US Data Center Daily Briefing

January 10, 2026

KEY THEMES

- 20-year nuclear PPAs underpin hyperscale expansion
- FERC rulemaking targets >20 MW large-load interconnections
- Environmental permitting tightening for data centres (Ohio NPDES)
- Local opposition to gas + transmission tied to data-centre load
- Mega-scale AI campuses announced with large capex (xAI $20bn)
- Grid-enabling transmission and substation buildout in India
- Behind-the-meter power, BESS and liquid cooling driven by grid delays
- Rising cyber and physical security risk for critical infrastructure tooling

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Global Data Centres & Power — Daily Briefing (UTC 2026-01-10)

Scope: Global | Audience: Institutional asset managers and infrastructure fund managers

Top news (3)

1. **Meta locks in long-dated nuclear supply in PJM**

- Vistra and Meta sign 20-year PPAs to support nuclear generation: **20-year PPAs for 2,609 MW** of zero-carbon nuclear energy in **PJM**.
  - Supply includes **2,176 MW** from operating units plus **433 MW of uprates**.
  - Plants referenced: **Beaver Valley (PA), Davis-Besse (OH), Perry (OH)**.
  - Meta support starts **late 2026**, with **full capacity by 2034**.
  - Vistra says the contracts support pursuing subsequent **20-year NRC license renewals**.

2. **US regulators moving toward standardised rules for >20 MW "large load" interconnections**

- US DOE directs FERC to standardise large-load interconnections: DOE directed FERC to begin rulemaking (**Docket RM26-4-000**) to create standardised interconnection procedures for **large electrical loads >20 MW** (including hybrids).
  - DOE asked for **final action by April 30, 2026**.

3. **US environmental permitting and local opposition intensify around data-centre-linked infrastructure**

- Ohio EPA proposes first general NPDES permit for data centers: draft general permit **OHD000001** would regulate statewide data centre **wastewater/stormwater** discharges (incl. **cooling tower and boiler blowdown**) with **effluent limits + monitoring**, **five-year term**, **Notice of Intent**, and **$200 application fee**.
- PEC urges Fluvanna to reject Tenaska 1.5 GW gas plant: environmental group urges "no" on a second **1.5 GW gas plant** in **Fluvanna County, Virginia**, citing impacts from a Harvard Dominici Lab study and arguing it would mainly serve data centres in **central/northern Virginia** alongside a proposed **~155-mile 765-kV** transmission line.

Key deals and projects

United States

- **Hyperscale / AI buildouts**
  - xAI announces $20B Macrohard supercomputing hub in Mississippi: xAI to invest **$20bn** in a **Southaven (DeSoto County), Mississippi** "Macrohard" supercomputing hub, contributing to a cluster intended to deliver **~2 GW of processing capacity**.
    - Built under **tax incentives approved in 2024**; expected to begin operations **within a month**.
    - Reported **environmental/community pushback** (petition **900+** signatures).
- **Site-level development risk (municipal approvals)**
  - Allen Park postpones decision on 26 MW Solstice data center: **Allen Park Planning Commission** postponed decision on **Solstice Data**'s proposed **26 MW** edge data center for additional studies, fire review, and outreach.
    - Developer cited impacts: **~25 permanent jobs**, **~200 construction jobs**, and **$6.2m–$7.4m/year** in property tax revenue.

India

- **Data-centre services / public-sector IT infrastructure**
  - RailTel secures Rs 1.02 billion IT infrastructure order: **Rs 1.02bn** order from **PFMS** to supply IT infrastructure plus managed operations across **DC, DR, SOC services and colocation**.
    - Execution due by **Jan 31, 2027**.
- **Capital markets / bankability context (infra broadly; relevant for DC power & grid enabling assets)**

- India's infrastructure financing transformed by reforms and new capital: cites **Union Budget 2025-26 capex Rs 11.2trn** and **RBI Project Finance Directions** effective **1 Oct 2025**, alongside growth in **InvITs** and infrastructure bonds.
- DFIs reshape India's infrastructure financing amid low NPAs: highlights NaBFID scale (**balance sheet >Rs 900bn; disbursements >Rs 1trn; sanctions ~Rs 2.7trn**) and a **partial credit enhancement** product (Sept 2025; first transactions expected **2025-26**), plus IIFCL exploring **ECBs with a MIGA-backed guarantee**.

Europe

- **Nature and land-restoration positioning (ESG / social license)**
  - Microsoft leads nature integration in Europe's data centre operations: Arbonics ranks Microsoft highest; cites **6,414 hectares protected** and **77,000+ trees planted**.

Central Asia

- **Nuclear buildout narrative linked to powering technology**
  - Kazakhstan president urges building nuclear plants to power tech: call to begin with **Balkhash** plant featuring **two Russian Generation III+ WER-1200 reactors**, targeting nuclear at **~5%** of electricity by **2035**, with additional plants planned using Chinese technology.

Power, grid, and interconnection highlights

United States

- **Large-load interconnection standardisation (potentially material for DC timelines and network upgrade risk allocation)**
  - US DOE directs FERC to standardise large-load interconnections: covers **>20 MW** load interconnections, including **hybrids**, with DOE requesting a rulemaking outcome by **Apr 30, 2026**.
- **Flexible load as a grid resource (software-enabled demand shaping)**
  - AI data centers could stabilize the power grid: Emerald AI/NVIDIA/Oracle/SRP/EPRI test in Phoenix on a **256-GPU cluster** reduced power use by **25% over a 3-hour stressed-grid period** while preserving SLAs.

India

- **Transmission enabling capacity near key growth corridors**

  - Tata Power commissions 400/220 kV substation in Greater Noida: commissioned **400/220 kV** substation and lines adding **1,000 MVA** transformation capacity; executed by **TP Jalpura Khurja Transmission Limited**; noted as first milestone under the **Jalpura–Khurja TBCB** project.

- **Renewables integration buildout**
  - POWERGRID wins transmission project to integrate 3 GW renewables in Karnataka: selected for a **400 kV double-circuit** transmission line and pooling station augmentations to integrate **3 GW** of RE (0.25 GW Davanagere; 2.75 GW Bellary) under **BOOT**.
- **Renewables procurement structure (storage + ISTS-connected requirement)**
  - SECI invites bids for 1000 MW excess renewable power: SECI tender to procure **1,000 MW** of excess RE from existing PPA-backed projects via **12-year PPAs**.
    - Requires **ISTS-connected** projects **with energy storage**; EMD **INR 954,000 per MW**.
- **Operator commentary on green power structures**
  - India data centres shift to green power, hybrid storage models: conference comments that hybrid+storage can supply **~90–96%** green energy at **~Rs 5–Rs 6 per unit**, with **25-year PPA horizons** and interstate sourcing.

Nuclear supply contracting (US)

- **Additional SMR deployment detail (beyond the Vistra PPAs)**
  - Meta, TerraPower to build up to 8 Natrium reactors: Meta to fund deployment of TerraPower's **Natrium** reactors (up to **eight units**, up to **2.4 GW**), funding early development of two units and securing rights for up to six more.
    - Natrium design: **345 MW** sodium fast reactor paired with molten salt storage that can boost output to **500 MW for >5 hours**.
    - First commercial project expected complete **2030**; additional unit delivery anticipated as early as **2032**.

Policy and regulation

United States

- **Water and wastewater regulation for data centres (new statewide template)**

  - Ohio EPA proposes first general NPDES permit for data centers: draft general permit sets a structured compliance pathway (limits, monitoring, NOI, fee), potentially affecting schedule/cost for new builds and expansions.

- **Energy policy supporting storage and firming options**
  - Pritzker signs Illinois energy law boosting batteries, renewables: Illinois **Clean and Reliable Grid Affordability Act** enables **battery storage**, lifts a moratorium on **large-scale nuclear**, and authorizes long-term contracts and geothermal pilots.
    - Illinois Power Agency estimates **3 GW battery deployment by 2031** could add small surcharges but reduce average monthly residential bills by several dollars (Ameren: **$3.90–$8.28**; ComEd: **$1.46–$1.85**).
- **Environmental compliance flexibility framed as grid reliability for AI load growth**
  - Trump EPA eases coal ash rules for AI data centers: proposal to relax enforcement of a 2024 coal-ash rule and consider a **three-year cleanup extension to Oct. 17, 2031** for **11 plants / 13 unlined ash dumps**.
    - Public comment through **Feb 6, 2026**.
- **Local permitting and social license for gas + transmission serving data centres**
  - PEC urges Fluvanna to reject Tenaska 1.5 GW gas plant: highlights “second-order” permitting risk where generation + transmission proposals are explicitly tied to data-centre load.
  - Tracking solid frack waste, data-center gas permit and concrete impacts: notes environmental groups appealing an air quality permit for a proposed **4.4 GW** gas-fired plant at **Homer City** intended to power a data center.

Telecom / connectivity deal conditions (US)

- Verizon opposes broadband deployment obligations in Frontier deal: Verizon objects to a CPUC requirement tied to its **$20bn** Frontier acquisition to deliver **100/20 Mbps** to all locations served by **88 rural wire centers** within five years.
  - Verizon proposes exclusions (already served / no requests) and alternatives where fiber cost exceeds **$10,000 per location**.
  - CPUC could vote as early as **Jan 15**; **DOJ approval expiry Feb 13**.

Technology, operations, and market signals (investor-relevant)

- **Macro outlook and infrastructure implications**

  - Global data center sector to add almost 100 GW: JLL forecasts **~100 GW** new capacity **2026–2030**, creating **~$1.2tn** in real estate value (Americas ~half).
    - Notes **multi-year grid connection delays** as a driver of **behind-the-meter power, BESS, liquid cooling**, and higher rack densities (estimated tripling to **~45 kW**).
    - Estimates **$1–$2tn** in tenant fit-out spending by **2030**.

- **Cooling architecture shift risk/opportunity (supply chain + retrofit capex)**
  - NVIDIA Vera Rubin racks reduce chiller need with liquid cooling: NVIDIA announced a **100% liquid-cooled** rack that can operate without a chiller and uses **hot water cooling**, consuming **twice the power** of its predecessor while delivering **5x peak inference** and **3.5x peak training** performance.
- **Cyber/operational risk for DC infrastructure management tooling**
  - Maximum-severity HPE OneView RCE vulnerability actively exploited: CISA added **CVE-2025-37164** (CVSS **10**) to its KEV catalog after observed exploitation; HPE issued a hotfix covering OneView **v5.20–v10.20**.
- **Physical security as a scaling constraint**
  - Data center boom driven by AI heightens physical security risks: argues human factors (training/policy/culture) are the primary vulnerabilities turning physical access into digital breach (examples include tailgating and device implants).

Two-line wrap

Long-dated clean power contracting and interconnection process reform are moving to the centre of data-centre delivery risk.
At the same time, permitting (water, air, coal ash) and security (physical + control-plane vulnerabilities) are becoming more material to uptime and expansion timelines.

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