TWENTY THREE POINT FIVE

INSIGHTS

January 2026

U.S. Data Center Load Growth: Regional Growth, Capex, Resource Needs, Incentives, and 10-Year Outlook (2026-2035)

By Bryan Kaus

Overview

Data centers have become the next major industrial build cycle in the United States, driven by AI compute, cloud migration, and the rapid expansion of digital infrastructure. The constraint is no longer real estate - it is energized capacity. Winning strategies pair power procurement, cooling and water strategy, and community acceptance with disciplined execution across supply chain and labor. This brief translates the buildout into operator terms: where growth is concentrating, what it costs, what resources it consumes, what incentives matter, and what risks will move the forecast.

1. The Market Backdrop: A New Industrial Load Class

For most of the last two decades, data centers were treated as specialized real estate. That framing is now obsolete. AI-era deployments pull grid-scale blocks of power, accelerate substation and transformer demand, and force local jurisdictions to answer difficult questions about land use, water, noise, and rates. In practice, demand is growing faster than deliverable power in many regions - and that mismatch is reshaping site selection, schedules, and capital allocation.

2. Executive Takeaways: What Matters Now

Demand is outrunning deliverable supply. Primary market vacancy is exceptionally tight, and a large share of near-term deliveries is already pre-leased.

Growth remains concentrated, but power is pushing the next wave outward. Core hubs lead absorption while power-available secondary markets capture spillover.

Power is the gating variable. Sites with credible time-to-power (often ~18-36 months) attract the highest-quality demand.

Costs are high and rising; AI-ready facilities carry a premium. Liquid-cooled designs commonly cost more than comparable air-cooled builds, with meaningful uncertainty by market and spec.

Queues imply an extreme upside, but not all projects will energize. The realized outcome will be set by interconnect reforms, transmission buildout, equipment availability, and local permitting politics.

Community acceptance and skilled labor are now first-order risks. Water strategy, noise/traffic concerns, and electrician availability can move timelines and economics.

3. Regional Map: Where Capacity Is Building

A practical regional view anchored to markets absorbing MW today, and to places attracting the next wave because they can actually deliver power and land at scale.

A) Mid-Atlantic / 'Data Center Alley' (Northern Virginia with Richmond spillover; PA/NJ adjacency) Still the most liquid market, but increasingly constrained by transmission upgrades, community pushback, and incentive scrutiny.

B) Texas (Dallas-Fort Worth; Austin/San Antonio corridor; Houston emerging pockets) A top absorption market with room to scale - if interconnect timelines and cooling-water strategies pencil.

C) Midwest power-and-land corridor (Chicago; Ohio/Columbus; Indiana adjacency) Rising on available land and logistics access; incentives can be meaningful, but job-per-subsidy narratives are tightening.

D) Southeast (Atlanta and the Carolinas) Accelerating quickly as fiber routes expand; rate impacts and grid upgrade cost allocation are becoming political.

E) Southwest / Mountain West (Phoenix, Nevada, New Mexico) Strong interest, but heat and water make cooling approach a first-order decision.

F) West Coast (Silicon Valley; Pacific Northwest) Demand is real, but high costs and power constraints force selective deployment and premium pricing.

4. The 10-Year Outlook (2026-2035): Capacity Scenarios

Because 'announced' and 'queued' do not equal 'energized,' the cleanest approach is to scenario realized incremental IT load and translate it into campus-scale planning units.

Assumptions:

- Hyperscale/AI campus averages ~200 MW of delivered IT load (typically phased).

- Large campuses drive the decade's grid impact; smaller colo builds continue but are not the main system driver.

Incremental IT load added (U.S., 2026-2035):

- Low case: +40 GW -> ~200 campuses (interconnect bottlenecks, local pushback, slower AI capex cycle).

- Base case: +75 GW -> ~375 campuses (strong AI/cloud growth, partial realization of queues).

- High case: +120 GW -> ~600 campuses (aggressive grid buildout, higher realization rate).

5. Capitalization: What It Costs to Build

Construction costs are commonly benchmarked as dollars per watt (or per MW) of IT capacity. Costs vary widely by market, and AI-ready designs typically carry a premium.

Planning-grade capex math (construction only):

- 100 MW IT load: often on the order of ~$1.0B in construction costs alone.

- 200 MW campus: often on the order of ~$2.0B in construction costs alone.

Operator note:

These figures can exclude or understate land, major utility upgrades, substations/transmission contributions, owner-furnished equipment, and financing carry - often the true drivers of schedule and ROI.

6. Resource Needs: Power, Water, and Labor

Power is the gating variable.

Developers are prioritizing sites with credible time-to-power. In many regions, interconnect queues and transformer/substation lead times are the binding constraints.

Water strategy is increasingly a permitting and community-relations issue.

A simple operational conversion aligns stakeholders quickly: at 100 MW IT load, 1.8 L/kWh implies ~1.14 million gallons/day; a 200 MW campus implies ~2.3 million gallons/day (illustrative).

Skilled labor is tightening.

Electrical trades are becoming a structural constraint, pushing wage pressure, schedule risk, and the need for disciplined construction planning.

7. Incentives and Politics: What Actually Moves the Pro Forma

The most useful packages combine tax relief with permitting certainty and credible time-to-power. Common structures include sales and use tax exemptions on equipment, property tax abatements, and infrastructure cost-sharing. Backlash risk is rising as communities question jobs-per-subsidy outcomes and rate impacts. The solution is not messaging - it is project design that reduces friction (water plan, noise plan, traffic plan) and shares benefits credibly.

8. Risks and Upsides: How the Market Dynamics Shift

Risks that move the forecast:

- Power and equipment lead times (interconnect, transformers, switchgear, transmission scopes).

- Rate and political risk (upgrade cost allocation and retail rate impacts).

- Community opposition (land use, water, noise, tax narrative).

- Labor scarcity (electricians and specialized MEP contractors).

Upside and durable advantage:

- Power-advantaged secondary markets become competitive moats.

- Behind-the-meter strategies (on-site generation, storage, demand response) can protect timelines and resilience.

- Integrated execution wins: power + permits + cooling/water + supply chain + labor planning.

9. What To Do Now: A 30/60/90-Day Operator Playbook

In the next 30 days: lock the constraints

- Confirm credible time-to-power, not just queue position; identify the true gating scope (substation, transformer, transmission, permitting).

- Choose a cooling/water approach that fits local constraints and community acceptance.

- Build an early labor and procurement plan for long-lead electrical equipment and contractor capacity.

In the next 60 days: de-risk execution

- Translate schedule into contracts and accountability for utility upgrade scopes; price delay risk explicitly.

- Stand up a community and permitting plan that reduces friction and clarifies benefits with credibility.

In the next 90 days: secure optionality

- Create site and energization optionality (multiple sites, phased blocks, alternative procurement paths).

- Evaluate behind-the-meter generation/storage as timeline insurance, not just a sustainability story.

10. How We Can Help @ 23.5

We wrote this brief to translate a fast-moving build cycle into an operator and investor lens. Outcomes are won by teams that coordinate power, permits, engineering, supply chain, contracts, and community acceptance into a coherent execution plan. If you are evaluating sites, underwriting investments, negotiating utility scopes, or building a partnership strategy around digital infrastructure, we'd welcome the conversation.

Sources and Further Reading

Selected primary sources and practical references (links current at time of writing):

[1] CBRE - North America Data Center Trends, H1 2025. https://www.cbre.com/insights/reports/north-america-data-center-trends-h1-2025

[2] Cushman & Wakefield - Data Center Development Cost Guide 2025. https://cushwake.cld.bz/Data-Center-Development-Cost-Guide-2025

[3] Turner & Townsend - Data Centre Construction Cost Index 2025/2026. https://www.turnerandtownsend.com/insights/data-centre-construction-cost-index-2025-2026/

[4] LBNL / U.S. DOE - U.S. data center electricity use and projections. https://eta.lbl.gov/publications/united-states-data-center-energy

[5] National Conference of State Legislatures - Data center incentives. https://www.ncsl.org/fiscal/policy-snapshot-data-center-incentives

[6] EESI - Data centers and water consumption. https://www.eesi.org/articles/view/data-centers-and-water-consumption

[7] McKinsey - Scaling data centers with smarter designs. https://www.mckinsey.com/industries/private-capital/our-insights/scaling-bigger-faster-cheaper-data-centers-with-smarter-designs

Disclaimer:

This brief is provided for general informational purposes only and does not constitute legal, tax, accounting, investment, or other professional advice. The analysis reflects the author's interpretation of publicly available information as of the date of publication and may change as new data emerges. Nothing herein is an offer or solicitation to buy or sell any security or to engage in any transaction; consult your professional advisors before acting.