DATA CENTERS

BI-WEEKLY UPDATE

November 3, 2025

FRESH COAST
Climate Solutions

Bold Solutions. Transformative Action.

EMERGING THEMES

Investments

$Bs in new data center (DC) projects

- Economic growth focused announcements; some focus on energy, water, grid, community impacts
- One mention of AI investments to be used for scientific/tech advancements
- One mention of sustainability metrics (TierPoint)

CCS emergent?

- Exxon Mobil and Google pursuing carbon capture and storage at natural gas plants; life cycle impact study compared to renewables needed

Flexible load management

- Flexible DC load management is a continued interest of tech companies, to reduce grid costs and emissions and improve grid stability

Technology

Resource efficiency a major focus

- Immersion cooling, on-site storage, and closed water systems reflect trend to maximize infrastructure efficiency
- On-site microgrids (Oracle & OpenAI) and flexible energy management tools (PGE & GridCARE) allow faster, more reliable AI deployment without waiting for utility

Resource integration

- Project to integrate battery speeds time to market and enhances grid stability (Aligned Data Centers)
- Schneider Electric reports on 10 tech integrations for more sustainable DC deployments (top 2 are low carbon power and low embodied carbon of equipment

Scrutiny over consolidated cloud data providers

- Large AWS outage this week

Legislation & Market Development

Federal regulatory pressure to speed grid connections

- U.S. DOE & FERC initiatives aim to fast-track interconnections for high energy demanding tech customers

New state proposals to balance economic and enviro/ community impacts

- PJM states push for more influence over grid capacity allocation to manage costs and energy reliability
- PA bill would enhance grid reliability, ensure fair costs, and require renewables
- MT tariff would establish rules for DC interconnection and fair cost allocation

Local pressures

- Saline, MI settlement agreement with Related Digital prompts questions on striking econ/enviro balance and may set precedent; DTE utility pushes for no public comment

Enviro/Social/Economic Impacts

DCs increase electricity costs or opportunity to lower costs?

- LBNL report states, properly integrated, DCs could lower elec costs
- PJM sees higher costs due to DCs
- Flexible DC management to lower peak load and enable greater use of existing, idle utility infrastructure

Environmental tradeoffs for higher efficiency/expansion

- Large-scale gas microgrids (Oracle & OpenAI, Google's Broadwing) and CCS projects raise concerns about safety, fossil fuel reliance, and air/water quality impacts

Social equity effects

- Black and marginalized communities face disproportionate burden from DC deployments
- AI data centers create local revenue streams, but economic gains may be unevenly distributed

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 and stakeholders

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Investments

Article/Link	Summary	Potential Impact
AES Indiana's 1,200MW Substation	**10/17/2025 (IN):** AES Indiana plans to build a 1,200 MW substation in Morgan County to support a $1 billion data center project. This energy load is twice that of all of AES's residential customers combined. The unnamed developer's facility could also use up to 4 million gallons of water daily, raising concerns about strain on local resources. While the utility claims it will ensure reliable service and transparency, environmental advocates warn of higher emissions and potential rate impacts especially since AES's proposed energy mix relies heavily on new natural gas generation.	**High** – Large DC project in Indiana likely tied to big tech firm risks impacts on grid, increased carbon emissions, potential water stress, and increased rates
$38B Data Center Debt for Oracle	**10/24/2025 (National):** Oracle is finalizing a $38 billion debt package (the largest ever for AI infrastructure) to fund major data center projects in Texas and Wisconsin under the Stargate partnership with OpenAI and Vantage Data Centers. Financing is led by global banks (including JPMorgan and MUFG) and will support facilities totaling 2+ GW of capacity by 2028.	**High** – Major tech investment in DCs risks prioritizing economic growth over social and environmental impacts
OpenAI & Oracle's $15B WI Data Center	**10/28/2025 (WI):** OpenAI, Oracle, and Vantage are planning a $15 billion data center campus in Port Washington, Wisconsin. The facility is expected to be completed by 2028. It will feature about 1 GW capacity and include $175 million in local utility upgrades. The project is part of Stargate's $500 billion plan to build 10 GW of capacity across the nation.	**High** – Rapid DC expansion notes econ growth and infrastructure improvements; no mention of energy, water, community impacts
NVIDIA Supports $350M Funding for Lila	**10/17/2025 (National):** Lila Sciences raised $350 million in Series A funding to scale its "AI Science Factories" and superintelligent research platform. Investors including NVIDIA's NVentures and Flagship Pioneering brought its total to $550 million. The company aims to accelerate discoveries in life sciences, chemistry, and energy. The funding also supports Lila's expansion into applications for commercial partnerships and national resilience.	**Medium** – Lila's research could produce advances in science and technology that improve (or exacerbate) sustainability impacts
TierPoint's $240M Financing and 100MW Expansion	**10/23/2025 (PA):** TierPoint has completed a $240 million securitization to reduce capital costs, extend debt maturities, and fund expansion of data centers. A 100 MW expansion is set for completion in 2026 at it's TekPark Pennsylvania data center campus. The financing was issued under TierPoint's Green Finance Framework and brings total asset-backed securities to nearly $2 billion across 33 facilities.	**Medium** – TierPoint's expansion promotes economics + sustainability metrics incl. carbon reduction
Bitfarms Turns Debt into Data Center Financing	**10/19/2025 (PA):** Bitfarms has restructured its $300 million loan from Macquarie Group into project financing to support the first phase of its 350 MW Panther Creek data center in Pennsylvania. The company will use an additional $50 million to accelerate construction and equipment purchases for its high-performance computing and AI infrastructure. Pennsylvania's strong regional energy and fiber resources have supported this development.	**Medium** – Financing supports infrastructure growth, but no mention of energy, water, community impacts

Technology

Article/Link	Summary	Potential Impact
"Power-Flexible AI Factories" to Unlock Grid Capacity	**10/29/2025 (National):** Emerald AI and Nvidia have teamed up to develop energy controls that can flex power requirements at data centers, unlocking up to 20% of existing grid capacity if deployed nationwide. They already tested this capacity as part of EPRI's DCFlex program and now seek to demonstrate this capability at the Aurora AI Factory in Manassas, VA. Primary benefits of flexing DC loads are enhanced grid reliability and reduced utility infrastructure investments.	**High** – Next gen DC design flexes power requirements to unlock current grid capacity and speed deployment of DCs; enviro/community impacts need to be considered
Exxon Mobil looking into CCS for DCs	**10/31/2025 (National):** Exxon Mobil is having "advanced talks" with power providers and tech companies to supply natural gas with carbon capture and storage (CCS) technology to capture 90% of carbon dioxide emissions from natural gas plants that power data centers. ""We secured locations. We've got the existing infrastructure, certainly have the know-how in terms of the technology of capturing, transporting and storing [carbon dioxide]," said CEO Darren Woods.	**High** – Big tech need for rapid deployment of DCs while reducing emissions may advance major CCS projects
Google's Gas and Carbon Capture Project	**10/23/2025 (National):** Google is supporting the Broadwing Energy Center, a 400 MW gas-fired power plant in Illinois that is paired with carbon capture and storage (CCS) capabilities to supply power for data centers. While the CCS system aims to sequester about 90% of CO_2 emissions underground, the plant still relies on fossil fuel combustion and faces high costs and technical uncertainties compared with renewable solar or wind alternatives.	**Medium** – Natural gas plant + CCS provides reliable, scalable power while reducing emissions, but reinforces fossil fuel reliance; impact study needed w/ comparison to renewables
New Battery Speeds Online Connection	**10/24/2025 (National):** Aligned Data Centers will install a 31 MW (62 MWh) battery at its new Pacific Northwest facility, allowing it to start operations years earlier without waiting for traditional utility upgrades. Developed with Calibrant Energy and the local utility, the project marks the first large-scale example of using grid-connected storage to accelerate AI data center deployment while supporting grid stability. By self-funding the battery, Aligned avoids passing costs to other ratepayers and enables utilities to use the system for broader grid services.	**Medium** – Battery system speeds DC time to operation, enables grid stability and renewable integration, and protects ratepayers; impact study needed
CleanSpark & Submer Partner for AI Data Center Cooling	**10/29/2025 (National):** CleanSpark is partnering with Submer immersion cooling firm to develop AI-focused data center campuses in North America. CleanSpark brings land and power infrastructure expertise while Submer contributes efficient and modular liquid-cooled systems for high-density AI workloads. This collaboration targets gigawatt-scale AI capacity and is part of CleanSpark's pivot from crypto mining to AI and HPC workloads.	**Medium** – Developer/tech partnership accelerates infrastructure deployment while improving energy efficiency through immersion cooling; RD&D needed

Legislation

Article/Link	Summary	Potential Impact
PA Considers Data Center Regulations	**10/23/2025 (PA):** Pennsylvania lawmakers are considering House Bill 1834, which would empower the Public Utility Commission to regulate data centers amid rapid AI-driven expansion. The bill aims to manage electricity demand, prevent costs from shifting to ratepayers, and require new facilities to source at least 25% of power from renewable sources. Advocates support the measure for protecting consumers and promoting grid reliability. Legislators emphasize balancing economic growth with environmental and social equity concerns.	**High** – Proposed PA bill emphasizes willingness to adapt to DC industry to balance econ growth with environmental and social goals; impacts TBD
Impact of Data Center NDAs	**10/28/2025 (National):** Major tech firms (including Amazon, Microsoft, and Google) use non-disclosure agreements (NDAs) with local governments and landowners to conceal details about large AI data center projects. These agreements prevent public access to information on land use, energy and water demands, and environmental impacts often until after key final development decisions are made. While developers claim NDAs protect competitive interests, the secrecy has fueled a sense of distrust and opposition in impacted communities. Advocacy groups argue that NDAs undermine democratic transparency and allow projects to bypass environmental review.	**High** – Use of NDAs highlights tension between economic growth and equitable transparent governance; growing awareness of NDA use and impacts
NorthWestern Plans "Large-Load" Tariff	**10/21/2025 (MT):** NorthWestern Energy plans to implement a "large load" tariff in Montana to manage the massive electricity demand from incoming data centers, which could reach 2,250 MW (nearly double the utility's current peak). The proposed tariff would establish clear rules for interconnection, rates, and resource planning to ensure that large facilities pay for the infrastructure and energy costs they generate. Advocacy groups support the measure, emphasizing the need to protect other ratepayers and maintain grid reliability as data center development accelerates.	**Medium** – New tariff in MT could balance grid reliability and serve as model to protect ratepayers from cost increases; efficiency and renewables requirements are TBD
Related Digital Lawsuit Settled	**10/21/2025 (MI):** Saline Township has settled its lawsuit with Related Digital, allowing the long-contested data center project to proceed under strict conditions to support both the local environment and community. The agreement zones the land for industrial use while preserving 200 acres of farmland and wetlands, limiting water consumption, and enforcing noise and setback restrictions. The developer will fund over $12 million in contributions to local emergency services, farmland protection, and community investment. The developed must also take full responsibility for infrastructure, construction, and environmental compliance. **Updates - 10/30:** Site will be OpenAI Stargate project; **10/31:** Community's rural residents are "in an uproar".	**Medium** – Settlement strives to balance economic benefits and enviro/community impacts; raises question if settlement went far enough; potential precedent for other communities
PA Power Station Redevelopment Delayed	**10/22/2025 (PA):** Plans to redevelop the former Cheswick power plant site in Springdale, Pennsylvania, into a 565,000 sq ft (180MW) data center have been delayed as officials are seeking further impact studies and public input. Meanwhile, multiple new data center projects are emerging across Pennsylvania.	**Low** – PA town planning commission delays decision on DC to allow time for impact studies and public comment

Research

Article/Link	Summary	Potential Impact
Data Center Sustainability Improvements Quantified by Environmental Impact	**10/6/2025 (National):** Schneider Electric's recent report details ten specific sustainability improvements for data centers. These include sourcing low-carbon electricity, using low-embodied-carbon modular IT equipment, deploying liquid cooling, reducing water dependency, and optimizing power architectures. Utilizing a model of a 1MW data center over 15 years, they found that implementing all ten improvements could reduce the carbon footprint from 84,000 t CO_2e to 11,300 t CO_2e (an 87% reduction) and drop site water use from about 220,000 m^3 to zero. The single largest lever is choosing a low-emission electricity source followed by lowering the embodied carbon of computing servers.	**High** – Low-carbon electricity and low embodied carbon of DC equipment can dramatically reduce carbon footprint; can support sustainable digital expansion while easing grid and water pressures
The Reason for Rising Electricity Prices	**10/25/2025 (National):** Rising electricity prices in the U.S. are often blamed on data centers, but a study by Lawrence Berkeley National Laboratory and Brattle shows that fixed infrastructure costs (including things like poles and wires) are the main drivers. Between 2019 and 2024, states with rising demand from data centers actually saw lower prices because higher electricity consumption spreads these fixed costs across more megawatt-hours. However as data center growth continues, especially in regions requiring grid upgrades, ratepayer electricity costs could still rise if utilities must rapidly expand capacity.	**High** –DC load growth can lower ratepayer costs by spreading utility costs, yet sudden load increases may necessitate costly upgrades. Careful utility planning is needed; medium to long term impacts require study
PEARC Sustainable AI Application Research	**10/17/2025 (OH):** At the 2025 PEARC Conference, the Ohio Supercomputer Center (OSC) earned two top national awards for projects advancing sustainable and secure AI applications. Samuel Khuvis' team was awarded for *ML Field Planner*, a tool that helps scientists optimize machine learning on low-power field devices to reduce wasted energy and improve efficiency. Ron Davies' team was awarded for developing a pre-processing security framework that filters unsafe or irrelevant queries before they reach large language models to improve supercomputing cybersecurity and efficiency.	**High** – Research shows promise to advance less energy intensive and more responsible advanced computing; more RD&D is required
OH Chamber Fdn Study on Sustainable Digital Growth	**10/24/2025 (OH):** The Ohio Chamber Foundation's new study highlights that the state's $40 billion data center boom has transformed Ohio into a major digital hub. Ohio now supports over 95,000 jobs and has generated $26.4 billion in economic output in 2024. By 2030, the sector could contribute $20 billion annually to state GDP. The report credits Ohio's incentive programs for high returns from data center development. The need for stronger coordination among government, utilities, and industry to manage energy and infrastructure demands is heavily stressed in this report.	**Medium** – OH's data centers strengthen the state's economy and focus is on expanding grid capacity for more DCs; risk of prioritizing power and econ growth over environmental and social impacts

Sustainability

Article/Link	Summary	Potential Impact
Google & NextEra Energy Restart Nuclear Plant	**10/28/2025 (IA):** Google and NextEra Energy will restart the 615 MW Duane Arnold nuclear plant in Iowa by 2029 to supply carbon-free power for Google's AI and cloud operations. This move reflects a broader tech industry shift toward nuclear energy as a reliable low-carbon energy solution. Surplus power will support the local grid, and the project is expected to boost local jobs and improve energy reliability in Iowa.	**High** – Another conventional nuclear restart to help decarbonize big tech's AI operations; waste, water, safety, and other concerns should be addressed
Meta's Green Steel Startup Deal Addresses Carbon Footprint	**10/22/2025 (National):** Meta has partnered with Electra (developer of a low-temperature renewable-powered process to refine iron ore without coal). This collaboration allows Meta to purchase Environmental Attribute Credits (EACs) tied to emissions reductions from Electra's "green iron," helping the company advance towards 2030 net-zero goals as its AI infrastructure expands. Electra's process reduces industrial carbon emissions, recycles low-grade ores, and reduces waste. Major investments from companies including Breakthrough Energy support broader scaling of Electra's production.	**High** – Cleantech partnership holds promise for green steel and credits to decarbonizing the digital economy; additional RD&D required
National Clean Energy Investments	**10/23/2025 (National):** In September 2025, $1.6 billion in national clean energy investments were canceled or scaled back, contributing to over $24 billion withdrawn this year, according to E2. Many of these cuts (including battery storage) reduce the availability of clean energy to power data centers. While new projects totaling $11 billion were announced, the net effect signals slower growth in low-carbon energy production and storage.	**High** – Slowed clean energy investment threatens ability of data centers to adopt sustainable power solutions and increases fossil fuel reliance.
BlackRock's XNRGY Decarbon-ized Cooling Investment	**10/22/2025 (National):** XNRGY Climate Systems, a sustainable cooling technology provider, has received a major investment from BlackRock and Temasek's Decarbonization Partners alongside other climate-focused investors to expand its energy efficient cooling systems for data centers applications. The funding will accelerate production and support broader deployment to reduce energy use, water consumption, and carbon emissions in the digital sector.	**Medium** – Investment supports more energy and water efficient cooling systems for DCs; RD&D required
OpenAI & Oracle's Natural Gas Microgrid	**10/24/2025 (TX):** Oracle and OpenAI's Project Stargate in Texas will run entirely off the public grid using a 700 MW natural gas–powered microgrid. The facility is part of a 3.7 million sq ft campus and will support up to 1.4 GW of computing capacity for AI model training. This off-grid energy approach accelerates the project's deployment timeline by avoiding multi-year utility connection delays. This strategy is being increasingly adopted thoughout the AI data center industry to avoid worsening strain on U.S. grids.	**Medium** – Off-grid data centers provide faster operations and grid reliability and but rely on fossil fuels and increase emissions

Other Industry News

Article/Link	Summary	Potential Impact
National Push for Data Center Grid Connection	**10/27/2025 (National):** The U.S. Department of Energy is pushing federal regulators to accelerate the connection of AI data centers to the electric grid. Energy Secretary Chris Wright proposed for the Federal Energy Regulatory Commission (FERC) to allow joint interconnection requests for co-located power load and generation, which could potentially shorten grid project reviews from multiple years to just 60 days. This initiative aims to meet the electricity demand driven by AI infrastructure while reducing costs and decreasing delays for energy utilities and data center operators.	**High** – Faster DC deployments enable economic growth; however, sidelining enviro review processes and stakeholder input risks ecological and community disruption
Data Center Boom Creates Disproporti-onate Risks for Black Workers	**10/20/2025 (National):** The expansion of AI data centers is raising environmental and economic concerns for marginalized communities, particularly Black Americans. Data centers are often built in historically polluted and economically disadvantaged areas. Black communities tend to disproportionately bear the environmental and health costs from increased emissions, water use, and other local impacts of data center growth.	**High** – DC growth can exacerbate both environmental injustice and economic inequalities; policy interventions and equity-centered planning needed
Governors Threaten to Withdraw from PJM	**10/15/2025 (PJM Region):** PJM (the U.S.'s largest grid operator) is under pressure from 11 state governors that threaten to withdraw as state members. PJM member states push for more influence over grid capacity allocation to manage costs and energy reliability amid data center expansion. Increasing capacity costs (from $2.2 B to $16.1 B in two years) are largely driven by projected data center loads. PJM is proposing a "Critical Issue Fast Path" to speed up state-backed projects, but critics warn that this will likely favor fossil-fuel generation over clean energy.	**High** – PJM must reduce grid stress and electricity costs to ease regulatory tension between it and the states; PJM plan is fossil fuel reliant
'Five-Alarm Fire' for Grid Reliability	**10/22/2025 (National):** At a Federal Energy Regulatory Commission (FERC) meeting, North American Electric Reliability Corp. (NERC) President Jim Robb warned that while U.S. grid reliability remains high, it faces growing risks (which he describes as a "five-alarm fire"). Rising electricity demand from data centers, aging infrastructure, extreme weather, and permitting delays are straining the system. Energy leaders emphasized the need for more efficient infrastructure expansion, improved data analysis tools, and coordinated planning to balance energy supply, affordability, and reliability.	**High** – Federal attention on risks that data centers pose to electric rates and grid reliability; call for more infrastructure, better tools, and coordination
AWS Outage Shows Hyperscaler Dependence	**10/23/2025 (National):** A major AWS outage on October 20th disrupted many widely used apps and critical services, highlighting the risks of global dependence on a few dominant cloud providers. Experts argue that the incident highlights the need for multi-cloud or multi-region strategies to strengthen resilience (AWS, Azure, and Google Cloud collectively control most of the current market). Industry leaders expect new regulations to emerge (like the EU's Digital Operational Resilience Act) to encourage diversification.	**High** – More diversified operators could reduce major outages but also increase overall environmental/ community impacts

Other Industry News (cont.)

Article/Link	Summary	Potential Impact
Portland GE Invests in Speeding Data Center Connection	**10/20/2025 (OR):** Portland General Electric (PGE) is using GridCARE's AI-driven tools to accelerate data center connections on a transmission-constrained grid in the Pacific Northwest. By leveraging batteries, onsite generators, and modeling based on demand, PGE has freed up more than 80 MW for interconnections that would have otherwise required years of waiting for new infrastructure. This approach enables data centers to access power sooner while optimizing grid usage and reducing the need for new transmission construction.	**Medium** – Grid load management and storage frees up existing grid capacity and allows for DC integration; must balance econ benefits with enviro/social concerns
PA Aims to Accomm-odate Data Center Water Needs	**10/17/2025 (PA):** Middlesex Township's public water utility has confirmed their capacity to supply up to 400,000 gallons of water per day for Project Bolt, a proposed multi-campus data center in Pennsylvania. The project is set to utilize advanced cooling and modular water storage to stay within their allocations.	**Low** – Example of township holding DC accountable on water usage

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THANK YOU

Let’s make bold changes together

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