US Data Center Daily Briefing

May 20, 2026

KEY THEMES

- EIA AEO2026: US servers reach 446–818 BkWh by 2050
- Virginia HB 507 forces Tier 4 generator limits for data centers
- Big Fiber $250M Stonepeak/CDPQ raise to expand dark fiber for AI
- Heartland Fiber Project $700M build across CO–IL for hyperscale AI

U.S. government forecasters just put a huge number on what many utilities and investors have been tiptoeing around: by 2050, U.S. data center *server* electricity use could hit **446–818 BkWh** a year—**22%–33%** of all commercial-building electricity demand. That range in the EIA's latest outlook isn't a rounding error; it's the difference between "busy" and "system redesign." The policy pushback and the infrastructure scramble in today's other stories make more sense once you anchor to that single forecast.

The Big Stories

The EIA's AEO2026 projection for U.S. data center server load is the day's cleanest signal: Washington is now modeling data centers as a structural driver of national electricity demand, not a niche planning problem. In the High Electricity Demand case, the report also puts **581 BkWh** of use in standalone data centers, and it explicitly treats data center cooling as far more energy intensive per square foot (up to **2.9x**). Why it matters: once this kind of modeling lands, it tends to show up—slowly but inexorably—in grid plans, rate cases, and environmental permitting assumptions.

Virginia is tightening the screws on on-site generation, and it's not subtle. In new DEQ guidance and HB 507, generator permits submitted on or after **July 1, 2026** must meet emissions limits at least as stringent as **Tier 4**, with a presumptive limit of **0.60 g/hp-hr**; the guidance also explicitly calls out **AI and cryptocurrency** facilities. The practical impact is that larger backup fleets are more likely to be treated as non-emergency sources, pushing hyperscale campuses toward **SCR/DPF/CEMS** deployments. Why it matters: Virginia is effectively turning "just run the gens" into an engineered, monitored, and more expensive proposition—raising the bar for any strategy that leans on combustion as a pressure valve.

That shift is colliding head-on with a very public test case. The DOJ says it may intervene or file an amicus brief in the NAACP lawsuit over xAI and MZX Tech, which alleges an **unpermitted**

gas power plant serving a nearby data center in **Southaven, Mississippi**—including claims of **up to 46 turbines** (with **19 added recently**). Plaintiffs filed for a preliminary injunction on **May 6**, and DOJ cited Clean Air Act interpretation alongside AI promotion priorities. Why it matters: if federal involvement escalates here, it won't just be about one site; it could reshape how aggressively the market treats behind-the-meter generation as a shortcut around grid constraints.

On the connectivity side, capital is moving to where power and compute are moving—distributed and inter-region. Big Fiber's $250 million raise from Stonepeak and CDPQ is explicitly aimed at expanding dark fiber routes and capacity to serve AI-driven growth in markets like the **San Francisco Bay Area, Hillsboro, and Atlanta**. The underlying logic is telling: power constraints and AI traffic patterns are pushing hyperscalers toward **distributed, power-rich campuses** tied together by **ultra-high-strand** fiber, which in turn tightens the optical supply chain. Why it matters: fiber is becoming the "second utility" for AI clusters—scarcity and lead times here can gate growth just as effectively as substation queues.

The Midwest is also getting a big, concrete build-out plan rather than another slide deck. The Heartland Fiber Project is a **$700 million** joint investment by **Dakota Carrier Network, Range, and WIN Technology** to expand high-capacity fiber across **CO, WY, MT, ND, MN, WI and IL**, with construction starting this summer and deployment over the next **one to two years**. It's designed with high-fiber-count cable and extra conduit, explicitly to scale bandwidth for **AI hyperscale data center growth**, strengthening connectivity into **Chicago** and western markets. Why it matters: this is the kind of backbone spending that quietly determines which "secondary" markets can credibly host large AI campuses.

Behind the Headlines

Interconnection is starting to look like a venture-scale product category, not a consulting line item. GridCARE's $64 million Series A is built around a platform it says can compress interconnection timelines from **years to months**, and it's already engaged across **more than a dozen markets** representing **over 2 GW** of AI compute capacity. The most important detail is the claim of **$10+ billion** in economic value "unlocked" by schedule compression—because it frames grid access as a monetizable bottleneck. If that framing sticks, expect more startups (and more utility partnerships) targeting queue navigation, studies, and staging strategies.

The fiber constraint story is getting less about money and more about execution—people, permits, and calendar math. At Fiber Connect 2026, panelists warned that workforce shortages and permitting delays are converging with surging data center demand, with a

blunt datapoint: roughly **90% of BEAD projects** are unlikely to be shovel-ready until **2027**. Training programs and guides are scaling up, but permitting and materials are already being scheduled into **Q3–Q4 2027**. The investor takeaway is uncomfortable: even when capital is available, delivery timelines are being set by institutions (permitting) and labor markets, not IRRs.

There's also a lot of "demand" in the system that isn't actually doing useful work—and it's not small. The IDCA 2026 Data Center Report puts global facility-level draw at **67.7 GW** and claims **13% of hyperscaler cloud consumption** is tied up in "zombie" workloads—about **3 GW in the U.S.** alone. It also warns that many markets are pushing past a **6.25%** national electricity-use threshold for data centers, while estimating global data center investment is approaching **$1 trillion annually**. The punchline: the industry is simultaneously fighting for more megawatts and wasting a meaningful slice of what it already has, which is exactly the kind of political own-goal that invites tougher scrutiny.

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