US Data Center Daily Briefing

January 19, 2026

KEY THEMES

- US EPA requires permits for xAI gas turbine generators
- Transformer procurement and long lead-times for US hyperscale builds
- Karnataka data centre investment proposals (NTT, Google)
- AI compute efficiency positioning (SambaCloud)
- Memristor in-memory training method claims large energy reduction
- ESG and clean energy/carbon removal activity tied to US data centres
- Offshore wind project restarts potentially support clean power supply

Top news (last 24–48 hours)

- **US air-permitting tightening for on-site generation:** The U.S. EPA said gas turbine generators supplying Elon Musk's xAI are **not exempt from air permits**, closing a local loophole that had allowed some temporary on-site generators to avoid permitting (US says Musk's gas turbine generators for xAI require permits).
- **India (Karnataka) pipeline of large investment proposals incl. data centres:** Karnataka reported **₹1.53 lakh crore** of industrial investment proposals over 11 months, including notable data centre and digital/tech projects such as **NTT ₹4,000 crore (Devanahalli)** and **Google ₹2,500 crore (Bengaluru)** (Karnataka attracts ₹1.53 lakh crore industrial investment proposals).
- **US hyperscale buildout pulls transformer supply chain:** CG Power won an export order of **~₹900 crore (~$99.2m)** to supply power transformers for a **large-scale hyperscale data centre in the US**, with delivery over **12–20 months** and **FAS Mumbai Port** terms (CG Power wins ₹900 crore US data centre transformer order).

Key deals & projects (by region)

United States

- **Transformer procurement for hyperscale data centre:**
  - CG Power order: **~₹900 crore (~$99.2m)** from **Tallgrass Integrated Logistics Solutions LLC (USA)**.

- Scope: **design, manufacture, test** of power transformers in India; deliver over **12–20 months** on **FAS Mumbai Port** terms.
- End use: **large-scale hyperscale data centre** in the US (CG Power wins ₹900 crore US data centre transformer order).

India (Karnataka)

- **Investment proposal tally (11 months post-GIM): ₹1.53 lakh crore** across manufacturing, renewables, data centres and GCCs.
- Notable announced proposals cited:
  - **NTT data centres: ₹4,000 crore** in **Devanahalli**.
  - **Google: ₹2,500 crore** in **Bengaluru**.
  - **SAP: ₹1,960 crore** in **Devanahalli**.
  - **QpiAI: ₹1,136 crore** in **Bengaluru**.
  - (Also listed: Toyota Industries Engine ₹1,330 crore in Jigani.)
  - Source summary: proposals span multiple sectors; data centres are explicitly included (Karnataka attracts ₹1.53 lakh crore industrial investment proposals).

Power, grid & interconnection highlights

- **Equipment lead-times and grid-interface capex signal:** The **₹900 crore** transformer order tied to a US hyperscale project underscores how large data centre buildouts continue to pull on **high-voltage transformer** manufacturing capacity and export logistics, with **12–20 month** delivery windows stated for this contract (CG Power wins ₹900 crore US data centre transformer order).

Policy & regulation

United States

- **Air permits for on-site gas turbines:**
  - The **U.S. EPA** ruled that gas turbine generators supplying power to **xAI require permits** and are **not exempt**.
  - The ruling closes a **local loophole** that previously allowed certain temporary on-site generators to avoid permitting (US says Musk's gas turbine generators for xAI require permits).

Technology, efficiency & compute strategy

- **Energy-efficiency positioning for AI infrastructure:** Rodrigo Liang announced the formation of **SambaCloud**, emphasizing "**Intelligence per Watt & Joule**" as an energy-efficiency metric for AI infrastructure and tools (SambaCloud formed to support AI with energy-efficient compute).
- **Potential step-change in AI training energy (research):** Researchers at **Zhejiang Lab** and **Fudan University** reported an **EaPU** method for **memristor-based in-memory computing** that reduces AI training energy by **nearly six orders of magnitude** and cuts update frequency to **<0.1%**.
  - Validation: **180 nm memristor array** for image denoising and super-resolution with **SSIM 0.896 and 0.933**.
  - Simulations: **ResNet up to 152 layers** and **Vision Transformer** models; reported **50×** and **13×** energy gains versus prior memristor methods and **MADEM** respectively (New memristor training cuts AI energy by million-fold).

Capital markets, ESG & clean energy signals (selected)

- **ESG/energy and data-centre-adjacent market activity:** A weekly ESG roundup flagged:
  - **osapiens** raised **$100m** at a **$1bn valuation** led by **BlackRock and Temasek**.
  - **Diginex** acquired **Plan A** for **$64m**.
  - **L'Oreal** launched a **€100m** fund backing **13 startups**.
  - US courts allowed **Equinor** and **Ørsted/GIP$5bn offshore wind** projects to restart.
  - **Microsoft, Google and Meta** announced **large carbon removal and clean energy deals** for **US data centers** (high-level reference only; no project specifics provided) (ESG Weekly: $100M raises, carbon deals, and policy rulings).

2-line wrap

Permitting scrutiny on on-site generation and continued long-lead electrical equipment procurement are shaping near-term execution risk for AI and hyperscale capacity.

Meanwhile, large investment pipelines (notably in Karnataka) and efficiency-focused compute narratives keep reinforcing the buildout case across power and digital infrastructure.

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