

Data Center Briefing

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Global

Key themes:

AMD Instinct MI450 deal powers 6GW Meta AI buildout; Google Pine Island adds 1,400MW wind, 300MW Form Energy batteries; Virginia 765kV Joshua Falls-Yeat line targets Northern Virginia data centers; Orange Town Council shifts hyperscale data centers to special permits

Meta just handed AMD a headline-sized wedge into the AI data center stack: a multiyear agreement for **up to 6GW** of AI capacity built around custom Instinct MI450 GPUs. If you've been wondering what "AI demand" looks like in purchase-order form, this is it — and the performance-based warrant structure is a tell that hyperscalers want suppliers to share execution risk, not just cash the cheque.

The Big Stories

[AMD to supply 6 GW AI capacity to Meta](#) is the clearest signal yet that "alternative GPU ecosystems" are moving from slideware to deployment plans. The deal is for up to 6GW of AI capacity using custom Instinct MI450 GPUs in Helios servers paired with EPYC CPUs, with deployments starting later this year. AMD also issued Meta performance-based warrants for up to 160 million shares tied to milestones up to 6GW and share-price thresholds up to \$600 — a structure that echoes AMD's earlier arrangement with OpenAI. The competitive implication is blunt: hyperscalers are pressuring vendors to commit to outcomes (capacity delivered) rather than just components shipped. Google had a two-front infrastructure day — one in the Midwest and one in Texas — and both were packaged with new grid capacity rather than vague offsets. In Minnesota, [Google to build new data center in Pine Island](#) includes a

Clean Energy Accelerator Charge (CEAC) with Xcel Energy and brings **1,400MW wind, 200MW solar, and 300MW iron-air battery storage (Form Energy)** onto Xcel's grid, plus a **\$50m** contribution to Xcel's CapacityConnect Program. In Texas, [Google to build Wilbarger County data center with clean energy](#) is co-located with clean power developed by AES and uses advanced air-cooling to minimise water use; Google also says it has contracted to add **more than 7,800MW of net-new energy capacity* to the Texas grid. The common thread: the hyperscalers are increasingly showing up with a grid story attached — because communities and regulators now demand one.

The U.S. power bottleneck is hardening into a political problem, not just an engineering one. A new Virginia proposal, [Proposal for 115-mile, 765 kV Joshua Falls-Yeat Transmission Line](#), would move large-scale power toward Northern Virginia data centers; Valley Link Transmission plans to file for SCC approval in summer 2026 and energize by end-2029, against a backdrop where PJM's 2025 RTEP recommended almost \$12bn in regional transmission projects and Dominion reported requests to serve over 70GW of demand. Zoom out and the stress looks systemic: [Data center expansion strains grids, raises costs and emissions](#) cites **at least 700GW of interconnection requests in 2025**, utilities seeking roughly **\$29bn in rate increases**, and average electricity prices around **~19 cents/kWh** by end-2025, alongside delayed coal retirements and new gas build. For investors, the message is that transmission timelines and rate cases are now core diligence items — not footnotes.

Local permitting is also tightening in ways that can quietly reset land values and development velocity. In Virginia, [Orange enacts zoning changes to restrict hyperscale data centers](#) moves data centers from by-right uses to a Special Use Permit process and prohibits them in Traditional Town Center and residential districts. The Piedmont Environmental Council is pushing for an explicit ban on data centers larger than 40,000 square feet and tighter standards around definitions, visuals, and noise — a reminder that “data center friendly” jurisdictions can flip when the politics turns.

Crypto-era infrastructure players keep trying to rebrand into AI capacity providers — but the capital structure matters as much as the press release. [Cipher Digital announces 2025 update, pivots to HPC data centers](#) (formerly

Cipher Mining) rebranded around HPC development, sold a 49% stake in three 40MW JV sites to Canaan for about \$40m, and completed three high-yield note offerings raising aggregate proceeds of **\$3.73bn** to finance Barber Lake and Black Pearl. Cipher says it has **600MW of contracted HPC capacity**, via two 300MW leases with AWS and Fluidstack/Google. The watch item: whether contracted megawatts translate into financeable, on-time delivery — especially in markets where grid access and equipment lead times are the real gating factors.

In Brief

- Sustainability narratives are getting sharper — and more defensive. [Five sustainability trends that will define data centers 2026](#) flags “greenhushing,” a looming renewable-incentive cliff with deadlines (begin construction by mid-2026; in-service by 2030 or by end-2027 depending on qualification), and more attention on nuclear, geothermal, and storage.
- Clean power developers are openly considering data centers as a curtailment sponge. [Engie considers storage and bitcoin mining at Assu Sol](#) says Engie is evaluating energy storage or bitcoin-mining data centers at its 895MWp Brazilian solar plant to improve economics, with a multi-year implementation horizon.
- One of the more controversial power “solutions” is resurfacing: regulatory exemptions to run dirtier backup generation. [Data center developers sought Trump EPA exemptions to pollute](#) reports Novva and Thunderhead requested Clean Air Act exemptions tied to urgent power needs; Thunderhead’s request covered 11 data centers totaling 23GW.
- Edge and industrial AI is getting a more productised footprint. [MHI launches DIAVAULT secure high-performance edge data center](#) is Mitsubishi Heavy Industries’ containerised platform with integrated power/cooling and two-phase direct chip cooling, targeting anything from small sites to several-megawatt inference deployments.
- Network vendors are repositioning routers as “AI fabric” plumbing. [HPE unveils Juniper PTX12000 and PTX10002 routers for AI](#) includes PTX12012 up to 518.4Tbps and an MCP server addition to Juniper Routing Director for agentic-AI-driven WAN ops.

- Talent signalling matters when everyone is rebuilding infra teams for AI. [Cisco launches AITECH certification for AI-ready infrastructure practitioners](#) adds a hands-on, exam-based credential aimed squarely at infrastructure practitioners supporting applied AI.
- Waste-heat reuse is moving from nice PR to quantified projects. [Data centers repurpose waste heat for district heating and efficiency](#) highlights atNorth's 22.5MW DEN01 integrating with district heating to supply waste heat to over 8,000 homes, plus multiple U.S. campus examples.
- Rack density expectations keep ratcheting up. [Data centre racks approaching 1 MW as AI demand rises](#) relays Vertiv's view that racks are moving toward 600kW, with 1MW becoming plausible — which has obvious knock-ons for powertrain, cooling, and facility design.
- OT/ICS security is increasingly being offloaded to the data path. [Akamai and NVIDIA launch agentless Zero Trust for OT](#) combines Guardicore Segmentation with NVIDIA BlueField DPUs for agentless segmentation, planned for global release in Q2 2026.
- South Africa's provincial investment pitch continues to feature hyperscale adjacencies. [Gauteng open for investment with R312 billion commitments](#) cites Microsoft's R5.4bn data centre expansion among broader commitments and enabling infrastructure projects.