

Data Center Briefing

January 07, 2026

Global

Key themes:

Entergy Louisiana >\$1bn 500-kV transmission proposal tied to 345MW data centre; Hyperscaler capex projected >\$600bn in 2026 amid >\$162bn blocked/delayed projects; AWS increases guaranteed GPU capacity pricing ~15%; Behind-the-meter/fast-start power solutions (jet engines, LNG microplants) for AI loads; High-density liquid cooling moving to turnkey reference designs (up to 142kW racks); Saudi high-voltage substation buildout (380/110/13.8 kV) to support renewables; India's Lucknow AI City framed as fully green-powered (solar + green hydrogen); Gas generation and pipeline timelines (SC 2,000MW plant; 71-mile pipeline); NVIDIA and AMD rack-scale AI platform roadmaps shaping next deployment cycle

Data centres + power infrastructure briefing (Global) — 7 Jan 2026 (UTC)

Top news (3)

1. **Louisiana grid buildout tied to large-load growth:** [Entergy's proposed billion-dollar transmission upgrades](#) include a **>\$1bn, 145-mile 500-kV line** to serve rising demand from **data centres and heavy industry**, linked to a planned **\$10bn, 345MW data centre in West Feliciana Parish** and Hyundai's **\$6bn steel mill**. Entergy expects ~**82%** of the \$1bn project cost to be **charged to ratepayers** and will seek approvals at the **Louisiana Public Service Commission in 2026**.
2. **Hyperscaler capex acceleration + growing project friction:** A sector roundup says hyperscaler capex is projected to **exceed \$600bn in 2026**, while **>\$162bn** of projects were **blocked or delayed** as of June 2025 ([hyperscale expansion in 2026](#)). Named commitments include **Oracle**

“Stargate I” (1.2GW), AWS \$5.3bn Saudi region and €7.8bn Germany sovereign cloud, plus multiple large AI campus initiatives.

3. **GPU scarcity showing up in cloud pricing:** [AWS raising EC2 Capacity Blocks for ML pricing ~15%](#) (example: **p5e.48xlarge in Ohio** from \$34.608 to \$39.799 per hour) signals tighter economics for guaranteed GPU capacity.

Key deals and projects (data centres, platforms, and supply chain)

North America

- **Fremont, California (AI/HPC colocation / hosting):** [AMAX expands its Fremont facility](#) with a **Phase A** upgrade adding **2MW** to support **liquid-cooled AI racks at 150kW class (optionally up to 300kW)** under its **HostMax™** service. It references support for **NVIDIA HGX** and **AMD MI355X** platforms, with **ASHRAE-compliant liquid and air cooling** and a **PUE-aware power/cooling architecture**.
- **Bitcoin/HPC developer organisational buildout:** [Cipher Mining leadership hires](#) add a **Head of Policy and Government Affairs** (Lee Bratcher; Texas energy regulatory and **ERCOT** experience) and **Head of Strategic Initiatives** (Drew Armstrong; infrastructure background). While not a capex announcement, it signals continued **data centre / HPC expansion intent**.

Global (platforms, racks, and enterprise AI stacks)

- **NVIDIA rack-scale platform launch:** [Nvidia unveils Vera Rubin NVL72](#) — a rack platform described as a **six-silicon system** (Vera CPU, Rubín GPU, NVLink 6, ConnectX-9, BlueField-4, Spectrum-6). NVIDIA states performance up to **3.6 exaflops NVFP4 inference** and **2.5 exaflops NVFP4 training**, with a configuration of **72 Rubín GPUs / 36 Vera CPUs** and expanded memory (**54TB LPDDR5x, 20.7TB HBM4**). Named partner support includes **AWS, Google, Microsoft, Meta, OpenAI**.
- **AMD rack-scale roadmap:** [AMD unveils Instinct MI500 GPUs and Helios](#) positions **Helios** at **3 AI exaflops per rack** and flags **MI500 (2027)** as next-gen. A separate AMD report highlights major partnerships and

supercomputing commitments, including a **U.S. DOE** agreement for **two more supercomputers at Oak Ridge (Lux AI and Discovery)** described as a **combined \$1bn investment** ([AMD's 2025 push](#)).

- **Enterprise AI software/hardware integration:** [Nutanix expands collaboration with Nvidia](#) on an integrated AI operating environment (Nutanix Acropolis OS and AHV; supports Nvidia AI Enterprise, NIM microservices, BlueField-4 and Spectrum-X integrations).
- **Inference storage architecture aligned to Nvidia networking/DPUs:** [VAST Data's AI inference storage architecture](#) ties the VAST AI Operating System to **NVIDIA BlueField-4 DPUs, Spectrum-X Ethernet, and RDMA NVMe** paths; it will be showcased **24-26 Feb 2026** in Salt Lake City.

Power and grid / interconnection highlights

United States

- **Louisiana (bulk transmission for large loads):** [Entergy's >\\$1bn 500-kV line proposal](#) (145 miles) is explicitly linked to supporting a planned **345MW** data centre investment and other industrial demand. Cost allocation mentioned: ~**82%** expected to be **ratepayer-charged**.
- **South Carolina (gas + pipeline to support demand):** [Dominion Energy and Santee Cooper's 2,000MW gas plant](#) is cited alongside a contracted Kinder Morgan **\$431m, 71-mile pipeline "Bridge Project"** via Elba Express Company, targeting **FERC filing in early 2027** and **construction aimed for early 2029**.
- **Behind-the-meter/fast-start power trend:** [US data centres turning to unconventional power sources](#) describes developers deploying **repurposed jet engines, aeroderivative turbines, LNG microplants, and imported power plants** to secure fast-start capacity for AI loads. The story cites IEA estimates that US data centres used **183 TWh in 2024** and could reach **426 TWh by 2030**.

Middle East

- **Saudi Arabia (grid readiness for renewables):** [Linxon's turnkey high-voltage substation contracts](#) cover multiple **380/110/13.8 kV** substations,

delivered as full lifecycle turnkey projects, positioned as supporting large-scale solar and grid readiness for variable renewables.

Asia

- **Japan (thermal generation coming online):** [Osaka Gas' Himeji 1.25GW plant](#) started commercial operation of **No.1 unit**, with a **second 622.6MW unit due in May**, lifting domestic thermal capacity from **~2GW to ~3.2GW**.
- **India (green power commitment for an AI hub):** [Uttar Pradesh's proposed Lucknow AI City](#) is announced to be powered **entirely by green energy**, using **solar systems and green hydrogen**, with **green building practices** and data centres designed to meet global environmental and energy-efficiency standards.

Policy and regulation watch

- **Louisiana utility approvals:** [Energy to seek LPSC approval in 2026](#) for major transmission additions; the story's explicit note that **~82% of costs may be charged to ratepayers** is likely to be a focal point in proceedings.
- **EU power demand and carbon cost implications:** [EU data centre electricity use forecast to double by 2029](#), a change expected to increase demand for **carbon permits**.
- **State-led "green data centre" positioning:** [Lucknow AI City's green-energy requirement](#) points to policy-led sustainability expectations (solar + green hydrogen; green building mandates).

Operational resilience and efficiency signals (select)

- **Cooling as deployment bottleneck and outage driver:** [Schneider Electric liquid cooling reference designs RD110/RD111](#), co-developed with NVIDIA, target **AI racks up to 142kW**; the piece highlights cooling failures as a significant source of costly outages and cites a market forecast from **~\$2.8bn to >\$21bn by 2032**.

- **Global network reliability:** [ThousandEyes' weekly outage summary](#) reported **199 global outage events** (Dec 29–Jan 4), including a **1-hour Hurricane Electric** outage (Jan 2) impacting multiple APAC countries and a **9-minute Cogent** outage (Dec 31) affecting multiple regions.
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Two-line close

Transmission and fast-start generation are being pulled directly into the data-centre growth story as utilities and developers respond to large-load concentration.

At the same time, hyperscaler capex momentum is strong, but supply constraints (GPUs, cooling, and grid capacity) are increasingly visible in pricing and project delays.