

Data Centers Bi-Weekly Update

October 20, 2026

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Emerging Themes

Investments & Market Activity

AI infrastructure investment reaches historic scale amid growing market scrutiny

- Data center spending in the US could exceed scale of past buildouts such as railroads, electrification, and telecommunications relative to GDP
- Market concerns are increasingly focused on debt burdens, highlighted by CoreWeave's sell-off and Anthropic's anticipated IPO valuation

Existing nuclear assets attract growing investment

- Constellation Energy reached long-term agreements with Google and Amazon to expand existing nuclear assets
- DOE signs conditional loan agreement with Vistra for reactor upgrades

Research & Technology

Rising utility costs drive interest in flexible and distributed energy solutions

- A PowerLines report shows US utilities requested record-breaking rate increases in Q3
- Brattle Group report shows that scaling residential VPPs could cut customer electric bill increases by half
- RMI shows heat pumps could lower customer costs, improve grid utilization, and reduce emissions
- Startup ON.energy is commercializing data center battery systems that reduce reliance on fossil fuel backup and help protect the grid from power disturbances
- Illinois is advancing battery storage deployment by implementing the Clean and Reliable Grid Act (CRGA)

Legislation & Policy

Grid operators continue to pursue reforms

- FERC rejects parts of PJM's fast-track data center interconnection plan
- MISO advances reforms to speed interconnection queue
- PJM plans to study the PORTS Technology Campus impacts on transmission and cost allocation

States continue to shape data center and energy policy

- WI PSC approves two new natural gas plants intended to support data center load growth
- MI lawmaker introduces bills to enable more local control in data center decision-making
- Investigation reveals WI Economic Development Corporation signed NDAs for five data center projects

Sustainability

Data center emissions rise, but cleaner growth pathways exist

- Independent analysts project a 60% increase in five major tech firms' emissions in 2026
- Chip manufacturing in Taiwan and South Korea remains a major source of tech-sector emissions
- Data centers' environmental impacts depend on location, power mix, and resource availability, not just scale
- VA's new energy plan models pathways to meet 85% increase in electricity demand while maintaining carbon-free energy mix by 2050
- OR governor announces pause on environmental permits for new data centers until July 2027

Investments & Market Activity

Article/Link	Summary	Potential Impact
Data Center Investment Estimated to Reach Historic Scale	**10/15/2026 (National):** A new report by Stijn Van Nieuwerburgh of Columbia Business School estimates that data centers represent the largest industrial investment wave in U.S. history as a share of GDP, surpassing railroads, electrification, and telecommunications. The report estimates a 1 GW AI campus costs about $41 billion and projects 183 GW of U.S. AI data center capacity by 2032, requiring $10.3 trillion in investment, or roughly 3.6% of GDP from 2025-2032. While supporters view the buildout as foundational AI infrastructure, critics cite grid impacts, reduced tax benefits, and concerns that returns may fall short if AI adoption or profitability underperforms. See the full report here.	**High** – Beyond debt financing, key risks of the buildout include uncertain demand, tenant concentration, technology shifts, and execution challenges.
Google, Amazon, and DOE Back Nuclear Uprates	**10/8/2026 (National):** Google and Constellation Energy announced a 20-year agreement to support nuclear uprates at 11 existing reactors across Illinois, Pennsylvania, and New Jersey, adding 890 MW of new generation capacity to the PJM Interconnection region through equipment upgrades rather than new reactor construction. Under the deal, Constellation will invest more than $4.3 billion to modernize turbines, steam generators, and control systems at participating plants, with the first uprate expected by 2028 and all projects targeted for completion by the early 2030s. See Constellation's press release here and read the full article here. **10/5/2026 (National):** Amazon and Constellation Energy signed a 20-year power purchase agreement to support a 190 MW uprate at the Calvert Cliffs Nuclear Power Plant in Maryland, alongside more than $3 billion in investments aimed at boosting the plant's output and extending its long-term operation. The new generating capacity from the uprate is expected to come online between 2030 and 2032. See Constellation's press release here and read the full article here. **10/6/2026 (National):** The U.S. Department of Energy announced a conditional $4.2 billion loan to Vistra to fund upgrades at its Beaver Valley (Pennsylvania), Davis-Besse (Ohio), and Perry (Ohio) nuclear plants. The investments are expected to increase generation capacity by approximately 433 MW, improve plant performance, and support long-term operation of nearly 4 GW of existing nuclear capacity. See the DOE press release here and read the full article here.	**High** – As data center and electricity demand accelerates and concerns about generation shortfalls grow across PJM, nuclear uprates are seen as a rare opportunity to add large volumes of reliable and clean capacity without waiting for new power plants to be built, while providing long-term price certainty for large-scale infrastructure investments.
CoreWeave Selloff Raises AI Market Scrutiny	**10/16/2026 (National):** CoreWeave became a focal point for investor concerns about a potential AI bubble after its shares and bonds sold off sharply amid signs that some hyperscalers may be slowing data center development and capital spending plans. Investors are increasingly scrutinizing the company's roughly $50 billion debt load, arguing that AI infrastructure providers are particularly exposed because they rely on heavy upfront borrowing to finance chips, land, energy, and data centers before revenues fully materialize. Despite pointing to a more than $104 billion revenue backlog and strong customer demand, CoreWeave's unprofitability and rapid cash burn have heightened broader investor concerns about the sustainability of debt-funded AI expansion.	**Medium** – The sell-off signals growing investor concern that the AI boom may be outpacing its economic fundamentals, increasing pressure on data center firms to demonstrate returns.

Investments & Market Activity (Continued)

Article/Link	Summary	Potential Impact
Anthropic IPO Expectations Cool	**10/15/2026 (National):** Some current and prospective investors in Anthropic's upcoming IPO are discussing a valuation of roughly $1.5 trillion, down from earlier expectations of around $2 trillion, following the company's latest financial disclosures. While Anthropic reported third-quarter revenue growth of 45% quarter-over-quarter to $16.8 billion and adjusted profitability, some investors were concerned that growth is slowing compared with the previous quarter, when revenue more than doubled. As one of the first major AI companies to approach the public markets at this scale, Anthropic's valuation is widely seen as a test of investor confidence in the broader AI investment thesis.	**Medium** – The reassessment suggests investors are placing greater emphasis on sustainable growth and returns as AI companies face rising infrastructure costs.

Research & Technology

Article/Link	Summary	Potential Impact
Utility Rate Hike Requests Keep Climbing	**10/7/2026 (National):** A new PowerLines report finds that U.S. electric and gas utilities requested a record $4.5 billion in rate increases in Q3 2026, bringing the year-to-date total to $23.1 billion and potentially affecting 45.5 million customers nationwide. Consumer advocates in Michigan reported growing demand for energy bill assistance, and residents in Indiana raised concerns about rising surcharges and other non-energy charges on monthly bills. Looking ahead, PowerLines notes that investor-owned utilities plan to invest $1.4 trillion in capital expenditures through 2030, suggesting the recent trend of rate increase requests could continue or accelerate as those investments are incorporated into future rate cases.	**High** – Rate requests may continue to climb as utilities invest in grid infrastructure, but regulatory interventions can significantly influence customer impacts and how costs are allocated.
VPPs Could Ease Rising Power Bills	**10/14/2026 (National):** A new report from the Brattle Group finds that scaling residential virtual power plants (VPPs) using existing technologies such as smart thermostats, EVs, and home batteries could reduce projected household electricity bill increases by more than half over the next five years. The analysis estimates that if utilities expanded VPP programs to achieve a 4% peak demand reduction, nationwide residential VPP capacity could grow from 10 GW to 35 GW, generating $4 billion to $7 billion in annual consumer benefits. See the full report here.	**Medium** – As utilities face rising infrastructure costs and electricity demand, VPPs could improve affordability while reducing the need for some grid investments.
Heat Pumps Could Lower Power Costs	**10/15/2026 (National):** A new report from RMI finds that many states, particularly in the Upper Midwest, have substantial unused winter grid generation capacity that could accommodate significantly more heat pump adoption without requiring major new grid investments. The analysis estimates that millions of additional households could electrify heating while improving utilization of existing infrastructure, spreading fixed utility costs across more electricity sales and helping put downward pressure on rates. The report argues that strategic load growth, including from data centers and building and vehicle electrification, can reduce costs and greenhouse gas emissions, challenging the notion that rising electricity demand will inevitably raise rates.	**Medium** – For Great Lakes states balancing data center growth and affordability, heat pumps could improve grid utilization, reduce emissions, and help offset costs.
New Batteries Aim to Support Grid-Friendly Data Centers	**10/15/2026 (National):** Startup ON.energy unveiled an AI-enabled uninterruptible power supply (UPS) system that uses lithium-ion batteries to both protect data centers from grid disturbances and reduce the risk of data center operations disrupting the grid. The technology is designed to replace traditional backup battery systems with a centralized battery platform that can improve grid stability, reduce reliance on diesel generators and gas-fired backup power, and help manage data centers' growing electricity demands. Following successful testing, the company is preparing for commercial deployment through a 5-GW order from AI data center developer Crusoe.	**Medium** – The development reflects a growing shift toward technologies that can make data centers more flexible energy users, not just larger electricity consumers.
Illinois Pushes for Battery Buildout	**10/19/2026 (IL):** Illinois is using the Clean and Reliable Grid Affordability Act (CRGA), enacted in June, to accelerate deployment of 3 GW of battery storage by 2030 through a series of competitive procurements administered by the Illinois Power Agency. In the first auction, developers bid for 20-year incentive contracts; the state targeted 1,038 MW but ultimately awarded contracts for 600 MW of new storage projects. While advocates viewed the results as a positive start, they also highlighted challenges around project economics, market design, and siting that will need to be addressed to attract additional developers in future procurement rounds.	**Medium** – Developer interest exists, but stronger incentives and greater revenue certainty may be needed to accelerate battery deployment.

Legislation & Policy

Article/Link	Summary	Potential Impact
FERC Rejects Most of PJM's Large Load Framework	**10/12/2026 (National):** The Federal Energy Regulatory Commission (FERC) largely rejected PJM Interconnection's proposed framework for connecting data centers and other large loads, including its Interim Resource Adequacy Service (IRAS) and "bring your own new capacity" provisions. FERC found that key elements of the proposal intruded on state authority over retail customers and rates and could unfairly discriminate against large-load customers. FERC approved PJM's large-load registry and reporting requirements but said states, not PJM, should determine which customers are curtailed during grid emergencies. Analysts noted the decision could keep capacity markets tighter for longer, benefiting existing generators while prolonging uncertainty around how PJM accommodates rapid load growth from data centers.	**High** – The decision highlights the evolving division of responsibilities among states, PJM Interconnection, and FERC as regions adapt to rapid data center-driven load growth.
MISO Queue Reforms Gain Support	**10/6/2026 (OH):** Midcontinent Independent System Operator's (MISO) proposal to accelerate processing of its roughly 71-GW interconnection backlog, dominated by renewable and storage projects, has gained support from state regulators, project developers, and utilities. The reforms would reduce delays caused by repeated restudies and late project withdrawals through earlier exit opportunities, stricter withdrawal rules, and limits on final-phase restudies. Supporters say the changes could help bring new generation online faster and move the region toward a one-year interconnection cycle, pending approval from the Federal Energy Regulatory Commission (FERC).	**Medium** – Faster interconnection timelines could help renewables meet reliability needs and growing electricity demand across the region.
PJM Plans to Evaluate SoftBank's Ohio AI Campus	**10/14/2026 (OH):** The PJM Interconnection plans to study SoftBank Group's proposed 10-GW Ohio AI campus using its state agreement approach (SAA), a framework that allows states to request evaluation of large infrastructure projects tied to economic development or policy goals. The project combines roughly 10 GW of data center demand, 10.2 GW of new gas-fired generation, and major transmission investments, making it one of the largest integrated load, generation, and transmission proposals considered by PJM Interconnection. The study will explore how transmission and upgrade costs associated with the project can be assigned to project beneficiaries rather than broader ratepayer bases, helping inform future treatment of large-load developments.	**Medium** – The study may help define a repeatable framework for allocating transmission and upgrade costs as AI-driven electricity demand grows across PJM.
WI PSC Approves New Gas Plants	**10/19/2026 (OH):** The Public Service Commission of Wisconsin approved Invenergy's proposed Foundry Ridge Energy Center and Red Oak Ridge Energy Center, two natural gas plants in southern Wisconsin that would provide roughly 1.5 GW of generation capacity. Supporters argue the projects are needed to help meet rapidly growing electricity demand, chiefly from data centers, as the state expects power demand to rise about 40% by 2032. The decision comes amid a broader debate over how Wisconsin should address load growth, with environmental groups citing emissions, health impacts, and costs, while regulators raised concerns that current state laws limit their ability to fully evaluate alternatives and system-wide planning needs. The approval also adds to a growing pipeline of proposed gas generation projects across the state. PSC commissioners suggested Wisconsin's regulatory framework may not be well suited to evaluating the broader costs, benefits, and alternatives associated with a wave of new generation proposals.	**Medium** – The case highlights tensions between rapidly approving new power supplies and ensuring regulators can comprehensively assess need, alternatives, and long-term system impacts.

Legislation & Policy (Continued)

Article/Link	Summary	Potential Impact
Wisconsin Data Center NDAs Draw Scrutiny	**10/16/2026 (WI):** An investigation by Wisconsin Watch found that the Wisconsin Economic Development Corporation (WEDC) signed at least five NDAs with data center developers, in some cases long before projects were publicly announced, shielding major AI and hyperscale data center proposals in communities including Menomonie, Beaver Dam, DeForest, Mount Pleasant, and Port Washington from public view. The report found that several agreements remained undisclosed even where local governments had not signed their own NDAs. The findings have intensified debate over transparency in economic development. While WEDC argues NDAs are necessary to attract major investments, critics say they limit public awareness of projects with significant land, energy, and infrastructure impacts. In response, Wisconsin state representative Clint Moses said he plans to expand proposed legislation banning data center NDAs to also cover WEDC, which previously would have applied only to local governments.	**Medium** – The issue reflects growing scrutiny of whether existing economic development practices provide sufficient transparency and public input for data center projects with significant community and energy implications.
Michigan Introduces Data Center Zoning Bills	**10/2/2026 (MI):** Michigan State Representative Reggie Miller has introduced two companion bills, HB 6426 and HB 6427, aimed at establishing a more formal framework for local review of large-scale data center projects. HB 6426 would require greater disclosure of information such as energy demand, water use, infrastructure needs, environmental impacts, ownership structures, and phased development plans when local governments consider major data center proposals. HB 6427 would amend the Michigan Zoning Enabling Act to make local zoning decisions subject to the requirements established in HB 6426, effectively integrating the new data center review process into existing land-use regulations. Together, the bills seek to increase transparency, public participation, and consistency in how communities evaluate large data center developments amid growing interest in AI-related infrastructure across the state.	**Medium** – The legislation reflects growing efforts by states to establish clearer local review standards for large data centers, balancing economic development opportunities with community concerns.

Sustainability

Article/Link	Summary	Potential Impact
Hyperscaler Emissions Surge	**10/19/2026 (National):** A new analysis from Bricola Group forecasts that the combined 2026 emissions of five major hyperscalers, Alphabet, Amazon Web Services (AWS), Meta, Microsoft, and Oracle, will rise nearly 60% year-over-year to about 215 million metric tons of CO_2e, a number that surpasses the national footprint of a large majority of countries. The report attributes the increase largely to the rapid expansion of AI and data center infrastructure, with the companies collectively expected to spend more than $1 trillion on capital investments across 2025 and 2026. The forecast is based on a model that links historical emissions to capital expenditure trends, allowing future emissions estimates to be generated months before sustainability reports are published.	**High** – The findings highlight the scale of the energy and emissions challenge associated with supporting rapidly growing AI and cloud computing demand.
AI Chip Supply Chains Lag on Clean Power	**10/14/2026 (National):** A new report from the NewClimate Institute finds that renewable electricity deployment in semiconductor manufacturing is not keeping pace with AI-driven growth in chip demand. The report highlights South Korea and Taiwan, which produce more than 60% of the world's memory chips and over 90% of advanced chips, respectively, but still rely heavily on electricity systems with relatively low renewable energy penetration. The report argues that semiconductor manufacturing is a major but often overlooked source of emissions for tech companies, whose supply-chain emissions frequently exceed those directly associated with data center operations. It also finds that most major tech firms have done relatively little to drive renewable electricity adoption among chip suppliers.	**High** – As data center growth accelerates, decarbonizing chip manufacturing in Taiwan and South Korea may become increasingly important to reducing the tech sector's overall emissions footprint.
Location Matters for Data Center Impacts	**10/6/2026 (National):** A commentary by Sebastian Leape, CEO of Natcap, argues that debate over data centers often overemphasizes total electricity and water consumption while overlooking a more important question: whether facilities are being built in places capable of supporting that demand. The article contends that environmental impacts are highly location-specific, with the same data center having very different consequences depending on local grid carbon intensity, transmission constraints, water availability, and ecosystem conditions. Historically, developers have prioritized factors such as connectivity, land availability, and speed to power, but Leape suggests future siting decisions will need to place greater weight on grid capacity, clean energy availability, water resources, and cumulative local impacts as AI-driven growth accelerates.	**High** – The analysis highlights the need for integrated regional planning that considers grid capacity, water availability, transmission needs, and environmental impacts together.
Indiana Solar Project Secures Funding	**10/6/2026 (IN):** Renewable energy developer Zelestra secured $350 million in financing for its 203-MW Reclamation Solar project in Gibson County, Indiana, which will supply clean power to Meta under a long-term power purchase agreement (PPA). Built on reclaimed coal mining land, the project combines renewable energy development, brownfield redevelopment, site restoration, biodiversity improvements, and local job creation while helping meet growing data center electricity demand. The project is already under construction and is due to come online by the end of 2027.	**Medium** – The project highlights how data center-driven clean energy procurement can support both energy needs and broader economic and environmental goals.

Other Industry News

Article/Link	Summary	Potential Impact
Inside the AI Infrastructure Gold Rush	**10/9/2026 (National):** Reporting from the Yotta 2026 data center conference, CTVC's Benjy Hansen-Bundy describes a mix of excitement and discomfort surrounding the AI infrastructure boom. The conference showcased extraordinary optimism around an estimated $11 trillion investment opportunity, with developers, utilities, and investors racing to build power and data center infrastructure, while exposing concerns about community backlash, fossil fuel dependence, resource consumption, and an increasingly speculative "gold rush" mentality. The author's perspective evolves over the event. While initially unsettled by the industry's mercenary tone and willingness to deploy gas generation to meet surging demand, conversations with grid planners, utilities, and developers highlighted potential upsides, including improved grid utilization, transmission investment, renewable energy development, and more flexible approaches to managing electricity demand.	**High** – The article highlights a central question: whether unprecedented investment in AI will modernize the grid or deepen conflicts over energy, infrastructure, and community impacts.
Unpacking the Senate's Permitting Reform Bill	**10/9/2026 (National):** In this Volts podcast, host David Roberts and Daniel Palken discuss the newly introduced Bipartisan American Affordability and Jobs Act of 2026, one of the most comprehensive federal permitting reform proposals in years. The conversation explores how the bill seeks to address lengthy permitting timelines that have delayed energy, transmission, manufacturing, and mining projects by imposing review deadlines, streamlining agency processes, and limiting some legal challenges. While permitting reform is often framed as a way to build more clean energy, the podcast notes that streamlined permitting could also benefit natural gas, mining, and other energy projects, making the ultimate emissions outcome dependent on what infrastructure gets built, not just how quickly projects are approved.	**High** – Permitting reform may be critical for meeting data center demand, but whether it lowers or raises emissions will depend on the resulting generation mix.
Virginia's AI Clean Energy Blueprint	**10/5/2026 (VA):** Governor Spanberger's new Virginia Energy Plan uses detailed modeling to argue the state can accommodate an estimated 85% increase in electricity demand, driven largely by data centers, while remaining on track for the Virginia Clean Economy Act's carbon-free electricity goals. Four modeled pathways reach net-zero by 2050 through combinations of expanded solar deployment, distributed energy resources, and greater data center load flexibility, including batteries and on-site resources to reduce peak demand. The plan enters an active debate over how Virginia should respond to AI-driven load growth. Republican critics argue the Virginia Clean Economy Act raises power system costs and that rolling back the law would be less expensive. The plan acknowledges lower direct electricity-system costs under a repeal scenario but argues those savings would come with higher emissions and an estimated $145 billion in additional pollution-related health impacts. It also contends that, with appropriate cost allocation, much of the infrastructure needed to serve new demand can be paid for by data centers rather than existing customers.	**High** – The plan reframes the debate from whether Virginia can support both data center growth and decarbonization to how the costs, benefits, and public health impacts of different pathways should be allocated and evaluated.
Oregon Pauses Data Center Permits	**10/13/2026 (OR):** Governor Tina Kotek ordered the Oregon Department of Environmental Quality to pause approvals of new state and federal air and water pollution permits for data center projects until July 1, 2027, effectively creating a temporary moratorium on new facilities and major expansions. The pause is intended to give the administration time to review findings from the governor's Data Advisory Committee and consider potential policy and regulatory reforms during the 2027 legislative session. Oregon is among the top 10 markets for data centers in the U.S. Read Governor Kotek's letter to the Oregon Department of Environmental Quality (DEQ) here.	**High** – As states take divergent approaches to data center regulation, Oregon's pause may become a case study in the tradeoff between greater scrutiny and retaining investment.

Thank You

Let’s make bold changes together

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