA's service area of 7 states, with TVA purchasing the power (enough power to serve 4.5 million homes or ~60 new data centers). Financial terms and timelines remain undisclosed.	**High** – New modular nuclear developments may improve grid stability and lower emissions; safety, waste, requires RD&D and validation
Broader Picture of PJM Supply Challenges	**9/10/25 (PJM Region):** Recent concerns about PJM grid reliability have highlighted the growing electricity demand of data centers, however, focusing exclusively on this sector overlooks broader long-term challenges. PJM has faced persistent supply pressures from retiring power plants, a backlog in interconnection approvals, and regulatory uncertainty. While data centers do contribute to rising demand, other factors (like electric vehicle adoption, port electrification, and general industrial load growth) also strain the system. PJM has begun implementing reforms including accelerated project approvals and AI-assisted interconnection tools to address these issues. The article emphasizes that data centers are essential economic drivers and should be considered in a holistic planning context.	**Medium** – Electricity demand reliability risks stem from combination of factors; grid operators/policymakers should improve interconnec-tion, enhance forecasting, and provide clear regulatory frameworks
Iowa Nuclear Plant Set to Restart	**9/1/25 (IA):** NextEra Energy plans to restart the Duane Arnold nuclear plant in Iowa to bring 600MW+ online by 2028. This action follows similar plant restarts at Palisades and Three Mile Island and is driven by growing electricity demand from AI data centers. NextEra is seeking a power purchase agreement with tech companies to fund this project. This reflects a shift toward nuclear to meet power needs while facing rising demand and declining renewable incentives.	**Medium** – Conventional nuclear plant restart may enhance grid reliability, support local econ and grid stability; requires study of safety, waste, comm impacts
Amazon Retreats from Planned MN Data Center	**9/9/25 (MN):** Amazon has stopped its planned data center in Becker, Minnesota, resulting in a major hit to the city's hopes of offsetting lost tax revenue from the closing Sherco coal plant. Policy changes including stricter permitting for backup diesel generators and reduced tax incentives contributed to the company's decision. Amazon has shifted focus to sites in North Carolina and Pennsylvania.	**Low** – Becker faces econ uncertainty for local tax revenue and jobs; reliance on large tech investments highlights risks tied to shifting energy policies

EMERGING THEMES

Investments

More Growth
- $20B+ in AI data center investments from hyperscalers in PA

More Fiber for More DCs
- Lightpath investing in 130 mi of AI-grade fiber to connect hyperscale data centers to major hubs

More Nuclear
- New modular nuclear plans and another conventional nuclear restart announced

New Tech Partnerships
- Strategic partnership (Microsoft & Equinor) to advance CO_2 transport, storage, and carbon removal

Technology

Operational + Grid Reliability
- Eaton's PXQ system assesses real-time power surges to prevent equipment failure and foster more energy management and grid reliability

Grid Independence
- Modular AI-ready microgrid and off-grid solutions (MG4AI & Capstone) reduces reliance on grid

New Tech Investments/Pilots
- Continued investment in liquid cooling and combined cooling/power systems to improve energy efficiency
- Geothermal + renewable energy pilot in MN (CenterPoint)

Legislation & Market Development

Applying Different Strategies
- OH pre-payment for utility upgrades
- PA streamlines permitting and power buildout, begins to look at costs and new tariffs,
- IN looks to reduce utility rates

Local Govt Weighs Tax Revenue vs. Impacts
- Indianapolis weighs $10M in new tax revenue versus local enviro/comm impacts

Some Pullback
- Amazon halted a multibillion dollar data center project (Becker, MN)

Enviro/Social/Economic Impacts

Environmental
- Precedent being established to use Lake Michigan water for Microsoft data center in Racine, WI
- Carbon capture initiatives and renewable technologies
- Efficient cooling and energy monitoring (Capstone/ MG4AI, Eaton)

Community Awareness
- Local governments are issuing pauses/moratoria on DC developments in order to understand impacts and establish requirements
- More evidence and concern around costs to ratepayers
- Legal effort in WI to force disclosure of energy/water impacts

THANK YOU

Let’s make bold changes together

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News Topics & Trends Rated Based on Potential Impacts to Environmental Footprint of Data Centers

Category (Color Code)	Definition	Indicators	Est. Size of Impact	Est. Scale of Impact
High Impact (Positive, Negative)	Current or potential **large** mitigation or exacerbation of environmental footprint of data centers	Major changes in investments, legislation, technology resulting in large energy use/reduction, water use/reduction, land use/reduction, grid or community impacts (e.g., 100% renewables requirement)	>= 25% footprint change ($100Ms)	Across one or more Great Lakes states
Medium Impact (Positive, Negative)	Current or potential **moderate** mitigation or exacerbation of environmental footprint of data centers	Moderate changes (e.g., major efficiency improvements, partial renewables use, regional requirements or investments)	10-25% footprint change ($10Ms)	Region within a state; multiple sites/communities
Low Impact (Positive, Negative)	Current or potential **minimal** mitigation or exacerbation of environmental footprint of data centers	Minimal, local or site-specific changes (e.g., minor operational tweaks, minor requirements)	< 10% footprint change ($1Ms)	Local; one site or community
Neutral/ Uncertain (Gray)	Impacts are mixed (positive and negative) and/or there is insufficient data to determine overall impact	E.g., Early-stage technology pilots, new requirements and approaches, impacts or geographies not yet studied (e.g., small modular nuclear)	TBD / Varies	TBD / Varies

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