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US Thematics | North America

Power Struggle: AI, Data Centers & Local Backlash

Community pushback against data center construction has accelerated in 2026 as new moratoriums have been introduced, with the majority of the change happening at the local level. This puts pressure on costs and timelines and could alter the geographic distribution of data centers.

Do the politics of energy imperil the data center build-out? Readers will recall that we cited AI-related capex as a growth driver underpinning our economic outlook back in May; MS estimates AI capex at $877 billion in 2026. We are seeing local communities push back — via legislation, moratoriums, etc. — on the data center build-out, which raises the question: Does this type of opposition limit the extent to which the US can build out its AI infrastructure? An estimated~$156 billion of projects were cancelled or delayed in 2025, and $130 billion already in 1Q26.

Why are consumers and local communities pushing back against data center construction? Opposition largely falls into 3 main categories: (1) concern around potential impacts on power bills, (2) environmental concerns including water use and waste heat, and (3) local quality of life concerns around large construction projects including noise, dust, and traffic.

Moratoriums are spreading, but most are pauses, not bans. Most of the activity is occurring at the local level, though an increasing number of state level legislative proposals are emerging. Importantly, the vast majority of proposals are moratoriums rather than outright bans. The data center build-out has been occurring rapidly and the majority of communities are looking for more time to consider impacts rather than a permanent ban on activity.

The consequences here are myriad, and not only for the obvious sectors in scope — data center REITs as well as US power & utilities. Just as relevant are the implications for the financing ecosystem supporting these developments, and the implications for the US position in the AI race relative to countries like China.

What Does this Mean for Markets? We believe opposition will put upward pressure on costs and timelines, contributing to project dispersion across the US, as

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the country remains the priority region for US developers. ***From an equity market standpoint,*** data centers are likely to increasingly adopt onsite generation, benefiting SEI, INIO, and BE, all rated OW, while publicly traded colocation data center REITs, including OW-rated EQIX and EW-rated DLR, should remain relatively insulated from political pushback given their smaller scale versus neoclouds or hyperscale owned AI training data centers and their role as society's critical infrastructure. ***From a macro standpoint,*** within credit, sustained data center pushback could ultimately extend the cycle and reduce future supply by lowering capex and financing needs, but near term capex front loading may worsen already-building issuance pressure, especially given the AI ecosystem has driven nearly all of this year's incremental corporate supply. Within securitized credit, existing ABS and CMBS transactions look relatively insulated from political challenges facing early-stage data centers, while any slowdown in new builds should be supportive by reducing oversupply risk ahead of key refinancing windows.

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Executive Summary

Politics are becoming impossible to separate from the data center build-out: We highlighted "The Politics of Energy" as one of our 10 thematic predictions to watch heading in 2026, in particular the risk of rising backlash against data center growth becoming a key wedge issue ahead of the midterm elections. To be sure, this has played out so far: as the issue rises in salience with voters, third parties report an estimated value of ~$156 billion of projects were cancelled or delayed in 2025, and $130 billion already in 1Q26. These instances of local opposition have grown louder across state lines, as lawmakers at the federal level are now introducing legislation toward this end. If realized — or if local opposition continues to grow, even if contained at the state level — then we see a greater risk of actual AI capex falling short of our $877 billion estimate for 2026, carrying a multitude of implications across equity sectors & the macro backdrop.

Data center moratoriums have precedent, and are expanding at the state and local level. To be sure, a growing number of localities have passed or proposed guardrails and restrictions on data center projects: guardrails introduced include infrastructure cost-sharing requirements, ratepayer protection initiatives, environmental disclosure rules and zoning changes. Restrictions have mostly been in the form of temporary moratoriums, impacting future projects or those lacking vested status. Further, although the explicit public opposition has tended to concentrate more in blue states and among Democratic-leaning voters, we're seeing state-wide data center moratorium proposals emerge roughly evenly in Democratic trifectas, Republican trifectas, and divided governments. **Importantly, most efforts are aimed at slowing — not reversing — the build-out, as many of these policy initiatives are temporary.**

Exhibit 1: Proposed State-Level AI Data Center Moratorium Bills & Political Breakdown

State	Bill(s)	Status	Description	Governor	Senate	House	Alignment
Delaware	SB 353	Introduced	Moratorium through Jan. 31, 2027 on applications and permits for data centers able to use 100 MW or more.	Matt Meyer (D)	D	D	Aligned
Georgia	HB 1059	Introduced	Forbids local governments from permitting data centers until Dec. 31, 2028.	Brian Kemp (R)	R	R	Aligned
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Minnesota	HF 4888 / SF 4298	Failed	Bans new data-center permits until a Public Utilities Commission report, no earlier than July 2027.	Tim Walz (D)	D	NP	Divided
New Hampshire	HB 1265	Failed	Establishes a one-year moratorium on data-center construction.	Kelly Ayotte (R)	R	R	Aligned
New York	A11560 / S10642	Passed Legislature	Places a one-year moratorium on large data-center permits and adds service-classification, energy-efficiency and host-community provisions.	Kathy Hochul (D)	D	D	Aligned
Oklahoma	SB 1488	Failed	Establishes a moratorium on data-center construction until Nov. 2029 and requires a study.	Kevin Stitt (R)	R	R	Aligned
Pennsylvania	SB 1359 / HB 2533	Introduced	Creates a statewide three-year moratorium on hyperscale data centers and impact studies, or authorizes municipal moratoriums.	Josh Shapiro (D)	R	D	Divided
South Carolina	H 5526	Introduced	Blocks state/local acceptance or action on data-center applications until a comprehensive oversight framework is enacted.	Henry McMaster (R)	R	R	Aligned
South Dakota	SB 232	Failed	Imposes a one-year moratorium on construction or expansion of hyperscale data centers.	Larry Rhoden (R)	R	R	Aligned
Vermont	S.205	Introduced	Creates a moratorium on AI data centers until 2030 and requires a report on impacts.	Phil Scott (R)	D	D	Divided
Virginia	HB 1515	Continued	Prohibits final local approval for a new data center until interconnection requests are fulfilled or July 1, 2028.	Abigail Spanberger (D)	D	D	Aligned
Wisconsin	SB 1061 / AB 1099	Failed	Prohibits data-center operation until 14 listed conditions are satisfied.	Tony Evers (D)	R	R	Divided

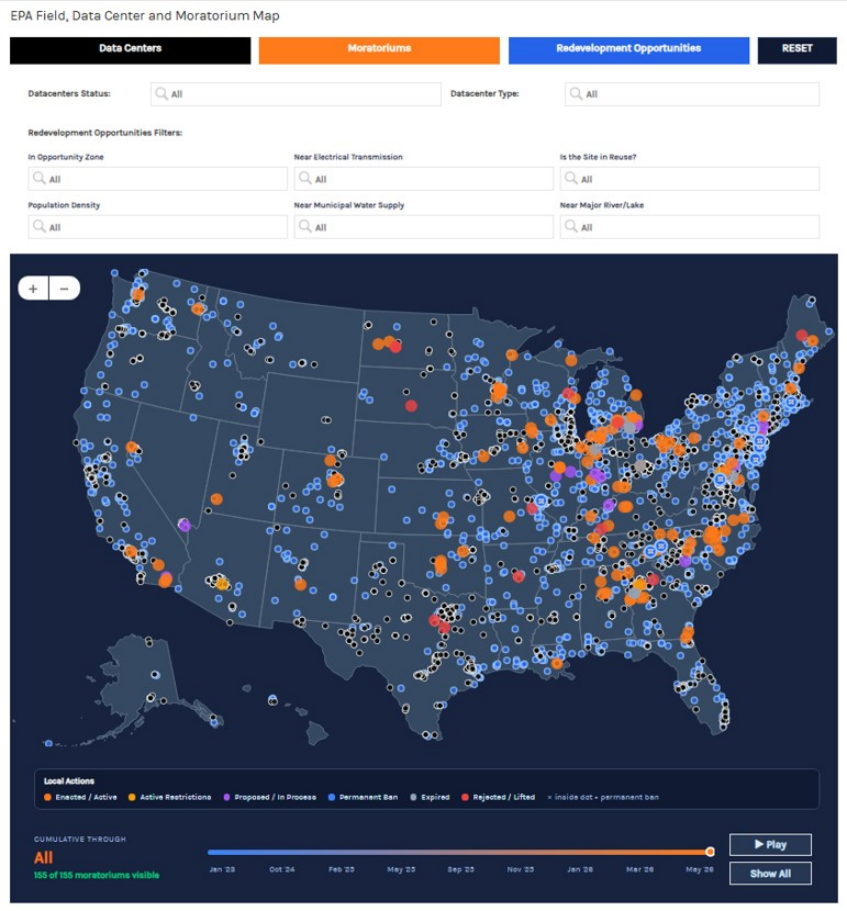
Source: NCSL, MultiState, Morgan Stanley Research

Tracking Data Center Moratoriums

We track opposition efforts at the local, state, and federal levels in the text below and encourage readers to click through our interactive map below to get more

detail on the opposition efforts.

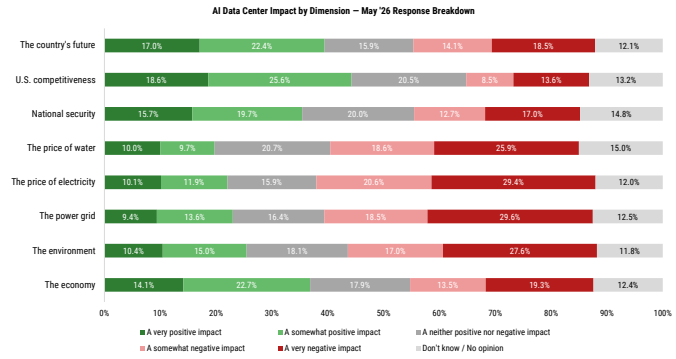
Exhibit 2 Data Center Moratorium Interactive Map



Source: AlphaWise Web Intelligence, Morgan Stanley Research, 451 Research, Interconnected Capital, EPA.

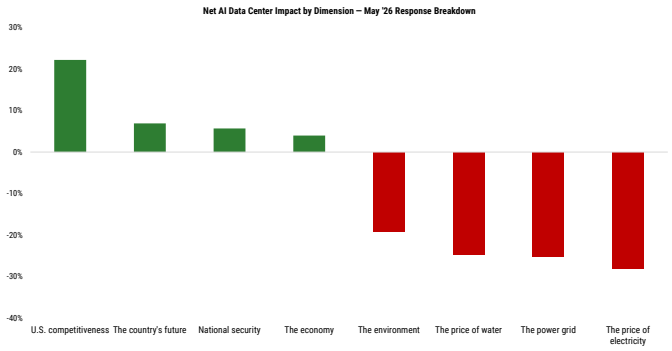
Consumer survey data reflects the idea that the public is broadly supportive of some limitation on data center construction. Roughly half of respondents in a recent Morning Consult survey believe AI data centers negatively affect electricity prices and the power grid, while concerns about water prices and the environment are close behind at around 45%. Since October 2025, a larger share of consumers now view AI data centers as having a negative impact across most dimensions, with the biggest increases in concern related to water prices and the environment. In May 2026, for the first time since October 2025, more respondents to Morning Consult's monthly survey favored halting data center construction (~45%) over continuing to build while expanding energy supply (~38%). The share selecting "don't know/no opinion" held roughly steady.

Exhibit 3: AI Data Center Impact by Dimension (May 2026)



Source: Morning Consult, AlphaWise Web Intelligence

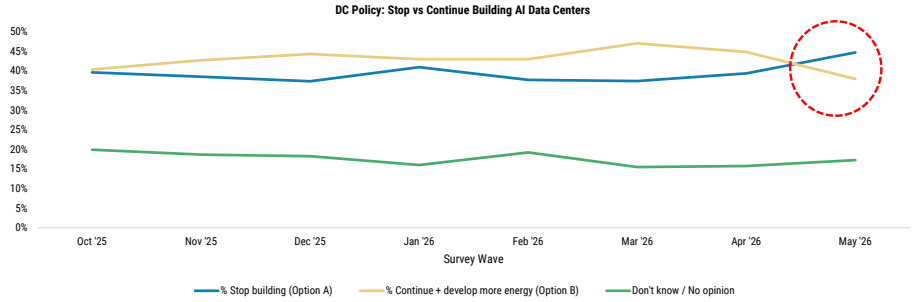
Exhibit 4: Net AI Data Center Impact by Dimension (May 2026)



Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 5:

DC Policy: Stop vs Continue Building AI Data Centers



Source: Morning Consult, AlphaWise Web Intelligence

Do these risks consequently imperil the US position in the global AI race? If the local policy efforts are either 1) made permanent and continue to expand and/or 2) reflected at the federal level, then we think the US risks keeping pace with China on the global AI competitive landscape. However, in our view, the geopolitical realities are hard to ignore, and therefore make it less likely that the federal government will meaningfully obstruct the US data center build-out. We think a conditional build-out is therefore a more likely outcome: given the integration of data centers into the physical layer of AI competition, we think projects may be heavily scrutinized, delayed, or contingent upon certain environmental or community-focused concessions.

In that vein, we see community benefits and local economic trade-offs as increasingly important, we think the three key levers to improve data center efficiency and address community concerns are:

1. **Utilization:** Improving utilization of existing data center capacity is one of the most immediate ways to increase efficiency, particularly as many facilities operate at only 30–40% utilization despite their high capital intensity. Better use of existing infrastructure can reduce the need for incremental capacity additions and improve the overall return on deployed capital.
2. **Power:** Data centers can address power constraints through on-site generation, demand response, and grid-support services. By combining renewables and storage, shifting non-critical workloads, and using UPS batteries to support grid frequency, operators can improve resilience, lower grid strain, and potentially create new revenue streams.

3. **Water:** Water efficiency is becoming a growing community and operational priority, with policy shifting from outright restrictions toward standards, disclosures, incentives, and performance benchmarks for data center water usage. This creates opportunities for enablers such as liquid cooling, water recycling, wastewater treatment, desalination, and ultra-pure water recovery technologies, all of which can reduce consumption and help operators meet tightening sustainability requirements.

Economic & Market Implications

US Economic Implications: the risk from data center growth is not a sudden nationwide electricity-price shock, but a stickier and more regional electricity inflation impulse. National electricity CPI remains elevated relative to its pre-COVID trend, and we expect it to settle at 4–5% y/y over the medium term as data center demand adds to underlying pressure. The strongest evidence is regional: Data center–heavy markets, particularly the South Atlantic/Northern Virginia, are seeing faster residential electricity inflation and higher wholesale power prices. The consumer impact is likely to be uneven and regressive, with affordability pressure most acute in regions where data center load growth collides with already elevated electricity burdens, transmission constraints, and slower grid expansion.

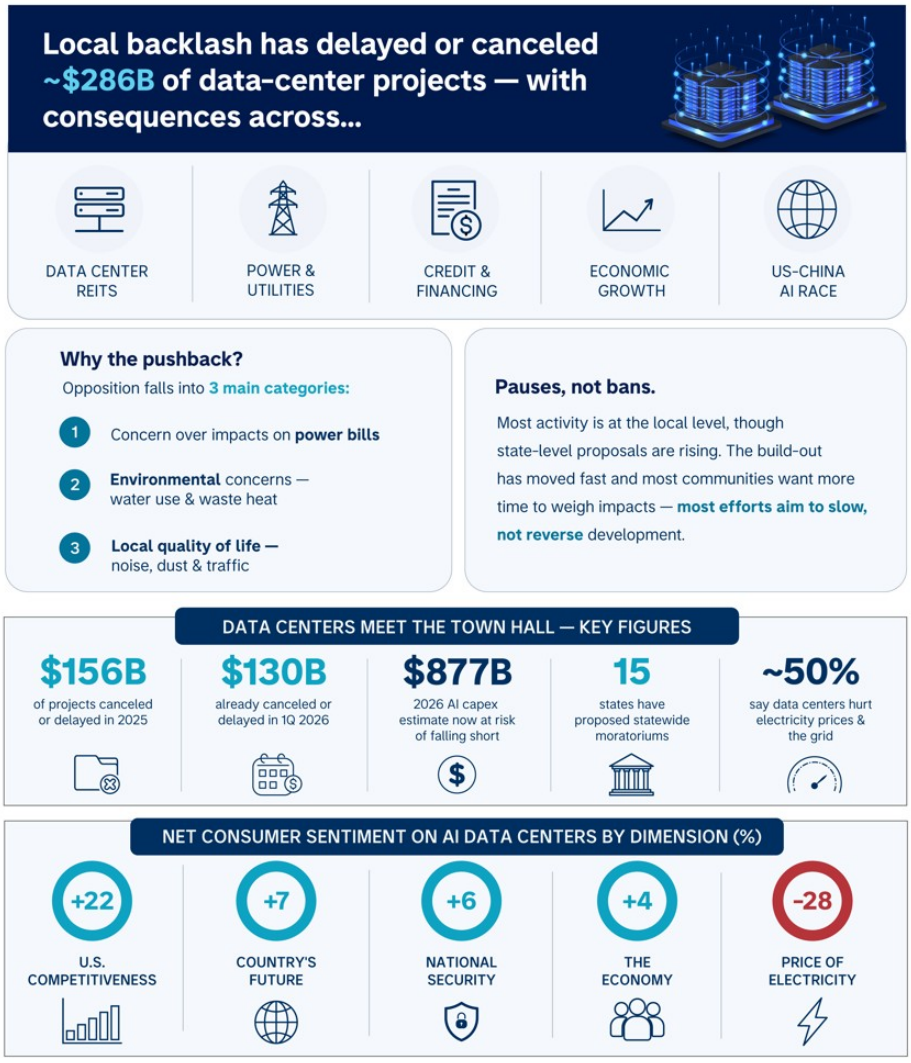
Equity market implications: we see the elevated political risk environment shifting cost allocation toward large load customers and creating bottlenecks around interconnection and labor. With an estimated ~38GW potential shortfall in power through 2028, we see data centers trending toward onsite generation as an attractive solution to address long lead times (5+ years in certain regions), which should be positive for SEI, INIO, and BE (all OW). We think publicly traded colocation data center REITs (OW EQIX, EW DLR) are largely insulated from the political pushback, as they are much smaller than the hyperscale/AI training data centers & are considered critical infrastructure.

Fixed income implications: pushback can clearly weigh on the timing and intensity of the capex cycle, **either drawing it out over a longer period of time, or curtailing total investment needs.** The AI build-out has shaped the market narrative across multiple forms of credit (corporate, securitized, private) via several key vectors, including: 1) significant debt supply across different channels, 2) increased fundamental exposure to the AI story on the back of a growing data-center debt sector and hyperscaler concentration, and 3) AI disruption fears in vulnerable sectors, that has driven tiering in performance across different segments within credit (e.g., private vs. public). The extent to which the pushback delays or constrains the buildout will be meaningful across the below asset classes:

- **Credit:** Drawing out the cycle & lower investment needs ultimately result in less supply. When we consider lower capex & associated financing needs in addition to the fact that almost the entire "delta" in corporate supply this year has come from the AI ecosystem, sustained pushback could mean a notable reversal in the issuance picture. Further, front-loading of capex could add to the already-building supply pressures in the market in the nearer term.
- **Securitized credit:** The existing transactions are relatively insulated from the political challenges of data centers that are being planned or in their early stages

of construction and power sourcing. We would view any obstacles that prevent or slow down the data center build as positive for ABS and CMBS, as it limits the risk over oversupply or overbuild, particularly before the refinancing window of many deals.

- **Munis:** the pushback is credit positive; expect more supply. Pushback means more balanced tax incentive deals. That could drive billions in property tax revenue — a credit positive. Higher costs could encourage more developers to seek tax-exempt capital, and for more muni utilities to prepay energy needs. Altogether, that could drive $100 billion in incremental muni supply.
- With lower compute built out, the disruption timeline also gets pushed back, allowing companies and sponsors to have more runway to come up with refinancing solutions. As a result, actual defaults in this scenario might be lower than expected, and the YTD laggards like private credit/BDCs, loans might gain traction as an "anti AI" trade.



US Thematics: Weighing AI Data Center Politics

Michelle Weaver, Anna Feldman, Ariana Salvatore, Mark Schmidt

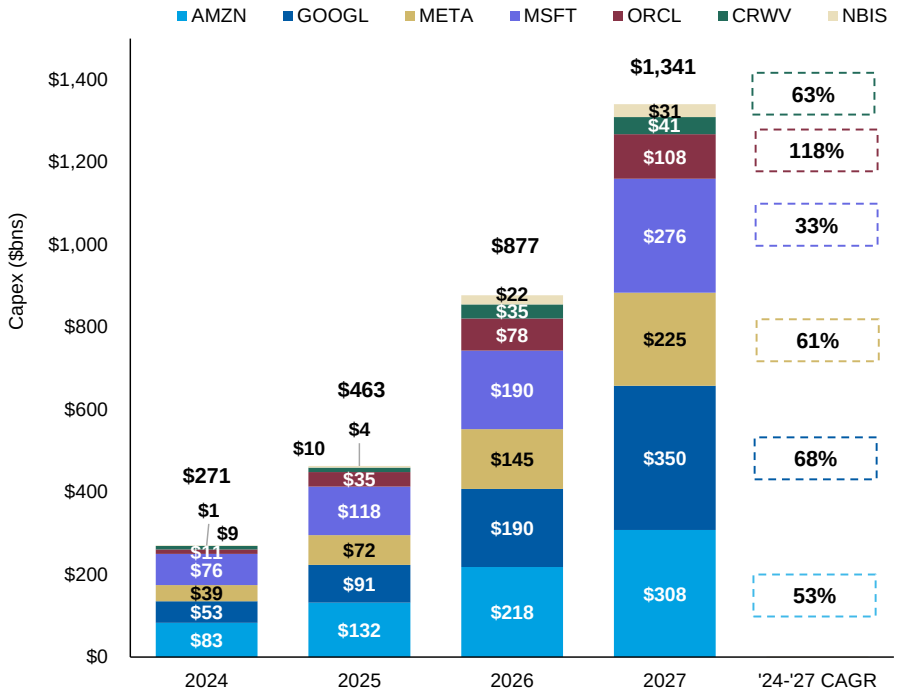
Data Centers Meet the Town Hall

Expanding legislation activity at all levels of government and rising local opposition presents a critical consideration for assessing the scale and pace of the data center build-out in the United States. **According to Data Center Watch, which tracks local opposition to data center projects, an estimated value of $156 billion of projects were cancelled or delayed in 2025, and $130 billion in 1Q26 alone.** While we continue to view power, memory and labor shortages as key bottle-necks for the AI infrastructure build-out, political push-back is increasingly cited as a concern for data center development. Bloom Energy's 2Q26 Mid-Year Pulse survey found that 28% of developers see community scrutiny worsening as a barrier to data center development, on par with cost of grid upgrades and second only to construction costs.

Our analysts continue to see upward bias to hyperscaler capex estimates, currently reflecting over $870 billion in 2026 and over $1.3 trillion in 2027. While the federal government continues to lean supportive, a growing number of localities have passed or proposed guardrails and restrictions on data center projects. Guardrails introduced include infrastructure cost-sharing requirements, ratepayer protection initiatives, environmental disclosure rules and zoning changes. Restrictions have mostly been in the form of temporary moratoriums, impacting future projects or those lacking vested status. Though state-wide moratoriums have not been enacted thus far, proposed plans could also impact projects with existing permitting, and even ongoing construction if signed by governors. Even without policy action, lawsuits have been enough to cause developers to withdraw from projects. On the other hand, some states have been increasing incentives to attract data centers.

We assess developments across the country to identify drivers of support and opposition, and evaluate their potential to pose risk to the AI data center build-out in the US. **We believe opposition will put upward pressure on costs and timelines, contributing to project dispersion across the US, as the country remains the priority region for US developers.** It is important to note that moratoriums are temporary measures, and longer-term approaches to regulating AI data centers will inform how the build-outs unfold.

Exhibit 6: Hyperscaler and Neocloud Capex Forecast



Source: Morgan Stanley Research

As primary markets for data centers become increasingly concentrated and permitting timelines stretch, various sources indicate data center projects are expanding geographically.

- Cushman & Wakefield's latest Global Data Center Market Comparison report ranks Dallas as the number one primary data center market in the world for the first time, followed by Atlanta and Virginia. Austin-San Antonio and West Texas are leading secondary and tertiary markets.
- Pew Research reports that 67% of planned data centers are located in rural areas while 87% of current sides currently in urban regions. Over one third of data centers are planned in counties that do not have existing data centers (39%), and three quarters will be built in the South and Midwest.

This demonstrates increasing prioritization of time-to-power over latency concerns for a meaningful portion AI data center development, though core markets will likely remain in demand due to connectivity benefits, existing fiber ecosystems and proximity to population centers. Training sites can more easily prioritize land and power, though inference is also driving demand for regional and distributed data centers with low latency. **Growing secondary and tertiary markets, such as West Texas, attract projects with abundant land and power resources, though these areas are also beginning to see opposition and introduction of guardrails.**

Tracking Data Center Moratoriums

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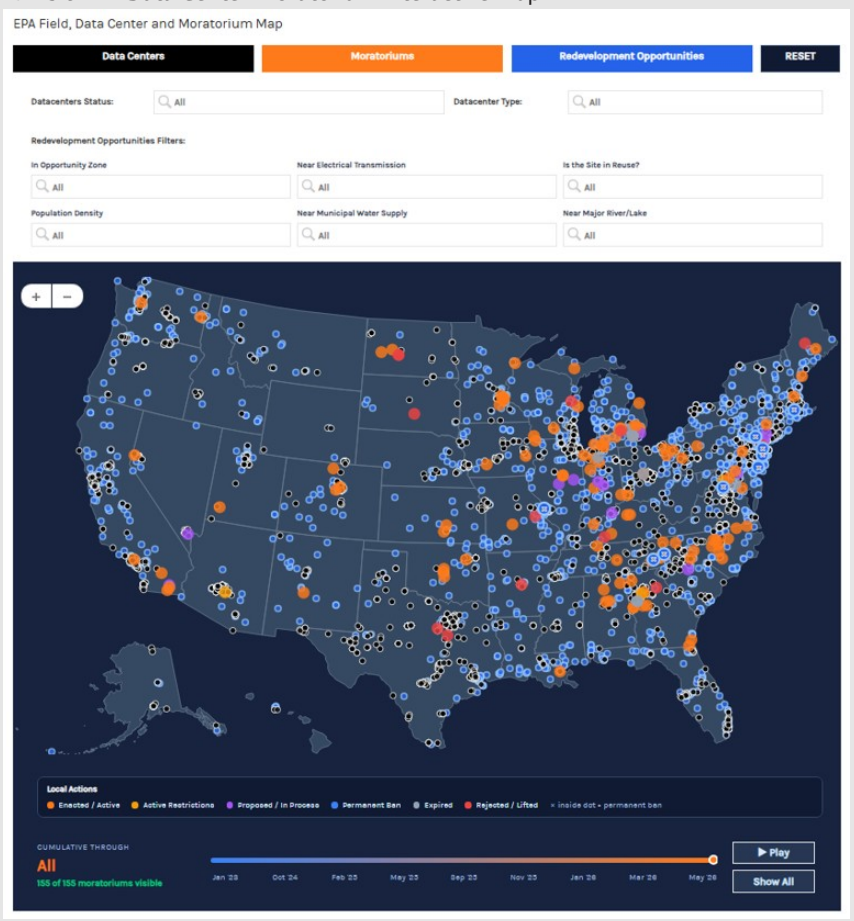
detail on the opposition efforts.

Exhibit 7 Data Center Moratorium Interactive Map



Source: AlphaWise Web Intelligence, Morgan Stanley Research, 451 Research, Interconnected Capital, EPA.

The mapping tool provides an overview of the following datasets:

- 451 Research Data Center Locations (as of 1Q26), including owner, operational status, and utility power usage (where available). This dataset can be toggled to differentiate between existing data centers and those still in the planning or construction phase. Given the rapid growth in the announced data center pipeline and evolving project disclosures, our analysis should be viewed as a point-in-time snapshot of the industry's geographic distribution, constrained by currently available data.
- Interconnected Capital's Moratorium Tracker including status, length and scope (as of 6/26/26).
- EPA's Superfund (and brownfield) Redevelopment Mapper including toggles for opportunity zone (existing tax incentives for redevelopment), proximity to electrical transmission and water sources, reuse status and population density.

Geographic expansion at scale implicates more communities and introduces new sources of opposition and support across party lines. Frictions between community,

state and national priorities (and timelines) are now much broader than electricity price concerns (though these remain at the forefront, see more here). We outline common logic behind moratoriums for various stakeholders in the table below, and find that general strain on resources and large scale land-use changes are common community, local and state government concerns. Key factors to watch include expanding rural community concerns in addition to urban and suburban. In examples of support for data center projects, we find that economic development is a common denominator, strongest in localities dependent on industries no longer active (though not all such communities welcome data centers either). The federal government and the EPA have supported repurposing Superfund and brownfield sites (often former industrial sites) for data center development, have published guidelines and worked to speed up their cleanup and remediation process across the country. The EPA map and database (Exhibit 8) allows users to filter for sites with industrial zoning, roads, water, fiber, and energy infrastructure that also overlap with Opportunity Zone incentives that can aim to attract private capital to distressed communities. While data center developers have still largely targeted greenfields due to clean-up and remediation costs and timelines these sites require, they may become increasingly viable amid local opposition (especially to repurposing greenfields for industrial use).

Exhibit 8: Moratorium Logic for Different Stakeholders

Place type	Moratorium logic	Typical concern
Rural counties / small towns	"Pause before greenfield industrialization happens."	Farmland, aquifers, wells, roads, fire service, grid capacity, landscape character.
Suburbs/ Semi-Rural	"Pause before an industrial-scale use lands near homes."	Noise, lighting, property values, diesel backup generators, traffic, neighborhood fit.
Large cities	"Pause before utility, environmental-justice, and land-use systems are overwhelmed."	Power demand, water use, ratepayer impacts, redevelopment priorities, neighborhood burden.
States	"Pause or regulate before large-load projects shift costs onto the statewide grid."	Electricity planning, utility bills, emissions, water reporting, permitting, tax incentives, consumer protection.
Federal	"Pause or condition national AI/data-center buildout until national safeguards exist" — but current federal executive/regulatory policy also has a competing pro-buildout / speed-to-power posture.	AI safety, national competitiveness, grid reliability, ratepayer protection, labor displacement, civil liberties, environmental impacts, export controls, and whether local communities retain approval power.

Source: Morgan Stanley Research

Policy Action: Local Governments

The data-center pushback has been primarily bottom up, with cities, counties, and townships enacting moratoriums, bans, and restrictions largely in reaction to nearby projects, though preemptive actions are growing. More than 300 moratoriums have passed since 2023 (one tracker counts 127 currently active), with proposals accelerating this year and restrictions now touching 40 states across all regions and political leanings. **Michigan, North Carolina, and Georgia lead, and most actions occur at the city or county level. The top concerns cited are water and energy use, zoning and land use, and environmental and health impacts, and the tools extend well beyond pauses to include setbacks, noise limits, water-impact reviews, and public-hearing requirements.** Importantly, the temporary nature of most actions reflects a need for time to study

impacts and build capacity rather than fundamental opposition: a CSIS panel and Brookings both noted that localities—especially rural ones with limited planning staff—are being forced into fast, high-stakes decisions, while large cities like Seattle use moratoriums to assess long-term effects and hold parties accountable.

The specific measures vary widely in scope. Many moratoriums pause only the consideration and approval of new proposals, though some also cover expansion or construction, and definitions of "data center" range from AI facilities to email servicing and even battery storage. Larger cities tend toward targeted restrictions eg Atlanta barred data centers from its Beltline Overlay District and several jurisdictions have carved out projects already in progress, as when Boyd County, Kentucky and Tulsa, Oklahoma exempted specific developments. Michigan illustrates how opposition clusters around experience with particular projects: more than 50 communities there have acted, including Saline Township, where a moratorium followed a drawn out fight over a frontier lab site that ended in a settlement, yet the town's continued push to amend zoning signals that concerns persist. At the far end of the spectrum, permanent and indefinite bans have emerged, from Monterey Park, California (the first city to ban data centers by popular vote) to New Jersey, which leads in permanent bans partly because its Municipal Land Use Law caps moratoriums at six months, effectively pushing towns toward outright bans. Beyond resource strain and environmental concern, these communities also cite the preservation of rural character, scenery, and heritage.

Increasingly, local leaders are looking past their own borders for larger-scale solutions. Officials in New Jersey towns with bans have called for state wide moratoriums and regulation, arguing that projects are harming a growing number of communities. Others are joining international efforts: during London Climate Action Week in June, 40 mayors (half from U.S. cities including Seattle, Chicago, Phoenix, and Miami) signed a pact on urban data center development. Rather than prohibiting facilities, the pact offers a roadmap for a build-out that delivers cleaner energy, lower costs, and healthier communities, emphasizing sustainability, community engagement, and shared, scalable solutions across cities. Seattle's participation while maintaining its own moratorium captures the broader posture of much of this movement: an attempt to balance competing priorities rather than reject data centers outright.

Policy Action: States

State actions thus far have focused on grid interconnection, cost allocation, utility tariffs, tax incentives, and permitting acceleration. However, 300 state data center bills were filed in the first six weeks of 2026, 15 states have proposed state-wide moratoriums, and others yet are adding tax incentives to attract data centers. Some bills aim to pause incentives and introduce guidelines, while moratoriums aim to completely pause new data center projects and/or delay existing ones. New York state is currently closest to enacting a statewide moratorium, pending Gov. Kathy Hochul's approval. **Statewide data-center moratorium proposals do not appear to be primarily a product of one-party control, and have emerged roughly evenly in Democratic trifectas, Republican trifectas, and divided governments.** Same-party control may improve the odds that a proposal advances procedurally, as seen in Maine and New York, but the current 15-state sample provides only weak evidence of a governance-alignment effect. The stronger explanation appears to be localized concern over energy, water, infrastructure, community impacts,

and public subsidies. According to NCSL, 8 proposals are in "introduced", "passed legislature," or "continued" status (others failed or were vetoed in current format).

Local considerations superceded general political alignment in Maine's decision to veto a state-wide moratorium. The Democratic governor vetoed a proposed moratorium by Democratic-controlled legislature citing local economic conditions for a specific town, Jay, earlier this year. In Jay, a proposed data center (currently on hold indefinitely due to developer reasons) would be located at a former paper mill brownfield site, formerly a key employer for the town. Importantly, the governor generally agreed with the idea of a moratorium on data centers, as did other Maine towns, and was one exemption away from approving it.

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Minnesota	HF 4888 / SF 4298	Failed	Bans new data-center permits until a Public Utilities Commission report, no earlier than July 2027.	Tim Walz (D)	D	NP	Divided
New Hampshire	HB 1265	Failed	Establishes a one-year moratorium on data-center construction.	Kelly Ayotte (R)	R	R	Aligned
New York	A11560 / S10642	Passed Legislature	Places a one-year moratorium on large data-center permits and adds service-classification, energy-efficiency and host-community provisions.	Kathy Hochul (D)	D	D	Aligned
Oklahoma	SB 1488	Failed	Establishes a moratorium on data-center construction until Nov. 2029 and requires a study.	Kevin Stitt (R)	R	R	Aligned
Pennsylvania	SB 1359 / HB 2533	Introduced	Creates a statewide three-year moratorium on hyperscale data centers and impact studies, or authorizes municipal moratoriums.	Josh Shapiro (D)	R	D	Divided
South Carolina	H 5526	Introduced	Blocks state/local acceptance or action on data-center applications until a comprehensive oversight framework is enacted.	Henry McMaster (R)	R	R	Aligned
South Dakota	SB 232	Failed	Imposes a one-year moratorium on construction or expansion of hyperscale data centers.	Larry Rhoden (R)	R	R	Aligned
Vermont	S.205	Introduced	Creates a moratorium on AI data centers until 2030 and requires a report on impacts.	Phil Scott (R)	D	D	Divided
Virginia	HB 1515	Continued	Prohibits final local approval for a new data center until interconnection requests are fulfilled or July 1, 2028.	Abigail Spanberger (D)	D	D	Aligned
Wisconsin	SB 1061 / AB 1099	Failed	Prohibits data-center operation until 14 listed conditions are satisfied.	Tony Evers (D)	R	R	Divided

Source: NCSL, MultiState, Morgan Stanley Research

Proposed moratorium bills have potential to impact ongoing projects if passed in current formulation. The state-wide moratorium bill under consideration in Michigan could delay data center operations until April 2027, even if they are allowed to be built. Vermont's S.205 and Pennsylvania's SB 1359 could also delay already-permitted projects because neither expressly grandfathers prior permits and both regulate construction or operation, rather than merely the issuance of new permits. South Carolina and Delaware are narrower and would primarily affect projects that still require final or additional approvals. Most bills had or have time spans of 1-3 years, while Oklahoma proposes a moratorium on construction until 2029 and Vermont on data centers until 2030. Some states proposed moratoriums that would last until certain conditions are met. For example, the bill currently in committee in South Carolina contains the following language aiming to:

"… prohibit governmental entities of this state, counties, municipalities, or political subdivisions from accepting or taking any action on permits or applications for data centers until the General Assembly establishes a comprehensive oversight and approval process for new data centers in this state, and to define 'data center.'"

States have enacted or advanced other measures to guide and/or slow the AI data center build-out, seeking to balance resource strain, cost allocation, local opposition, economic-development goals, and tax-revenue potential.

States are recalibrating fiscal measures. Thirty-eight states offer tax incentives for data centers, though a number are amending current policies. Virginia preserved its core data center tax incentives but added a temporary $0.011-per-kWh electricity consumption tax on data centers. Other states are pausing existing incentives. Ohio has paused consideration of new data center sales-tax exemption requests while lawmakers study the sector's costs and benefits, and lawmakers have considered reducing future exemptions while preserving larger benefits for projects that use brownfields or bring their own power. Illinois also paused the sales tax exemption while developing a broader framework for data centers. Arizona instated a three year moratorium on the sales tax exemption while explicitly allowing projects to continue constructions as part of a broader tax cuts package in June. On the other hand, states like Kansas created a 20-year state and local tax exemption to attract data centers, though with conditions (such as minimum investment thresholds).

States continue to create power-access pathways for data center development. Pennsylvania's 2024 Executive Order created a coordinated fast-track process for selected major projects so agencies and applicants have clearer timelines and public progress tracking. In Texas, the Public Utility Commission (PUC) adopted a bill in 2025 directing ERCOT (the state's independent power grid operator) to establish standards for large-load interconnections while balancing business development, system reliability, and the risk of stranded grid-infrastructure costs. Since then, a closely watched batch-processing strategy is being implemented by ERCOT that aims to reduce timelines for viable projects, while reducing speculative requests overwhelming transmission planning. West Virginia's certified microgrid framework was enacted in 2025 and allows data centers to move faster where they pair development with behind-the-meter or dedicated power infrastructure. The framework provides for state certification, a 14-day review period for complete high-impact data center submissions, exemptions from certain utility-regulatory requirements, state coordination through a Data Economy Liaison, and preemption of many local zoning, building-permit, and land-use restrictions.In PJM, governors from Pennsylvania, Virginia, Maryland, and New Jersey have backed a bring-your-own-generation concept that would pair large-load growth with qualifying generation and expedited interconnection review, though key elements remain subject to PJM implementation and tariff processes.

Consumer protection and broader responsible-development conditions are coming into focus. The key question is no longer just whether a data center will invest capital or create jobs, but whether it can be served without imposing reliability risks or stranded infrastructure costs on other customers. New Jersey's comprehensive plan on data centers expands beyond tax and grid rules into community-benefit, labor, transparency, and municipal-negotiation standards. It calls for data centers to bring new clean energy online, contribute to grid infrastructure, report energy and water use, shift costs away from residents, support community-benefit agreements, and use local trades at prevailing wages. The governor of Texas recently directed the PUC and ERCOT to protect consumers from rising power costs at the same time as supporting aforementioned streamlining policies for power. Governor Shapiro's proposed GRID Standards in Pennsylvania condition state support on energy affordability, transparency, workforce commitments, environmental protection, and protections against shifting data-center grid costs to existing ratepayers.

Policy Action: Federal Level

The federal government has moved to speed up AI/data-center construction by streamlining permits, opening some federal sites for data centers and power generation, and encouraging new energy infrastructure to support AI, while addressing rising local concerns recently on a voluntary guideline basis.

The administration has promoted streamlining processes relating to permitting and land availability. The administration's 2025 data-center permitting order directs agencies to streamline federal environmental reviews, expedite permitting for qualifying projects, promote brownfield and Superfund sites, and authorize appropriate federal lands for data-center construction and related power infrastructure. DOE has followed that by selecting federal sites such as Idaho National Laboratory, Oak Ridge, Paducah, and Savannah River for potential private AI data-center and energy-generation projects. EPA has also framed large brownfield sites with existing infrastructure and industrial zoning as potential candidates for AI and high-performance-computing data centers.

At the same time, the federal government has signaled that it does not plan to create nationwide environmental standards for data centers. EPA Administrator Lee Zeldin reportedly said EPA would not set national requirements or recommendations, leaving issues such as water use, cooling design, and air quality to states and local communities because conditions differ across regions. The administration emphasized that several environmental and siting questions should remain with state and local decision-makers, even while federal agencies speed permitting and provide guidance.

On the energy side, the federal push is paired with major grid and generation support. DOE announced a $26.5 billion loan package earlier this year for Southern Company subsidiaries in Georgia and Alabama, aimed at building or upgrading more than 16 GW of firm power, including gas generation, nuclear uprates and license renewals, hydropower modernization, battery storage, and more than 1,300 miles of transmission and grid-enhancement projects. The White House has also promoted a Ratepayer Protection Pledge, under which major AI and hyperscale companies agreed to build, bring, or buy new power and pay for grid upgrades needed for their data centers so those costs are not shifted to households.

The latest FERC move reflects another effort to speed up power access: FERC issued orders in June to all six regional grid operators under its jurisdiction, requiring them within 60 days to justify or reform tariff rules for connecting data centers and other large loads. The orders focus on faster study processes, cost transparency, avoiding cost shifts to other customers, co-location and behind-the-meter generation, flexible large-load service, and nearby generation studies.

Some lawmakers at the federal level are pushing back. Sen. Bernie Sanders and Rep. Alexandria Ocasio-Cortez announced an AI Data Center Moratorium Act that would pause AI data-center development until national safeguards address AI safety, worker impacts, utility prices, community harms, and environmental effects. Separately, the bipartisan federal GRID Act from Senators Blumenthal and Hawley would require new data centers to use power sources separate from the grid, give existing facilities a 10-year transition period, and require transparency around utility usage. The House Energy and Commerce Subcommittee has also advanced 8 bills in June on addressing electricity, grid, pipeline-safety, and data-center-related bills including the Ratepayer Protection Act and the Protecting Families from AI Data Center Energy Costs Act. The bills were forwarded to the

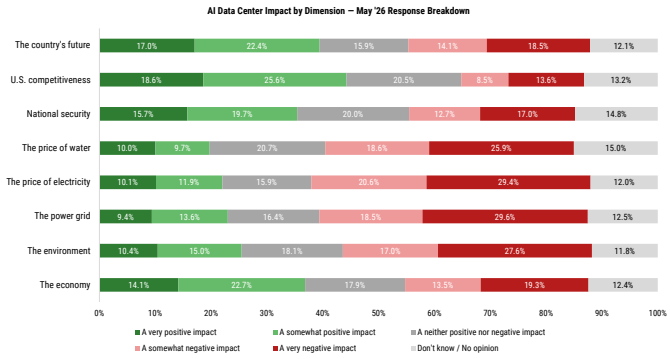
full House Energy and Commerce Committee, but they have not been enacted into law.

Survey Says

Survey data indicates net worsening sentiment regarding the impact of AI on various dimensions, though opinion on policy responses to AI data centers varies between the national and local level. Roughly half of respondents in a recent Morning Consult survey believe AI data centers negatively affect electricity prices and the power grid, while concerns about water prices and the environment are close behind at around 45%. Net sentiment is most negative for electricity prices, at -28%. At the same time, consumers see clear benefits in areas tied to national priorities. About 44% believe AI data centers positively affect U.S. competitiveness, followed by the country's future at roughly 39%. Net sentiment is positive for national competitiveness (+22%), the country's future (+7%), national security (+6%), and the economy (+4%). Since October 2025, a larger share of consumers now view AI data centers as having a negative impact across most dimensions, with the biggest increases in concern related to water prices and the environment. Sixty-seven percent of respondents say AI data centers are at least somewhat responsible for rising electricity prices, up from 54% in October, though slightly below the April high of 69%.

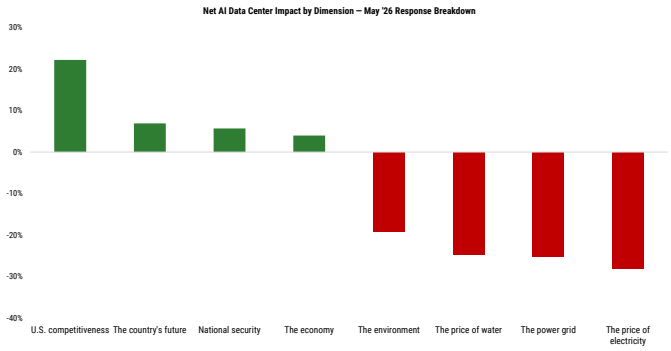
In May 2026, more respondents aligned with a "stop building" (~45%) vs. "continue to build while developing more energy" (~38%) policy response for the first time in a monthly Morning Consult survey since October 2025. The portion of respondents who chose "don't know/no opinion" stayed somewhat stable. However, when asked at a more local level, more respondents continue to oppose banning data centers near where they live (~50%), while ~39% support, with a widening margin. The portion of respondents who chose "don't know/no opinion" has declined to ~16% from 24% in October.

Exhibit 10: AI Data Center Impact by Dimension (May 2026)



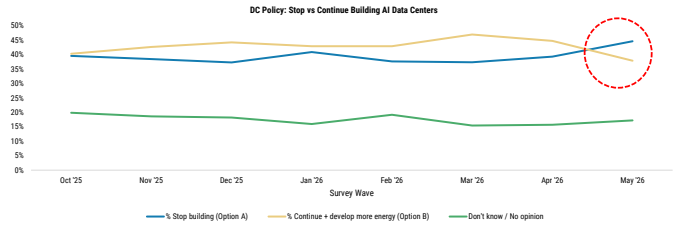
Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 11: Net AI Data Center Impact by Dimension (May 2026)



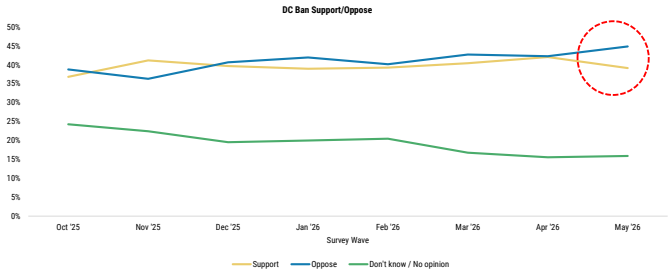
Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 12: DC Policy: Stop vs Continue Building AI Data Centers



Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 13: Would You Oppose or Support AI Data Center Construction Near You?



Source: Morning Consult, AlphaWise Web Intelligence

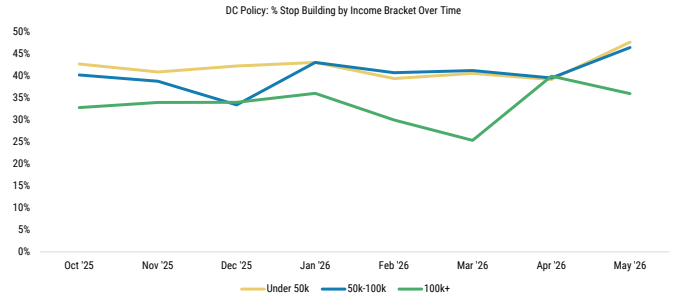
While attribution of power price increases to data centers remain nuanced by region and type of electricity market, power bills remain a primary issue, though the gap to other dimensions is narrow. Concerns appearing in case studies reveal a larger web of interconnected issues that cross conventionally binary political, social and economic perspectives and reflect immediate local and household concerns.

Demographics

Morning Consult polling data offers further demographic granularity regarding sentiment toward AI data centers. The local-ban question tends to find greater support among Republicans, higher-income voters, and urban voters. The national "stop building" vs. "continue to build while developing more energy" frame in the context of data centers raising electricity prices is relatively stronger among Democrats, lower-income voters, and rural voters, with a notable broadening in May. Rural voters are not the most likely to support banning data centers near them, which is consistent with the idea that some rural communities may see economic-development upside. Although they become more restrictive when the issue is framed around electricity prices. Higher income voters may be less incentivized by economic upsides to data centers in their region.

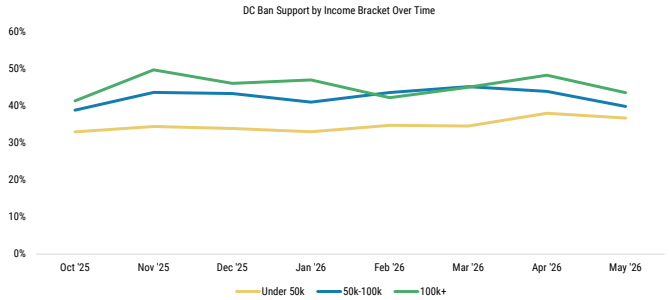
Responses are within 15 point ranges for each question on restricting data centers, and answers to the national stop building question have converged between urban, suburban and rural respondents in May. Responses range wider than 10 points for the same question along political party lines and income level. The only category with a majority stance in May are Democrats supporting the broad "stop building" policy (52%). The majority of urban community respondents supported a local ban in the previous month (~53%), though dipped to 43% in May.

Exhibit 14: DC Policy: % Stop Building by Income Bracket Over Time



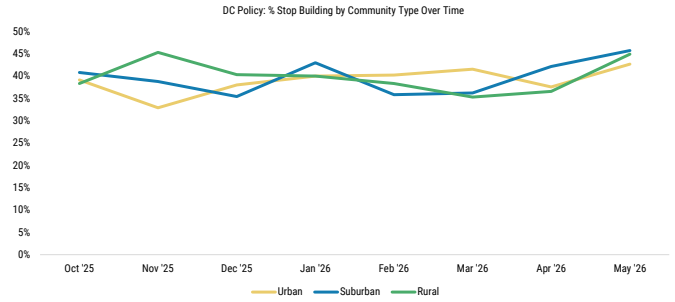
Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 15: DC Ban Near You Support by Income Bracket Over Time



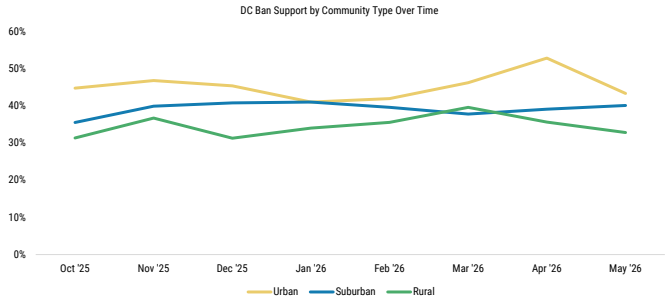
Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 16: DC Policy: % Stop Building by Community Type Over Time



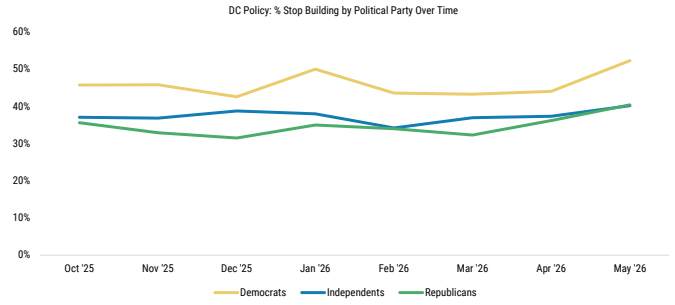
Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 17: DC Ban Near You Support by Community Type Over Time



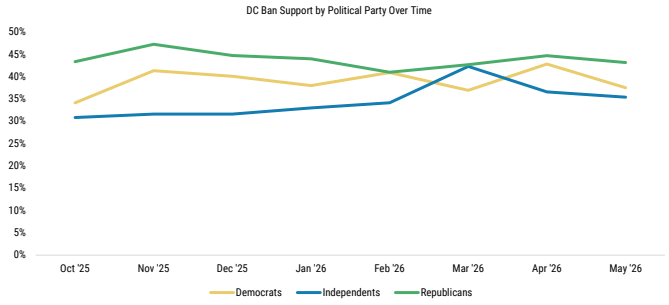
Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 18: DC Policy: % Stop Building by Political Party Over Time



Source: Morning Consult, AlphaWise Web Intelligence

Exhibit 19: DC Ban Near You Support by Political Party Over Time



Source: Morning Consult, AlphaWise Web Intelligence

Other Community Concerns From Case Studies

Data center capex of $800 billion have the potential to create billions of dollars in property tax revenue. The challenge is that local governments' initial desire to welcome data centers has created a perception that the tax benefits are too scant, while negative externalities are real. The case studies below explore this dynamic, which underscore our view that tax incentives are likely to become narrower for new data center projects.

Community voices have been influential in local government decisions as well as in instances of legal action brought against data center projects. Concerns surrounding data centers are quite universal, appearing to outweigh benefits being presented by some local

officials and developers in most cases. In some localities, economic development prospects (often in post-industrial communities) do succeed in motivating support for data center projects. We find that this support can appear across regions and political leanings, provided the economic argument is strong enough. Importantly, the "tale of two towns" concept prevails in multiple regions, where towns or counties within the same state can have differing attitudes toward data centers, highlighting the importance of granularity.

Scale & Land. While 38% of Americans already live within 5 miles of at least one operating data center, the sheer number of projects coming at speed to communities all over the countries are overwhelming even those not fundamentally opposed.

- ***Too many data centers in one place:*** Residents are quoted stating that, while one data center may be manageable, numerous data center projects in their area are not. Examples of small towns, like Archbald, PA, highlight the relative scale of planned data center projects to the town itself. If built, six data center campuses under Project Gravity would cover 14% of the town's land. Residents voice concerns about proximity to their homes, noise potential, forestry and animal habitat disruption, proximity to state parks and more.
- ***Zoning conflicts:*** Coweta County, Georgia, residents expressed frustration over bringing heavy industry to rural areas in which they intentionally choose to live in response to a 800 acre rezoning plan of forrest land for the Project Sail data center. In Silver Spring Township, Pennsylvania, a farmer rejected an offer of more than $15 million from data-center developers and instead placed a permanent conservation easement on his 261 acres, ensuring that the property would remain farmland.

Data centers are increasingly perceived as permanent transformations of the physical landscape rather than isolated pieces of digital infrastructure.

Speed. Archbald residents also stress that the build-out is happening too fast, introducing uncertainty, leading to council resignations, and even violence.

- ***Bypassing local feedback & community engagement:*** In Archbald's example, Project Gravity was fast-tracked under Pennsylvania's 2024 Executive Order inviting economic development and infrastructure projects. Data centers are increasingly looking for ways to fast-track permitting, with lengthening grid access time lines one of the biggest time constraints for the build-out.
- ***Shorter permitting timelines can catch communities off guard, creating friction:*** A recent FERC order (discussed below) and other state initiatives aim to streamline permitting timelines. Projects are also securing off-grid power plants to by-pass long time lines for grid connection, with 61% of developers naming this as their primary strategy to mitigate the bottleneck. More than a dozen projects with off-grid power plants have received approval within under a year, and at least 57 projects are proposed or under construction across the country. In Ohio, power-project approvals can be granted in 45 days without public hearing in since last year, and there have been reported examples of environmental evaluations becoming publicly available only after construction begins, creating the perception of speed over community consideration.

While off-grid solutions can help lower the strain on existing power grids, fast-tracking also entails less time for community awareness, public hearings, reviews and evaluations, which has often outweighed benefits for local residents.

Transparency

- ***Negotiations can occur without public notice:*** Residents often argue that data center proposals move forward before communities have enough notice, detail, or influence.
- ***NDAs around tax abatements are especially controversial:*** Pushback is especially strong where early negotiations involve nondisclosure agreements, which developers have defended as necessary for land, security, and business reasons, though Microsoft announced in 2026 that it would stop using NDAs with local governments because of community trust concerns.

While NDAs have historically protected commercial interests during sensitive development negotiations, growing public pushback against data centers is challenging that precedent as communities demand greater transparency about projects with significant impacts on local resources.

Resources & Environmental Impact

- **Resource Strain & Price Increases:** Consumers across regions continue to voice concerns about rising power and water prices as a result of data center consumption, we elaborate here.
- **Pollution:** Environmental and civil-rights groups are increasingly challenging data-center development because of its potential effects on water, air quality, energy use, and public health. Over 60 groups called on the governor of New Jersey to pause data center projects, after which New Jersey released guidelines. In Bessemer, Alabama local residents and the NAACP Center for Environmental & Climate Justice oppose Project Marvel citing strain on the environment, especially against the backdrop of an already pollutant Jefferson County's coal plant.

Quality of Life

- ***Discomfort & Health Risks*:** Health concerns usually center on the infrastructure supporting data centers, especially diesel backup generators, gas-fired power, construction, and emissions. Locals in Lowell, Massachusetts have raised concerns over air and water quality due to the proximity of a data center, and the subsequent effects on respiratory and other adverse health effects. Residents of Hillard, Ohio voiced concerns at an Ohio EPA hearing opposing permitting for a specific tier of 158 diesel backup generators at a proposed data center that produce a higher level of particulate matter than another class of generators. Noise is another rising concern, with 24/7 operating uptime driving the majority of community pushback, with residences within a few hundred feet of a center increasingly reporting of sleep deprivation and ear pain.
- ***Home Values*.** Home-price concerns reflect uncertainty over whether nearby data centers will make homes harder to sell because of noise, industrial views, traffic, or perceived environmental risks. In Decatur Township, Indianapolis, residents opposing Sabey Data Centers feared the project would hurt property values (due

to water contamination, noise pollution). In Natrona County, Wyoming, residents opposing a Prometheus Hyperscale data center and related man-camp proposal raised concerns about groundwater, rural character, and property values.

- **Character & History Preservation**. One of the largest data center debates took place in Prince William County, Virginia, where the proposed complex would have brought 35+ data centers to the edge of a Manassas National Battlefield Park. After five years of public backlash, the proposal was officially terminated. Residents in Augusta Township, Michigan are quoted opposing data centers while citing preservation of their town's 'rural character'. **While the battlefield examples have occurred primarily in Virginia due to data center density and history, disruption of community character and landscape is prevalent across rural and small-town communities.**
- ***Broader AI Anxiety*.** Broader concern about artificial intelligence is increasingly shaping anti-data-center sentiment, as some residents view these facilities not only as local land-use projects but also as the physical infrastructure enabling technologies they distrust. Gallup's April 2026 survey of 1,561 U.S. adults who opposed a local AI data center found that 12% cited jobs or AI replacing human workers, 4% were categorized as "Scared of AI/Don't trust it/AI will takeover," and another 4% cited AI's effects on humanity, society, thinking, or human contact. A citizen opposing a proposed Oklahoma data center and linked the project to surveillance, such as AI facial recognition. **As AI becomes more embedded in employment, public services, communication, and personal decision-making, anxieties about job displacement, surveillance, privacy, social isolation, and technological dependence are likely to continue influencing how residents assess the data centers enabling its expansion.**

Tax Incentives: The Changing Math for Municipalities

As state and local governments become more skeptical towards data center developers, **we think tax incentives are likely to decline.** That likely means **data centers face higher taxes and utility charges:**

- In one scenario, **a new equilibrium emerges** where data centers receive fewer incentives, and **data centers ramp to paying a full property tax bill more quickly.**
- In another scenario, data center developers continue to **shop around** for the friendliest local jurisdiction, **causing project delays** as it becomes harder to find a welcoming government partner.

$800bn in data center capex *should* create billions of dollars in property tax revenue. Early deals featured aggressive property tax abatements of 70% or more of property taxes. Foregone sales tax revenues in just 3 states — Georgia, Texas, and Virginia — likely exceeded $3 billion last year. Still, we can see both sides to the argument. After all, an incumbent data center is very *unlikely* to move should property tax rates change. That is just the kind of sticky commercial assessed valuation that most municipalities want in their property tax base.

Selected multi-billion TIF/PILOT projects

State	Municipality	Subsidy Approach	Duration	Sponsor

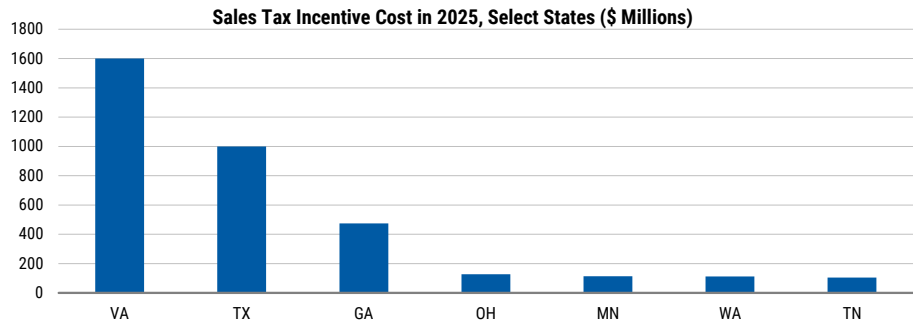
Wisconsin	Mount Pleasant	TIF Recapture		Microsoft
Missouri	Kansas City	Infrastructure support	25 Years	Google
North Carolina	Richmond County	Tax reimbursements	20 Years	Amazon
Texas	Fort Worth	35-70% Tax Abatement	10 Years	ACS
Texas	Abilene	85% Tax Abatement		Stargate
Virginia	Henrico County	Reinvestment into Housing		QTS

Sources: Data Center Dynamics, local news reports, Texas Monthly

Economic Development Math: Local governments prize a commercial and industrial tax base, because it generates revenue in excess of services provided. Factories do not send their kids to school.

- Manufacturing jobs pay above-average wages, which means that state and local governments have historically encouraged industrial projects as an economic development tool.
- But the relatively few permanent jobs created has led governments and taxpayers to question whether manufacturing incentives are warranted.

Exhibit 20: Foregone revenues already exceed $1bn/yr in some states



Source: Bloomberg Tax, Morgan Stanley Research

Amid the debate, however, it's worth asking: why do governments agree to these deals in the first place? The short answer is it's still an uplift to property taxes. At a time when intergovernmental aid is declining, big increases in assessed valuation are appealing to local governments.

Building Outside the US

US hyperscalers and AI infrastructure developers are broadening their global data center footprints, amid growing AI demand and increased focus on sovereign AI, with some motivation from domestic obstacles. While power access serves an important incentive for site selection abroad, governments outside the US are increasingly treating compute capacity as strategic national infrastructure, developing initiatives to support data center projects in their countries while also introducing guidelines. Importantly, regions such as Canada, Australia, Malaysia and the UAE are all pursuing some version of this sovereign-AI agenda, but also face their own bottlenecks around power, permitting, grid readiness, regulation, water use and local acceptance.

Our colleagues recently wrote about US-based hyperscalers and developers expanding

European data center projects for several strategic reasons including data sovereignty and regulatory compliance, "Made in Europe" credentials, serving European enterprise demand, access to renewable energy and nuclear power, and availability of secondary markets. However, they stated that US companies will likely continue to prioritize US markets due to certain bottle-necks being as restrictive if not worse in EU regions, in addition to regulatory and data transfer concerns. We see these as common themes across other markets, like Canada (home to the Toronto primary market and growing Alberta tertiary market), which also have top-down initiatives to encourage AI Sovereignty and provide access to clean electricity resources but where projects are running up against local pushback and straining power grids. Meta's recently announced 900+MW data center in Alberta, Canada is set to be largest outside the US, with Meta's ability to bring its own power a key reason why Alberta prioritized the project. Meta is also committing to invest $42 million in local infrastructure and use a closed-loop cooling system.

US hyperscalers have expanded their data center footprint in APAC, with Malaysia and Australia emerging as key hubs. Cushman & Wakefield's latest Global Data Center Market Comparison report ranks Johor, Malaysia, as the fifth leading primary data center market in the world. Johor become a destination for hyperscalers driven by lower development costs for land and construction, and less capacity constrained power grids compared to other APAC regions. Australia offers a high-quality infrastructure play and Sydney was ranked number ten by the C&W primary market list. Australia also recently published expectations for data centers that outlines similar sentiment regarding prioritization of Australia's national security and data sovereignty, reducing upward pressure on energy prices, efficient resource use and more.

Against this backdrop, Stargate remains the most visible effort to anchor frontier AI infrastructure in the United States. Stargate was announced in 2025 as a US-based AI infrastructure initiative targeting up to $500 billion of investment over four years, with an initial $100 billion deployment. In September 2025, five additional US data center sites were identified and the project was on track toward a 10 GW infrastructure commitment, with nearly 7 GW of planned capacity and more than $400 billion of investment over the following three years. The project was largely framed around securing American leadership in AI and creating jobs domestically. Stargate does have an international angle, and the UAE partnership was largely supported by the US government as an effort to promote allied sovereign-AI infrastructure and expand demand for US technology. Although, the recent Middle East conflict presents important security considerations for the region with reports of data center operation disruption. The federal government has followed with a positive update on general US-UAE collaboration in April. As a general gauge of large project distribution, Epoch AI, which tracks the largest data center projects, shows 10 projects intended for US hyperscaler use outside the US and 40 domestic through 2029. **We believe geopolitical developments relating to AI overall will inform which global locations will persist as viable locations for US compute.**

US Public Policy

Ariana Salvatore

AI Backlash Growing into Midterm Elections

We've written previously on the growing backlash to data centers and AI more broadly (see here and here), and thus far have treated it as a state and local-level issue as the effects in terms of electricity bill increases tend to be in the states hosting these new builds. However, given the growing opposition (in particular among younger voters) to AI more broadly, the issue has been federalized: Candidates in multiple states are running on this issue, and the pushback has grown louder (in some cases actually cancelling projects). That's been mirrored by the introduction of legislation toward these ends in Congress, from both Democrats and Republicans.

We've been of the view that this would continue to be mitigated at the state/local/utility level, as these are the entities seeing more of the impacts directly. We wrote in our initial midterms coverage that AI policy initiatives seem likely to take shape regardless of the election outcome, reflecting bipartisan alignment around AI as a strategic priority, but with emerging regulatory and societal constraints. However, as national attention has picked up, **it's quickly becoming a wedge issue for the midterm elections, and likely 2028 as well.**

One key risk here is that local pushback against data centers becomes a federal political issue and manifests in legislation that bars construction or otherwise slows the position of the US relative to China. In our assessment there are convincing signs pointing directionally toward that outcome: consider that: 1) Americans' views of China have become somewhat less negative now, reducing the political force of a purely China-competition argument; 2) voters are no longer just expressing abstract anxiety about AI, but are now showing direct support for data-center moratoriums; and 3) the policy response is already moving up the ladder from local backlash to formal state and municipal action, with New York lawmakers passing a one-year hyperscale data-center moratorium.

At the same time, we are hesitant to subscribe to the view that the federal government will take up a national data center ban or meaningfully constrain the build-out, given national security, grid investment, and economic growth counterweights. We still see the federal government's role as one that is supportive of the AI build-out via permitting reform, implementing additional access to power, and leaving it to industry to shoulder the burden (as evidenced by the president's ratepayer protection pledge), albeit with a greater degree of federal scrutiny.

Geopolitical Realities Underscore Our View

Data centers are integral to the physical layer of AI competition, which reinforces our view that the federal government is more likely to facilitate, rather than hinder, the build-out, even as local/state-level scrutiny rises. As model sizes increase, the binding constraints on AI infrastructure are broadening from chips and power to the materials, optical components, transmission systems, and grid capacity required to move data at

scale. That makes domestic data-center capacity a strategic asset rather than just a private-sector capex cycle. All else equal, that means projects might get more heavily scrutinized or delayed in some states but we think it's not likely to manifest at the national level.

The geopolitical realities are hard to ignore, and in our view make it less likely that the federal government is unlikely to meaningfully obstruct the US data-center build-out. While the domestic backlash to data centers is real (per our colleagues' survey work, voter trends, etc.), three China-related developments argue against the view that the federal government will ultimately stand in the way of the build-out:

1. **China is leveraging its supply chain position to pressure the physical inputs required for AI infrastructure.** Beijing is increasing scrutiny of indium phosphide exports, following the addition of the metal to its export control list in February 2025. Indium — which is used in the lasers inside optical transceivers that move data within and between AI data centers — is largely produced by China (70% of the global market). As model sizes increase and the bottleneck shifts from compute to data movement, those components become more strategically important. Media reporting suggests that industry leaders traveled to China with the business delegation accompanying the president for the US-China summit in part to address delays in these export licenses.
2. **China is accelerating its own physical AI build-out.** Bloomberg reported that China is preparing to spend roughly $295 billion over five years on a nationwide network of interconnected AI computing hubs, with an objective of sourcing the bulk of the underlying technology domestically, including AI chips. The report also syncs with recent directives from the government that reflect an ambition to indigenize much of the critical technology (80% of the core underlying technology to be sourced from domestic suppliers).
3. **Research has identified China-linked influence operations that used an American frontier model to generate social-media posts, comments, and political cartoons linking data center construction to rising energy prices.** Although the frontier lab said it hasn't seen evidence that these campaigns influenced public opinion at scale, in our view this reporting underscores the linkage between national security/geopolitics and the AI data center build-out.

Taken together, these developments underscore the physical component of the AI race & make something like a national data center ban (or federal legislation toward these ends) difficult to reconcile with the growing bipartisan strategic imperative around AI.

So what's the expected policy direction from here? We see conditional support as more likely than obstruction. We see the administration continuing to remain broadly supportive of the build-out, alleviating pressure points where possible (permitting reform, new power-access initiatives, grid investment, domestic supply chain incentives, and potentially strategic stockpiling or friend-shoring of critical materials). At the same time, policymakers are likely to demand more explicit ratepayer protections (as we mention above), greater transparency around local impacts, and clearer evidence that developers are paying for incremental grid costs rather than shifting them onto households.

The Economic Impact

Diego Anzoategui, Sam Coffin, Arunima Sinha, Heather Berger, and Lingdi Xu

Data Centers and Residential Electricity Prices: The Evidence Continues to Build

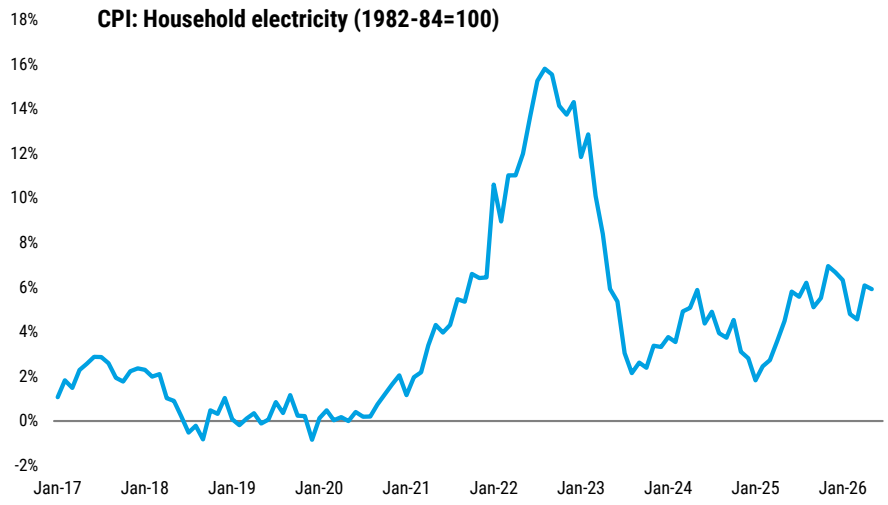
The rapid expansion of data center investment remains one of the most important developments underway in the US economy. That investment wave continues to raise a key question for inflation: will growing electricity demand from data centers materially increase residential electricity bills? So far, the answer remains "yes, but gradually."

Data centers are already significant consumers of electricity. According to the Congressional Research Service, US data centers consumed roughly 176 terawatt-hours of electricity in 2023, equivalent to approximately 4.4% of total US electricity consumption, and several studies project that share could rise meaningfully over coming years as AI-related demand expands (see here).

National inflation data remain broadly consistent with the view we laid out previously (see here). Electricity CPI inflation is currently running around 6% y/y, somewhat above our expectation of a 4-5% y/y range. We think part of the recent strength reflects higher oil and broader energy prices earlier this year, which temporarily boosted utility costs. As these pressures fade, we expect electricity inflation to move back toward the 4-5% range over time.

Even if inflation moderates from current levels, **the broader point remains unchanged: electricity inflation appears likely to settle above its pre-pandemic trend.** Prior to COVID, electricity prices generally increased at a much slower pace. Since 2023, however, electricity inflation has remained persistently elevated even after the sharp decline in natural gas prices following the Russia-Ukraine energy shock. This persistence suggests that demand-side factors, including the growing footprint of data centers, may be contributing to a higher underlying trend in electricity costs.

Exhibit 21: Electricity CPI inflation remains sticky and higher than the pre-COVID trend

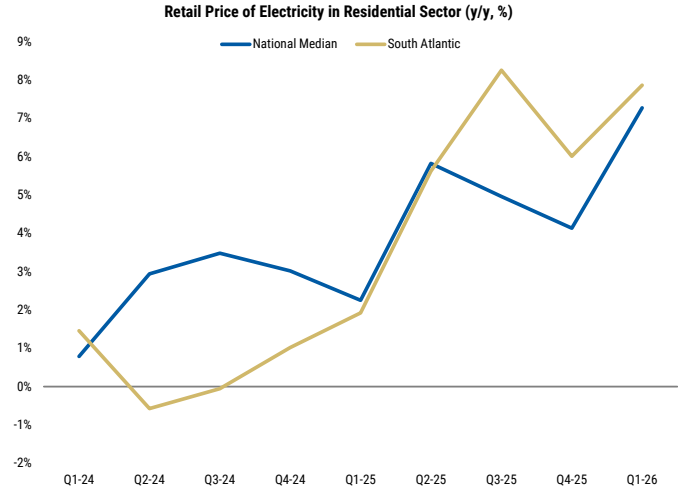


Source: BLS, Morgan Stanley Research.

Regional indicators continue to provide stronger evidence that data center demand is creating localized pressures. The clearest example remains the South Atlantic region, which includes Northern Virginia — the World's data center capital. EIA data show that residential electricity prices in the region have accelerated much faster than the national median. While South Atlantic residential electricity inflation was running near 1% y/y in early 2023, it has subsequently risen to roughly 7% y/y, outpacing the national trend. This divergence should be interpreted cautiously — regional electricity price data can be volatile and influenced by local regulatory decisions — but the geographic pattern is notable given the concentration of data center activity in Northern Virginia.

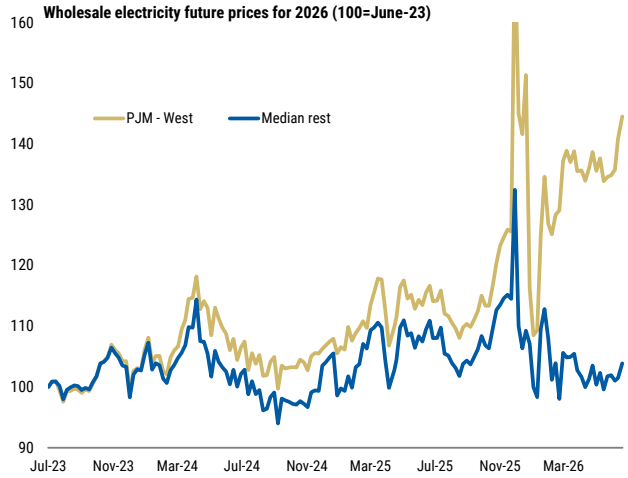
Wholesale electricity markets tell a similar story. Among major US power markets, wholesale futures prices for 2026 delivery remain highest in PJM-West, the provider that serves Northern Virginia. Futures prices in data-center-intensive regions have generally risen more than in other power markets, signaling expectations of tighter supply-demand balances in coming years. These markets are effectively pricing in the need for significant investment in generation and grid infrastructure to meet projected load growth.

Exhibit 22: Residential electricity prices rose more in the South Atlantic region ...



Source: EIA,, Morgan Stanley Research.

Exhibit 23: ... Mirroring a sharp rise in wholesale prices in that region.



Source: Morgan Stanley Research,

What does this imply for inflation going forward?

The evidence still argues against a sharp, nationwide increase in residential electricity costs. After years of exceptional growth in data center investment, the aggregate impact on household electricity bills has remained relatively modest. Large data centers require years to plan, permit, connect, and fully ramp operations, meaning electricity demand typically rises gradually rather than abruptly.

At the same time, the regional evidence is becoming increasingly difficult to ignore. Areas with the greatest concentration of data center activity are seeing both stronger retail electricity price increases and higher wholesale power prices.

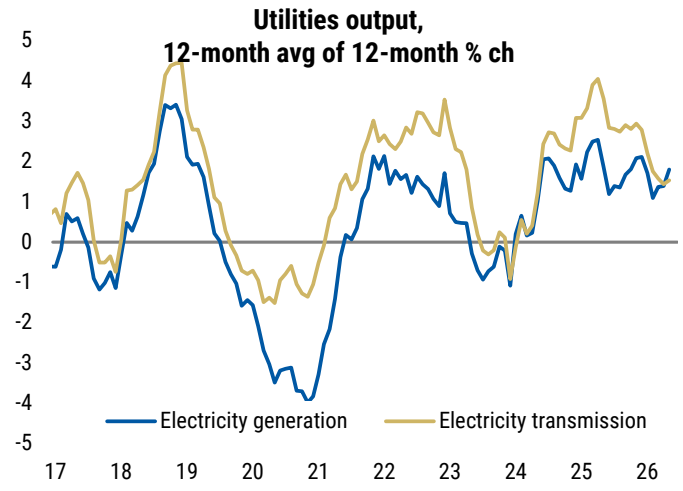
Our baseline view remains largely unchanged. We expect electricity CPI inflation to remain sticky in a 4-5% y/y range over the medium term — above its pre-COVID trend. The key risk to this outlook is whether electricity supply, transmission capacity, and grid infrastructure can expand quickly enough to accommodate the next wave of AI-related electricity demand.

Electricity output is rising quickly, but generating capacity has been rising even faster

Higher prices appear to have driven faster capacity growth. Utilities' output has risen quickly over the past several years. Transmission is 5.0% above where it was in 2022, a large rise compared to —for example — the 0.6% decline in factory output or the 2.3% rise in population over the same period. Commercial sales, which include sales to data centers, have driven the rise, with a 15.0% increase.

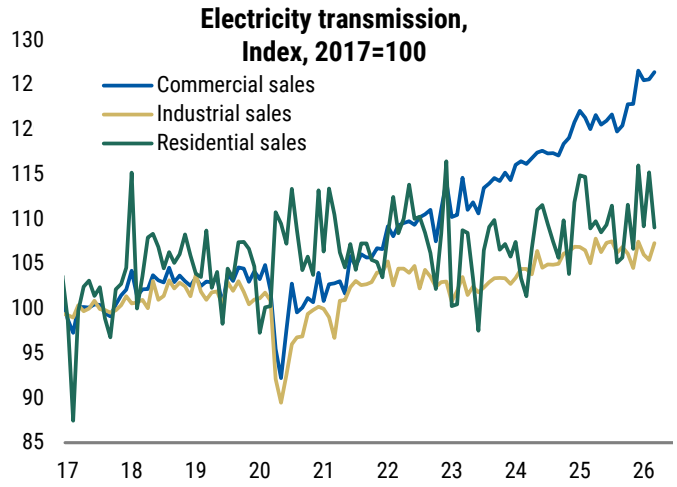
However, the surge in output is not now straining capacity. Capacity utilization for the utilities sector has fallen over the same period because utilities' capacity has risen by 14.2%. EIA data show that the expansion reflects increased solar power, wind power, and battery storage capacity. There may be constraints ahead, but for now, capacity is outpacing the new demand.

Exhibit 24: Rapid increase in utilities output



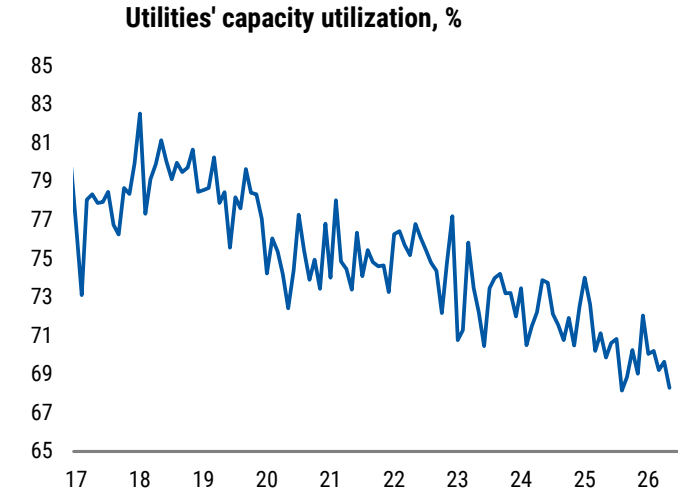
Source: Federal Reserve Board, Morgan Stanley Research

Exhibit 25: "Commercial sales," which include data centers' electricity usage, have shot upward



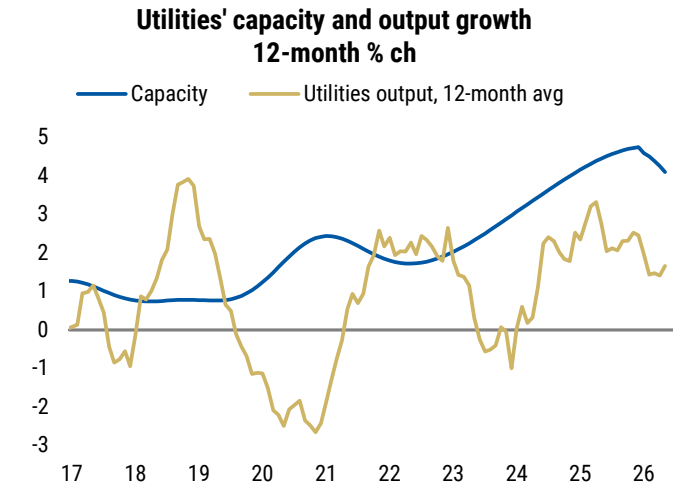
Source: Federal Reserve Board, Morgan Stanley Research

Exhibit 26: Falling capacity utilization...



Source: Federal Reserve Board, Morgan Stanley Research

Exhibit 27: ...with very rapid capacity growth



Source: Federal Reserve Board, Morgan Stanley Research

Exhibit 28:

Net summer capacity, mil kw

	Coal, petroleum, nat gas	Nuclear	Renewables	Of which: Solar	Battery storage	Total
2022	730	95	299	67	7	1156
Year ending Feb	711	97	392	142	37	1262
Change	-19	2	93	75	30	106

Source: EIA, Morgan Stanley Research

GDP Implications of Data Center Delays

We see only a modest downside risk to US GDP from delays or cancellations of data center projects. Assuming the estimated $130 billion of projects delayed or cancelled in

1Q26 continues at a similar pace through the year, and that these projects would have been constructed over a two- to three-year horizon, we estimate that local political pushback could reduce real GDP growth in 2026 and 2027 by less than 5bp.

As we argued in our mid-year outlook, AI-related capex has been an important driver of growth, supported by sustained hyperscaler investment and the continued buildout of compute and power infrastructure. Accordingly, we remain attentive to risks that could alter hyperscaler spending plans. Under this scenario, delayed data center projects could reduce the contribution from nonresidential fixed investment to real GDP growth by roughly 10bp in both 2026 and 2027.

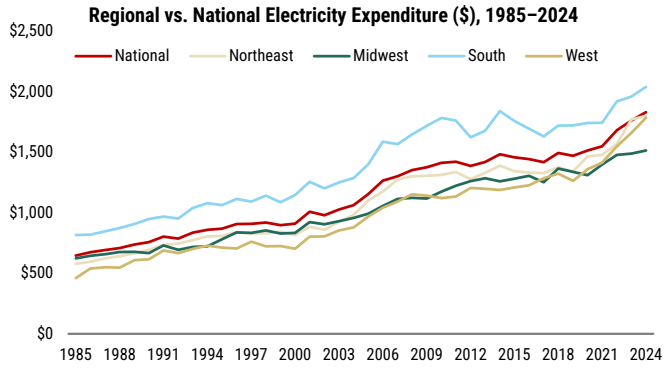
However, the implications for GDP are considerably smaller than the effect on business investment. A substantial share of AI-related capital spending consists of imported equipment—including servers, semiconductors, and other hardware. Consequently, weaker data center investment would also reduce imports, offsetting much of the drag from lower fixed investment in the GDP accounts. After accounting for the imported content of AI-related investment, we estimate the reduction in real GDP growth to be only around 1–3bp.

That said, we see greater downside risks to the medium to long-term growth outlook than to near-term GDP. If political opposition continues to delay or constrain data center development, it could slow the expansion of computing capacity needed to support AI adoption beyond 2028. Given that the economy remains in the early stages of the AI investment cycle, a meaningfully slower infrastructure build-out would likely delay AI development and its diffusion across industries. In turn, this would postpone the productivity gains and broader economic benefits we expect from AI adoption, even if the near-term impact on measured GDP growth remains limited.

What Are the Regional Effects for the Consumer?

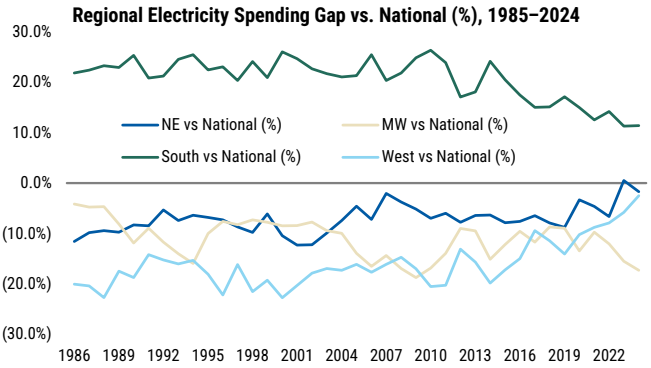
In our previous note, we noted how rising electricity prices are likely to weigh on households because electricity is an essential service with few short-run substitutes, meaning higher costs primarily squeeze disposable income rather than reduce usage. Lower-income households are disproportionately affected, as electricity, gas, and fuel make up a larger share of their spending and utility budgets, tightening already constrained household finances. Survey evidence suggests payment difficulties increased across most income groups between 2023 and 2024, but the burden is most acute for lower- and middle-income households, making higher electricity prices a regressive shock to consumer spending.

Exhibit 29: Average annual electricity spend has increased, at the national and regional levels



Source: BLS, Haver Analytics, Morgan Stanley Research

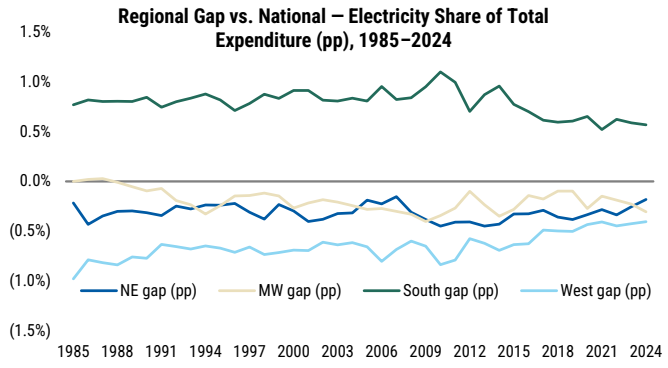
Exhibit 30: The South has been persistently spending more on electricity than the other regions



Source: BLS, Haver Analytics, Morgan Stanley Research

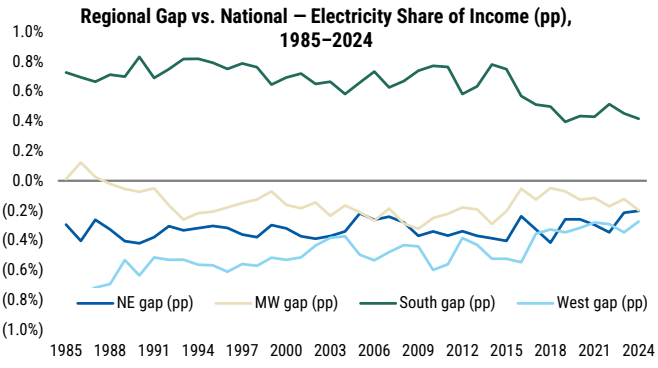
We also find that the national picture masks a meaningful regional divergence in the electricity cost burden on consumers. Data from the Consumer Expenditure Survey (CEX) implies that nationally, average annual household electricity expenditure has nearly tripled in nominal terms since 1985, rising from $647 to $1,833. However, **the regional spread around that average has been widening, not narrowing.**

Exhibit 31: As a share of total expenditures, the South spends more on electricity than the other regions...



Source: BLS, Haver Analytics, Morgan Stanley Research

Exhibit 32: ...and the difference persists when measuring electricity spend as a share of income.



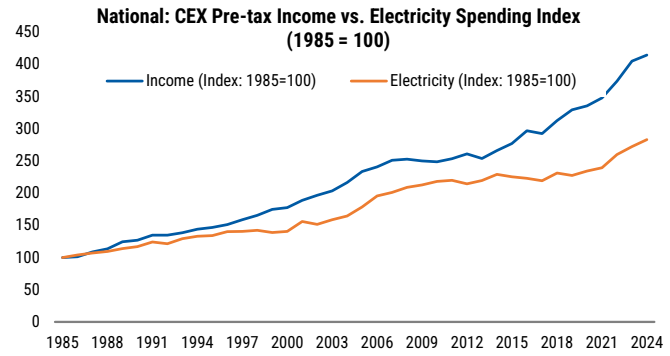
Source: BLS, Haver Analytics, Morgan Stanley Research

The South has spent more than the national average on electricity every year since 1985, and that gap has grown to +$209 (11.4%) above the national figure in 2024. The Midwest shows the opposite and more striking trend: a region that spent roughly in line with the national average through the 2000s now spends 17.3% below it ($317 less annually), the largest regional shortfall of the four. Northeast and West track closer to the national line, each running modestly below it.

The South's higher dollar spend reflects a disproportionately larger share of electricity costs, rather than larger household budget. On a share-of-budget basis, Southern households devote 2.9% of total expenditures and 2.2% of income to electricity in 2024, versus 2.3% and 1.8% nationally. The burden gap of roughly half a percentage point has persisted, narrowing only modestly, from +0.77pp in 1985 to +0.57pp in 2024 on the expenditure measure. The West sits at the opposite end, spending the least of any

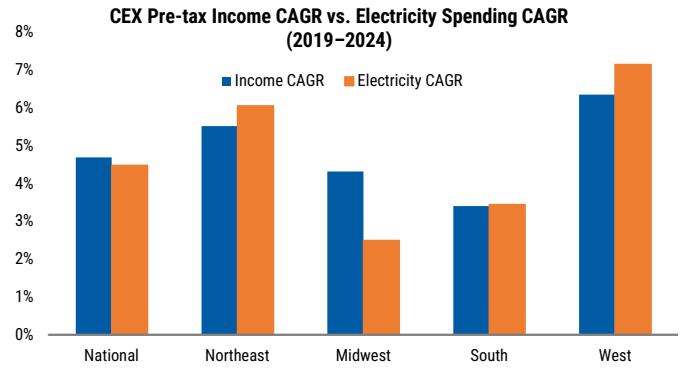
region as a share of both income and total expenditure despite having among the highest nominal incomes. This suggests that the burden on the consumers in the South burden is structural.

Exhibit 33: At the national level, the growth in pre-tax income measured in the CEX data is faster than for electricity spending over the last four decades



Source: BLS, Haver Analytics, Morgan Stanley Research

Exhibit 34: Over the past five years, the pace of growth of electricity costs has exceeded the pace of pre-tax income growth for the North-East and West regions



Source: BLS, Haver Analytics, Morgan Stanley Research

Over the past four decades, nationally and in every region, income has grown faster than electricity spending. National income has seen a CAGR of 3.7% versus 2.7% for electricity between 1985-2024. This implies that electricity costs have not, on a multi-decade view, structurally outpaced households' capacity to pay these costs. However, more recent years tell a different story. **Over 2019–24, the gap has nearly closed nationally (4.7% CAGR for CEX pretax income growth vs. 4.5% for electricity spending), and has flipped outright in the Northeast and West, where electricity spending is grew faster than income** (+0.53pp and +0.80pp per year, respectively). The Midwest is the clear outlier, with income growth still running well ahead of electricity costs in 2024 (-1.82pp). Our results imply that even as data center–driven demand growth pressures electricity bills in aggregate, the household-level squeeze is much more regional. The most up-to-date CEX data suggests that this pressure on households is concentrated in the Northeast, West, and, on a persistent budget-share basis, the South.

Fixed Income

Vishwanath Tirupattur, Vishwas Patkar, Fernanda Lima, Carolyn Campbell, James Egan, Mark Schmidt

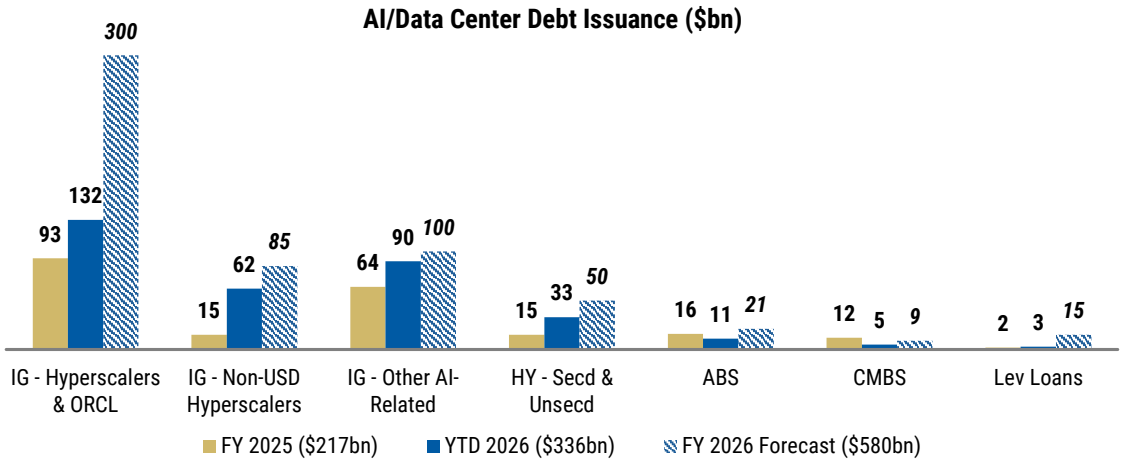
The AI buildout has shaped the market narrative across multiple forms of credit (corporate, securitized, private) via several key vectors, including: 1) significant debt supply across different channels, 2) increased fundamental exposure to the AI story on the back of a growing data-center debt sector and hyperscaler concentration, and 3) AI disruption fears in vulnerable sectors, that has driven tiering in performance across different segments within credit (e.g., private vs. public). **We would expect that any emerging bottlenecks – including political pushback — that results in a slower data center build, and consequently less compute, should be most positive for credit products that are backed by stabilized or nearly-stabilized assets given the reduced risk of overbuild and asset obsolescence.**

Debt Issuance Remains the Biggest Story for Credit

This time last year, AI/data center debt financing was barely a talking point with investors, while today it is arguably the most important theme. During 1H26, we estimate nearly $311 billion of AI-related/adjacent debt issuance across global corporate and securitized credit (+43% vs. issuance in FY25, ~$217 billion). For USD issuance, we expect the run-rate to hold or even accelerate in certain buckets, but think non-USD issuance could moderate. As a result, we forecast FY26 issuance of roughly $580 billion (Exhibit 35).

Pushback to future data center build-outs can clearly weigh on the timing and intensity of the capex cycle, either drawing it out over a longer period of time, or curtailing total investment needs. Details matter, though: Over what time frame might any such restrictions apply? Will there be actual curtailment or just a higher bar/scrutiny for future approvals/permitting? Will data centers currently under construction be impacted or not? Finally, how could potential pushback impact path to monetization and also influence future investment decisions by the hyperscalers?

Exhibit 35: We've seen ~$336bn of AI-related debt issuance across global credit markets YTD



Source: Bloomberg, Trepp, CreditFlow, PitchBook, Morgan Stanley Research estimates. Data cut as of 7/7/26.

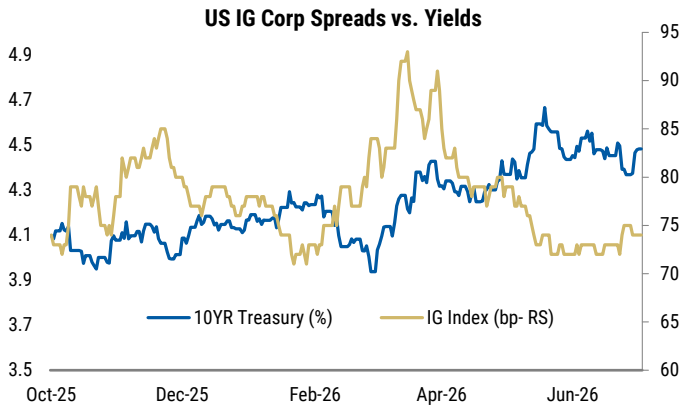
At this point, there are too many unknowns to have high conviction on how this affects credit markets near-term. Ultimately, **we rest our baseline assumptions on our public policy team's thesis that the federal government will continue to support the data center build-out for national security reasons,** albeit with an evolving and somewhat more stringent process for approvals, including ratepayer protections and sustainability considerations.

Given the importance of the supply narrative for credit markets, we walk through implications in two potential scenarios that could unfold for corporate credit, both public and private:

1) Capex cycle gets truly drawn out and lower investment needs ultimately result in less supply. In this scenario, political backlash would manifest as lower capex in 2027/28 vs. market expectations, and therefore associated financing needs also get tempered. **When we overlay this with the fact that almost the entire 'delta' in corporate supply this year has come from the AI ecosystem, this could mean a notable reversal in the issuance picture.** All else equal, this could mean that already tight spreads could go even tighter, potentially hitting new lows since 1998. **One offsetting consideration here though is that spreads have been this tight because of high level of interest rates (Exhibit 36).** The level of yields in turn has been driven in large part by AI capex emerging as a structural growth driver. If pushback to future data center buildout dents the growth narrative, and drives yields lower, spreads may not tighten, even if new issuance slows down sharply.

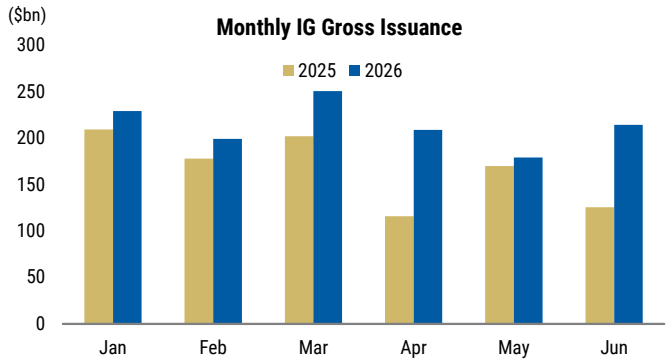
2) Front-loading of capex for data center construction on increasing worries that regulatory environment turns into a limiting factor for additional capacity. In this case, there is no imminent stoppage of data center buildout, but instead there are increasing worries that such regulation may happen in the not-too-distant future (the 2028 election possibility being seen as an important inflection point). Counter-intuitively, this might drive front-loading of the data center capacity buildout as developers may look to gain permits/acquire land/get projects underway before the window closes in a more meaningful way in the future. **This might lead to a hockey-stick style path on the investment cycle where front-loading leads to a sharp increase in capex over the immediate term, but at the expense of a decline in out-years. This might add to the already building supply pressures in the market (Exhibit 37).** Solid macro and micro fundamentals mean that spreads still stay low relative to history, but markets that see the largest supply increases potentially underperform.

Exhibit 36: All-in yields provide a strong anchor for IG spreads



Source: Bloomberg, Refinitiv, Morgan Stanley Research. Data as of 7/7/26.

Exhibit 37: Supply pressure is building in the IG market, in our view



Source: Morgan Stanley Research, Bloomberg, PitchBook LCD. Returns as of 6/30/26.

In either scenario, it is important to highlight that access to power, especially "Off-grid" power solutions (ranging from fuel cells and gas turbines to energy storage) along with "time-to-power" strategies such as repurposing Bitcoin mining sites, have become central to the build-out. Power is no longer a secondary consideration but a co-equal constraint on data center development that must be secured up front. Developers are already prioritizing sites based on power availability and exploring integrated solutions that bring generation and compute closer together. Incorporating the sourcing of power will be a key consideration for capex to materialize, regardless of the effect of regulatory regime changes at the Federal or state and local levels

For securitized credit, the story is slightly different. Securitized credit products such as data center ABS and CMBS are for data centers with stabilized contractual cash flows - data centers that are built out, powered, with established contractual leases and cash flows. As such, the existing transactions are relatively insulated from the political challenges of data centers that are being planned or in their early stages of construction and power sourcing. Indeed, we view any obstacles that prevent or slow down the data center build as positive for ABS and CMBS, as it limits the risk over oversupply or overbuild, particularly before the refinancing window of many deals.

Stabilized and Under Construction Assets Become More Valuable and Overbuild Risk Becomes Less of a Concern for Now

Data center construction is becoming its own sector among the different credit markets. Unsecured corporate issuance has and continues to fund AI capex, but we have seen project finance-like structures emerge even in the public corporate credit markets as of late. Since the beginning of 2025 we have seen ~$91 billion of data center construction bonds in corporate credit (~$38 billion in HY and ~$53 billion in IG) and $44 billion of data center bonds in securitized credit ($27 billion in ABS and $17 billion in CMBS). In this context, it is important to lay out what investors are financing in the different markets:

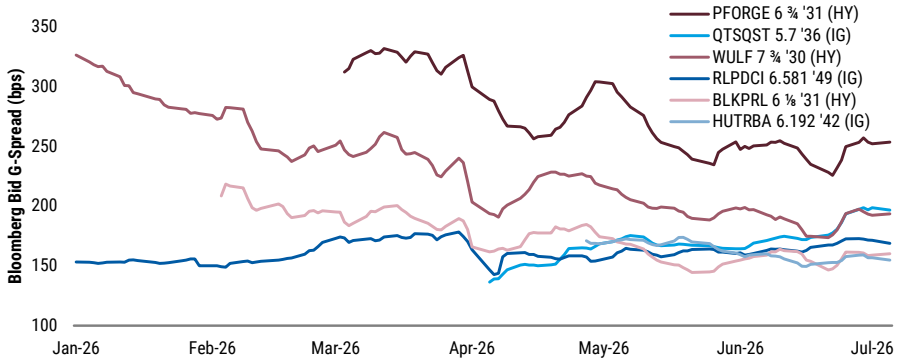
- For **corporate credit bonds (Exhibit 38),** debt is being raised mostly by developers (a number of which used to be bitcoin miners and are now first time issuers in the corporate credit markets) to finance the construction of the data

center, which will then be leased out. Debt gets amortized (only partially, in most cases) with rent payments from the tenant, which is either a hyperscaler or a neocloud. In the case of deals that have neoclouds as tenants, higher quality credits such as hyperscalers are either backstopping or fully guaranteeing lease payments. **Many of these deals are underwritten on a loan-to-cost metric, but as construction is complete, the more relevant metric becomes loan-to-value.**

- For **securitized credit,** assets are fully stabilized and operational. Nearly every deal is backed by multiple tenants and multiple assets/campuses, creating a diversification benefits for investors. Assets range from predominantly hyperscaler campuses with a handful of tenants and large capacity to smaller retail data centers leased our to dozens if not hundreds of tenants. Because the assets are already cashflowing – sometimes for many years – there is no construction risk. However, deals are non-amortizing ahead of their expected maturity, and while lease terms typically extend beyond the expected maturity date (with the exception of colocation data centers), assets are exposed to refinance risk. As such, securitized credit data centers are most indexed to asset/thematic risk compared to other asset classes.

Tying this back to the political backlash discussion, we would expect that fewer operational data centers in the US should mean less overbuild risk, as supply of compute should remain well out-stripped by demand. The likelihood of asset risk - i.e. a data center no longer being needed by the tenant/backer for a wide variety of reasons - also goes lower. In a nutshell, this could be a positive "fundamental" catalyst for data center debt, in addition to the tailwind of lower supply.

Exhibit 38: Select HY and IG data center construction bonds performance YTD



Source: Bloomberg, Morgan Stanley Research. Updated as of 7/6/26, presenting a 3-day moving average.

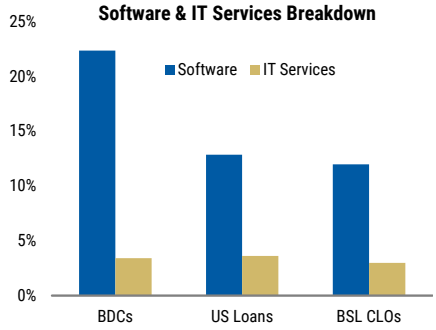
The implications to unsecured hyperscaler risk are less straight-forward, in our view. While lower capex and issuance needs could be supportive for spreads and ultimately result in lower pressure on ratings and credit quality, having less capacity available could prolong the path to monetization. Less capacity might also result in price increases to customers to protect margins, and then the question would be how sensitive is AI adoption to price hikes (for both consumer and enterprise categories).

Disruption Fears Might Be Overdone If Compute Capacity Is Constrained; BDCs/Private Credit and Software Loans Can Catch Up

Another side of the AI debate in credit has been around disruption fears, especially in asset-light services oriented industries like software. The impact on market level performance has been most pronounced across private and the broadly syndicated loan (BSL) space, where the exposure to software is notably high. As we show below (Exhibit 39), BDCs have nearly 25% exposure to software, while the BSL market has roughly 16%. On the year, software loans have seen a ~7 pt decline, where as the ex-software cohort has seen less than 1pt decline (Exhibit 40).

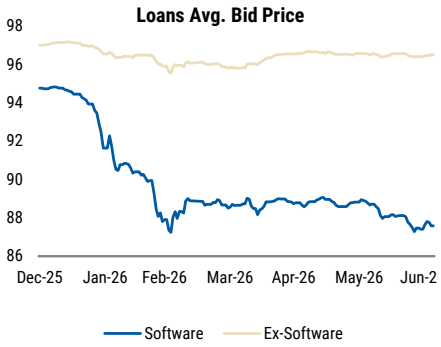
If the data center buildout is drawn out, we can reasonably conclude that the imminence of the potential disruption that have driven the agita in private credit market, will become less immediate. **A more gradual rollout would push the anticipated impact of AI-driven disruption further into the future, giving affected companies additional time to adapt, reposition, and manage through the transition.** It is important to note that the sectors that are seeing underperformance actually have fairly healthy operating metrics. Software companies — while highly levered on average — continued to show reasonable fundamentals growth anchored by stable contractual revenues.

Exhibit 39: Software exposure across BDCs, BSL and CLOs



Source: PitchBook | LCD, Morningstar, S&P Global, ICE BofA, Morgan Stanley Research

Exhibit 40: Loans price performance

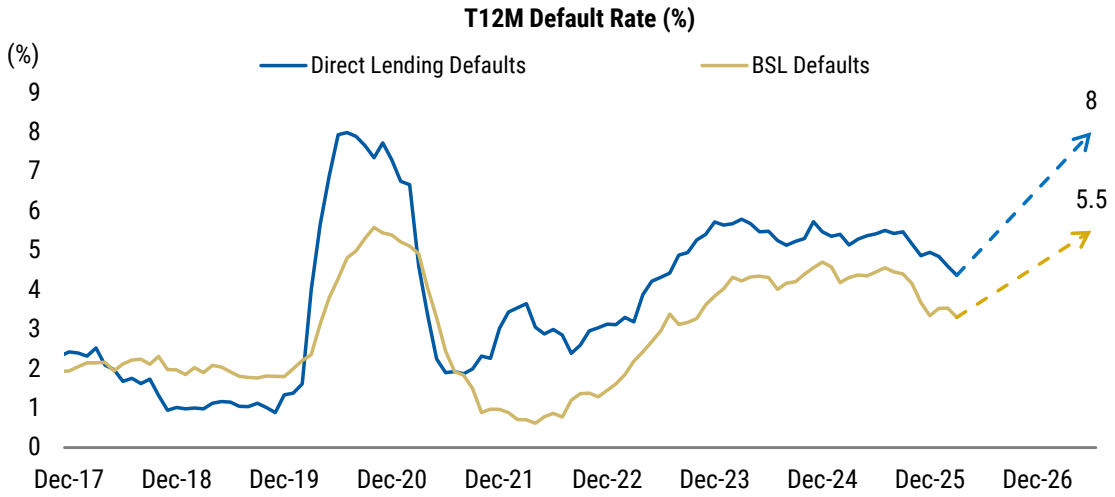


Source: Morningstar, Morgan Stanley Research

With fears of AI disruption emerging, large chunks of the sector have lost access to capital, with tech accounting for just 10% of YTD loan issue (vs. >20% in both 2024 and 2025; for context, ~88% of tech loan issuance is comprised of software). Our baseline is for a refinancing driven default and downgrade cycle within the sector, that takes overall default rate to 8% in private credit and 5.5% in BSL (Exhibit 41).

But as we have said before any potential disruption rests on the narrative of continued improvement in frontier models, as their capability broadens out in scope. **With lower compute built out, the disruption timeline also gets pushed back, allowing companies and sponsors have more runway to come up with refinancing solutions. As a result, actual defaults in this scenario might be lower than expected, and the YTD laggards like private credit/BDCs, loans might gain traction as an "anti AI" trade.**

Exhibit 41: We expect the software refinancing-driven default cycle to result in higher default rates for private credit and BSL

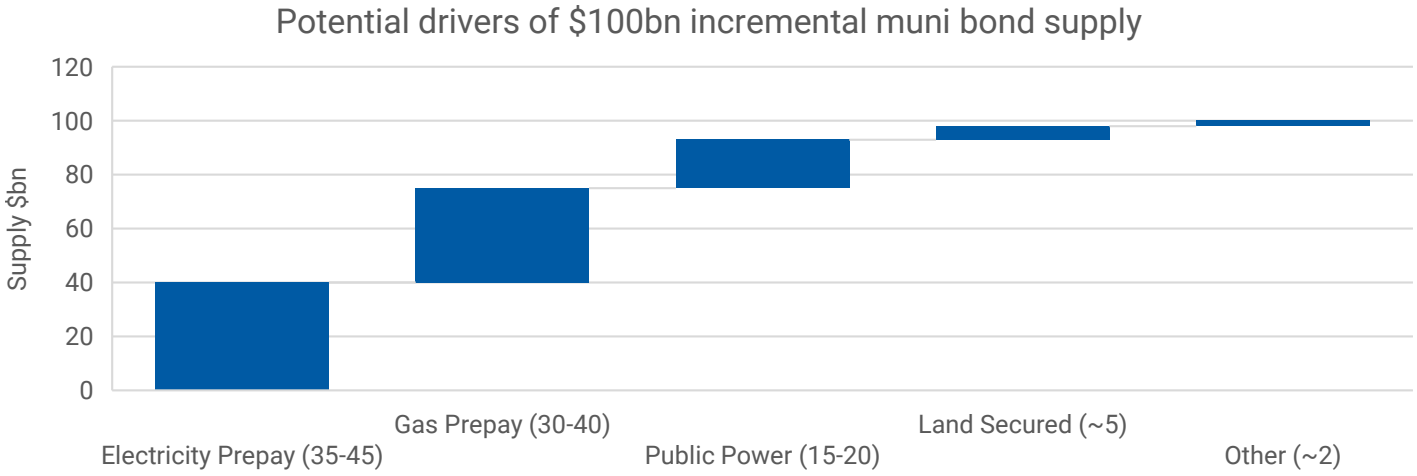


Source: S&P, Pitchbook | LCD, Morgan Stanley Research

Munis: Powering the AI Race

Rising power prices are likely to spur action by municipalities. We see scope for up to $100 billion in incremental muni issuance, led by energy prepay debt, plus incremental public power and land-secured deals.

Exhibit 42: AI-driven increases in energy prices could spur $100bn of muni issuance in the years ahead



Source: Morgan Stanley Research estimates.

Pushback to rising power prices is likely to spur more prepay and public utility issuance, not less.

As moratoriums, tax hikes, and regulatory delays drive up project costs, we think data center sponsors could pay more attention to the funding advantage offered by tax-exempt finance.

Tax exempt finance is more complex than regular way securitized or corporate issuance, but the funding advantage could encourage more data center developers to explore muni

capital markets. We now expect more hyperscalers to elect to be funding recipients in prepay transactions.

Exhibit 43: We Can Imagine 8 Ways Muni Bonds Could Help Fill the Data Center Financing Gap (Though Not All Are Likely)

Option	Feasibility	Likelihood	Who Owns It:			Considerations	Likely Debt Outcome
			Data Center	Energy Supply	Infrastructure		
Municipal utility prepays gas and electricity deliveries	High	High	Private Customer	Public (Delivery)	Public	Data center cannot guarantee repayment	Tax-Exempt, non-AMT Prepay bond
Municipal utility builds power plant to accommodate load growth	High	High	Private Customer	Public	Public	Muni utility must retain economic risk	Tax-Exempt, non-AMT
Development district builds infrastructure for data center	High	Medium	Private	Any	Public	Municipality foregoes property tax revenue	Tax-Exempt, non-AMT
Hyperscaler elects to be funding recipient in prepay transaction	High	Medium	Private	Any	Private	Subject to remarketing risk	Tax-Exempt, non-AMT Prepay bond
Public university builds data center for research purposes	Moderate	Medium	Public or 501c3	Any	Public or 501c3	University retains ownership & management risk	All or a portion would be taxable given for-profit business use
Spaceport builds data center for qualified space-based infrastructure	Moderate	Medium	Private	Any	Public Lease Private Use	Data center would need to be related to a space project	Qualified Spaceport bond
Public broadband provider invests in physical internet capacity to attract data centers	Low	Very Low	Private	Any	Public	Requires approval of conduit financing authority	Detailed tax compliance Subject to AMT
Data center elects to build data center through an industrial reveue bond (IRB)	Very Low	Very Low	Private	Any	Any	Requires approval of conduit financing authority	Qualified small issue limit Subject to AMT

Source: Morgan Stanley Research, IRS guidance

As for local governments, we see state and local government pushback as credit positive: it will encourage a fairer negotiation around tax abatements and tax incentives. This should encourage faster growth in taxable assessed valuation, and therefore property tax revenue.

Data Center REITs

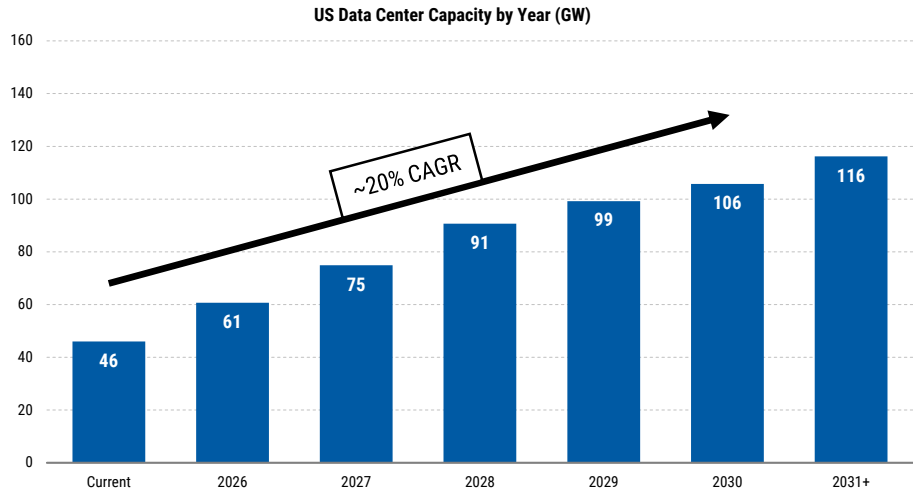
Cameron McVeigh and Garo Amerkanian

We see the publicly traded colocation data center REITs (OW EQIX, EW DLR) as **relatively insulated from political pushback risk** to new data center development and further capacity expansion. In recent group meetings at NAREIT (see our full takeaways here), management of both companies highlighted that while data center development as a whole is increasingly difficult, they have not seen significant construction delays and have even accelerated builds in some cases.

We would note that an increase in US political headwinds could prompt data center operators and developers to reallocate future capacity investments toward US jurisdictions with less regulatory friction or international markets. As a result, **slower US capacity additions would likely pressure revenue growth and development yields**, which remain central to our Top Pick thesis on EQIX (see here for our upgrade). We remain constructive on the data center REITs, with our view summarized in the following three points:

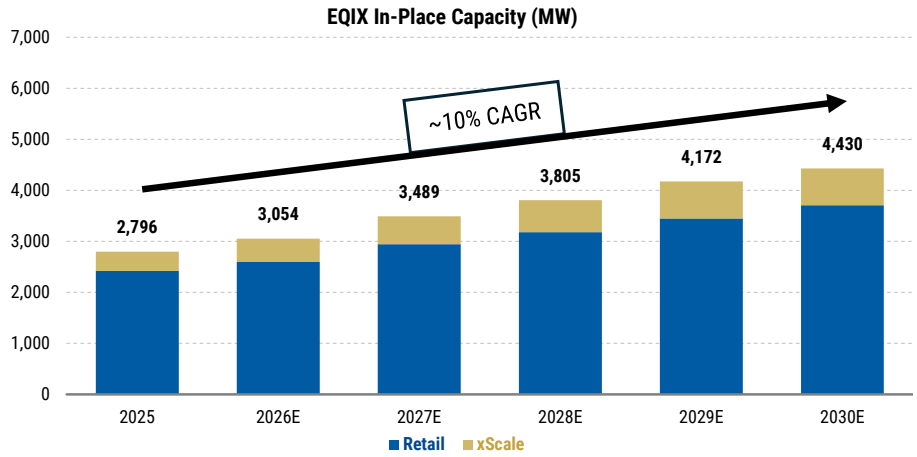
1. **Colocation data centers are much smaller than hyperscale/AI training data centers.** EQIX and DLR own and develop data centers in the 5-10 MW range, on average, a much smaller power draw than the gigawatt-scale campuses being planned and developed by hyperscalers, neoclouds, and bitcoin miners. This results in shorter interconnection queues, lower impact to power prices, lower water consumption, and less forceful political pushback.
2. **Colocation data centers are critical infrastructure.** While they have begun to serve new AI training and inference workloads, colocation data centers still primarily house traditional workloads for enterprises, governments, and network providers. Colocation data centers form the backbone of the internet, powering schools, hospital systems, and consumer-facing applications. Their critical role in connectivity should result in softer political pushback during planning and development.
3. **The data center REITs have experience and proven track records in community engagement.** Both EQIX and DLR have decades long operating experience. They have developed significant expertise in engaging with municipalities, customers, utilities, power grids, land owners, equipment vendors, and all other stakeholders in the data center value chain. In many cases, they are a trusted partner to governments and communities, with dedicated teams for community engagement and sustainability.

Exhibit 44: US data center capacity is expected to reach 106 GWs by 2030, per 451 Research



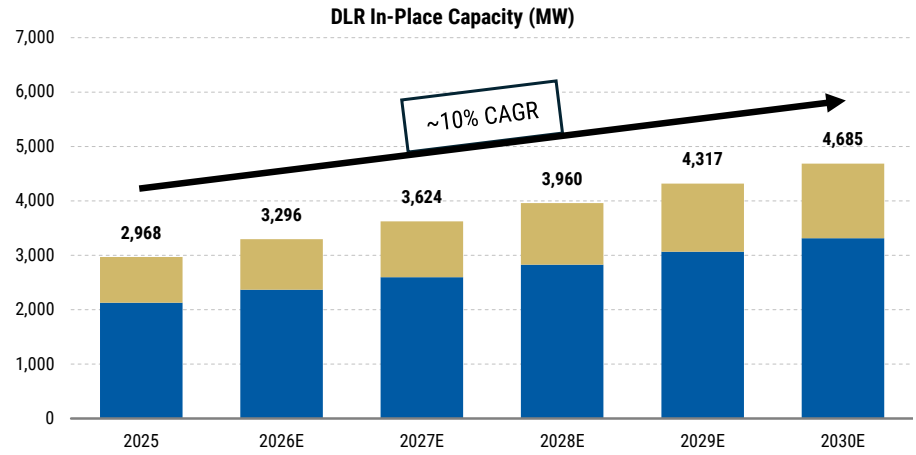
Source: 451 Research, Morgan Stanley Research

Exhibit 45: We forecast Equinix's sellable capacity to reach 4.4 GWs by 2030 including their xScale joint venture, a ~10% CAGR



Source: Company data, Morgan Stanley Research
Note; All values MSe

Exhibit 46: We forecast Digital Realty's in-place capacity to reach 4.7 GWs by 2030, a 10% CAGR



Source: Company data, Morgan Stanley Research
Note; All values MSe

US Power & Utilities

David Arcaro & Amanda Huang

Elevated Political Risk

Increasing political risk ahead of the midterm elections. As the midterm election cycle gains momentum, we expect political focus on electricity affordability to remain elevated. Throughout the year, issues such as utility rate freezes, heightened scrutiny of customer bills, shielding residential ratepayers from costs associated with data center infrastructure, lowering electricity bills, and slowing data center development have increasingly become part of gubernatorial campaign platforms, and we would expect this to be a an important voter issue in November. In practice, sitting governors have also taken direct action on several of these issues, including:

- **Delaware:** In June, Governor Meyer called for immediate action and urged regulators, utilities, lawmakers, and the public to prioritize affordability heading into the final weeks of the legislative session. The Governor also outlined key issues such as the utility profit model, rate freezes, and new generation projects.
- **Louisiana:** In June, Governor Landry signed an executive order to set new requirements for data center projects to balance economic opportunities with protecting ratepayers.
- **Maine:** In April, Governor Mills signed an executive order to establish a Data Center Advisory Council to help protect ratepayers, minimize environmental impacts, and enable development. The order also directed the Department of Energy Resources and the PUC to identify and implement ways to protect ratepayers from energy costs related to data centers.
- **Pennsylvania:** In May, Governor Shapiro introduced the Governor's Responsible Infrastructure Development (GRID) Standards setting enforceable guidelines for data centers. More recently, the PA House passed legislation codifying the standards into law and requiring data center developers to protect energy affordability. Earlier in April, Governor Shapiro sent a letter to several utilities in the state laying out several directives to help address affordability concerns.
- **Texas:** In June, Governor Abbott directed the PUCT and ERCOT to **1)** require data centers to fully fund the costs of electric infrastructure needed to serve their operations, **2)** identify additional actions under their authority to safeguard residential and small business ratepayers and submit a joint memorandum to the Office of the Governor by July 17, 2026, and **3)** initiate action to reduce residential ratepayers' transmission costs by July 31, 2026.
- **Utah:** In May, Governor Cox signed an executive order creating statewide guidelines for large data centers focused on natural resource protection.
- **PJM Governors:** In January, a bipartisan coalition of 13 PJM governors pushed PJM to hold a reliability backstop auction to protect ratepayers.

Data center incentives reversal underway. For roughly a decade, states had competed with one another to offer generous packages to attract data centers, including sales and use tax exemptions, property tax abatements, long-duration windows, and direct subsidy

packages. We are now beginning to see a reversal, with states now moving to pause, condition, or repeal data center tax breaks. While largely not permanent in nature, we still see these actions as a risk to future data center build-out, potentially contributing to pauses or delays while emphasizing parts of the country which still have incentive mechanisms in place.

Exhibit 47: Recent State Rollbacks of Data Center Tax Incentives

State	Status	Action
Alabama	Enacted	Legislation to modify (limit) current data center exemptions.
Arizona	Enacted	3-year moratorium on new sales tax exemptions for data centers.
Delaware	Enacted	Legislation to eliminate state tax credits and license fee reductions for most large data centers.
Illinois	Enacted	Pause of state tax incentives for new data center developments.
Iowa	Enacted	Reformed limits on new sales tax exemptions.
Massachusetts	Enacted	Pause of the acceptance of applications for the state's sales and use tax exemption, pending stronger ratepayer and environmental protections.
Nebraska	Enacted	Eliminated a dedicated sales and use tax exemption, tax breaks still exist.
New Jersey	Enacted	Pause on applications for the Next New Jersey Program - AI.
North Carolina	Enacted	Provision to remove sales tax exemption for electricity used on-site, complete repeal proposed.
Ohio	Enacted	Pause of new data center sales tax exemptions.
Oklahoma	Enacted	Removal of tax incentives for any data centers not operational by Jan 1, 2027.
Oregon	Enacted	1-year moratorium to block new data centers in urban and suburban areas from accessing property tax incentives.
Washington	Enacted	Removal of tax exemptions for equipment replacements and refubishments.
Michigan	Introduced/Pending	Legislation to repeal sales and use tax exemptions.
Montana	Introduced/Pending	Package of bills to repeal tax break structure.
Pennsylvania	Introduced/Pending	Legislation to eliminate or restructure sales tax exemption.
Wisconsin	Introduced/Pending	Bills to add strict requirements for tax break qualification.

Source: Morgan Stanley Research

Data Centers to Pay for Infrastructure Build and Upgrades

Shifting cost allocation. Across different entities (utilities, utility commissions, legislators, and hyperscalers), we continue to see a push towards shifting costs onto large load customers to protect existing ratepayers. Large load tariffs, in particular, have gained traction across the country at both the utility and state level — as of last month, 24 states had approved at least one large load tariff and four other states had pending tariffs. Such tariffs should help protect existing ratepayers, reduce stranded asset risk, and introduce a standard pathway for load requests by including provisions such as contract term and exit fees, minimum billing demand, financial assurance, and capacity reassignment. We include an updated list of utilities under coverage which have either received approval for or are in the process of receiving approval for a large load tariff below:

- AEE secured in MO
- AEP secured in IN, KY, OH, VA, WV and pending in MI, TX, OK
- CMS secured in MI
- D secured in VA
- DUK secured in SC
- EXC secured in PA and IL and pending in DE
- IDA secured in ID
- NEE secured in FL
- PCG secured in CA (interim implementation)
- PNW pending in AZ
- PPL secured in KY and PA
- SO secured in AL and GA
- XEL secured in MN and pending in CO

Potential national efforts for data centers to build/bring/buy energy. On the national level, the Ratepayer Protection Act is being considered in the House as one of the first federal attempts to allocate infrastructure build-out costs — the bill would require state utilities to consider creating a "large load standard" requiring data centers to pay for grid

upgrades. Recall, in March, Amazon, Google, Meta, Microsoft, OpenAI, Oracle, and xAI signed the Ratepayer Protection Pledge, a voluntary agreement from the White House committing to shielding existing consumers from the data center infrastructure build-out. The Ratepayer Protection Act would codify elements of the pledge and would help essentially create a national data center tariff, which is currently being implemented in a piecemeal manner across utility jurisdictions and at the state level.

Continued Uncertainty in Competitive Markets

Even with data center cost allocation, we still see heightened affordability challenges in competitive markets with prices likely to keep rising. Competitive markets (making up ~2/3 of overall demand) rely on price signals to help incentivize new generation build - with increasing capital costs, we now estimate a new combined cycle gas plant would require ~$95+/MWh around the clock pricing. ERCOT forward prices around $50/MWh and PJM prices around $80/MWh (including capacity revenue) are still too low to incentivize new baseload generation to get built, leading to continued market tightness amidst growing demand forecasts.

Potential PJM market reforms ahead. As an initial push to address such capacity shortfalls, PJM will be conducting their one-time Reliability Backstop Procurement (RBP) process over the next several months. The RBP is currently proposed to include two parallel phases: **1) Bilateral Matching** to provide match-making services for buyers (large load) and sellers (new generation) and **2) Central Procurement** to procure additional necessary capacity as requested by large load customers. Concurrently, PJM is also finalizing their Connect and Manage framework to help expedite grid interconnection for new load in exchange for curtailment or load shifting during periods of grid stress. Even with RBP supply additions, we still believe PJM will remain very tight. Recall, the most recent capacity auction resulted in a 6.5 GW shortfall for mid-2027 and PJM's load forecast implies 6-12 GW of load growth annually in the years following, with very little supply likely to come online over that period. PJM has also initiated its market design assessment and expects to have reforms implemented by the May 2027 BRA - FERC will host a technical conference on potential reforms later this month.

Data Centers are Trending Toward Onsite Power

Bottlenecks are beginning to form around interconnection and labor. With a substantial ramp in data center power demand, we expect lengthy grid interconnection delays with some regions already experiencing 5- to 7-year wait times. Most utilities have previously noted transmission as the key bottleneck for accelerating demand, and as more data centers are connected to the grid, we would expect the bottleneck to intensify. Additionally, we are beginning go hear about potential challenges with labor, with the buildout of power and data center infrastructure dependent on the same core workforce.

Data centers are trending toward onsite power — positive SEI, INIO, and BE (all OW). As grid interconnection lead times extend beyond five years in certain regions and pressure increases for data centers to directly secure or fund the power they consume, onsite generation is emerging as an attractive solution to address these concerns. These "de-bottlenecking" solutions include small scale gas turbines, reciprocating engines, fuel cells, and battery storage and allow data centers to get access to electricity ahead of grid

interconnection. With an estimated ~38 GW potential shortfall in power for US data centers through 2028 (growing to ~122GW through 2030), we see an expanding TAM for such solutions that can accelerate access to power for large loads.

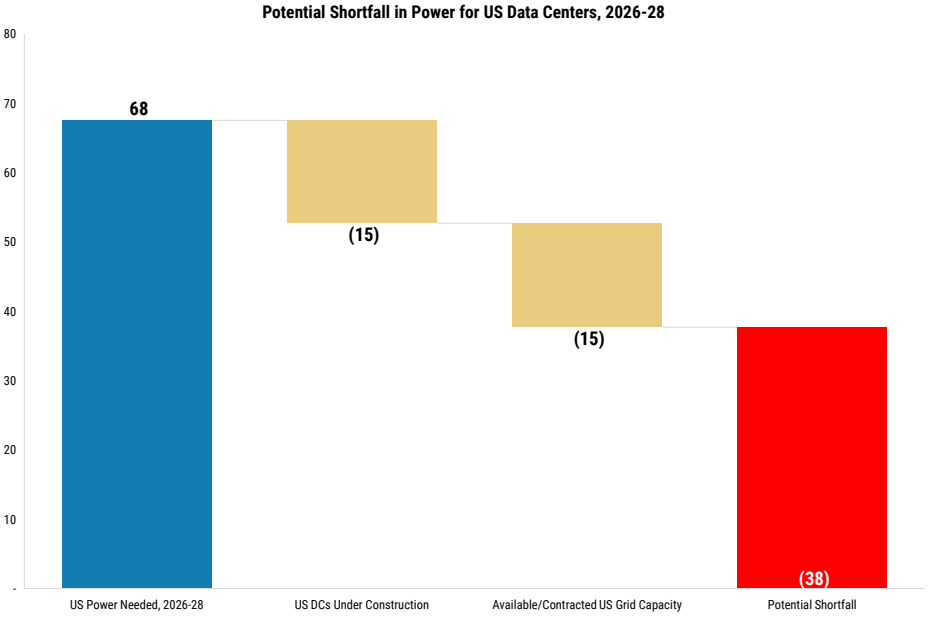
Powering GenAI

Stephen Byrd

Despite the active conversation surrounding the Powering AI thematic, the key argument remains clear: demand for compute is likely to continue growing materially faster than the power infrastructure required to support it. Our latest US data center power shortfall math shows a 38 GW power bottleneck over 2026-28, down from our prior 47 GW estimate for 2025-28. We now identify 15 GW of US data center capacity under construction, an incremental 5 GW relative to our prior work. This is a meaningful improvement, but it does not change our investment conclusion: power availability, transmission access and grid interconnection remain the primary bottlenecks to AI deployment. We continue view the following 4 solutions as most relevant. **(A)** natural gas turbines (15-20 GW through 2028), **(B)** Bloom Energy fuel cells (5-8 GW through 2028) our view on Bloom's ability to mitigate political concerns over emissions may accelerate the shift towards Bloom solutions, **(C)** nuclear co-location which has been revised downward to 0-5G W from 5-15 GW reflecting materiality of our prior conviction on heightened political risks, and **(D)** the Bitcoin miner repurposing of mining sites to AI data centers, represents our highest conviction time-to-power solution. The Bitcoin miners in our Intelligence Factory model (please click here to request a copy) represent nearly 25GW of critical IT power with firm grid interconnect agreements. The value lies is controlled access to power, high-voltage transmission, permitting progress, and a credible construction path.

Even with these solutions, we continue to see a disconnect between the power implied by AI chip sales and the power that can be energized on a commercial timetable. The durable bottleneck remains in consistently delivering the compute, power, cooling, land, transmission and construction capacity required to support more capable models and more intensive inference workloads.

Exhibit 48: We project a 38GW 2026-28 Potential Power Shortfall



Source: Morgan Stanley Research

Exhibit 49: Even after our probability-weighted assessment of time to power solutions, we still expect a 1-11GW shortfall

Total US Data Center Power Demand (GW), 2026-28	**68**
Less Data Centers Under Construction	(15)
Less Utility Grid Access	(15)
Power Shortfall Before New "Time to Power" Solutions	**38**

	Low End	Midpoint	High End	Probability of Success
Solution #1: Nat Gas Turbines	15	18	20	90%
Solution #2: Bloom Energy Fuel Cells	5	7	8	90%
Solution #3: Site DC at Op'l Nuclear Plant	-	3	5	75%
Solution #4: Convert Bitcoin Sites	10	14	19	90%
Probability-Weighted "Time to Power" Solutions thru 2028	27	37	46	
Net Shortfall Through 2028	**(11)**	**(1)**	**None**	
Shortfall as a % of 2026-28 US DC Deployments	*16%*	*2%*	*0%*	

We believe the most likely outcome

Source: Morgan Stanley Research

Recent investor attention has shifted toward model efficiency, token usage, and hardware demand. These debates matter, but they do not alter our core view. As AI adoption broadens and deepens, and as the complexity of what we do with AI increases, compute demand should continue to exceed supply. Our token economics work reinforces this conclusion. For a Blackwell data center, margins are in the 50-60% range; for Rubin and Feynman data centers, we estimate margins rise to ~80% and ~90%, respectively. These economics should allow token prices to fall while still preserving attractive margins, reinforcing the Jevons Paradox dynamic we view as bullish for AI power demand.

From the perspective of an Enterprise adopter of AI, the economics are compelling. For example, in a study of a wide range of Enterprise AI use cases, the average single use would save an Enterprise customer $55 in costs. While it is not possible to precisely know how many tokens will be used to achieve this outcome (and token usage will likely vary

significantly across Enterprise use cases), we can ground ourselves in some helpful math. One analysis suggests that a single AI Agent may consume ~15x the tokens relative to a query-based usage of a LLM. A typical query based usage of a LLM would consume ~5,000 tokens. If an Enterprise customer used 5-7 AI Agents to execute an economic task, the token usage would be 375,000-525,000 tokens. Token pricing can be found here — you will see that pricing can range widely among models and between input and output tokens. At an assumed average token price of $3-10 (in general, input tokens will outweigh output tokens, but not always), the cost to execute the economic task would be $2-5, a fraction of the $55 benefit.

The scale required for model training is also moving higher. A Google executive recently stated that the company may need to double compute every six months, which would imply a roughly 1,000x increase in 4-5 years. While it may sound daunting for LLM developers to accumulate 10x the compute to achieve a 2x increase in capabilities, an important mitigant is the rapid improvement in GPU and TPU computational power per chip. For example, for NVIDIA, we project that each new chip generation will have 250% more exaFLOPs, with only 60% more power usage. 10x compute used for training = 2x increase in LLM capabilities. We believe the non-linear rate of improvement in LLM capabilities continues to be one of the, if not the, most important drivers of alpha across a wide range of asset classes. It is difficult for all of us to think on a non-linear basis, and we notice that there is not enough focus on extrapolating the implications of AI adoption over time.

The key development in our thinking is the US political environment: the threat from politics is primarily a supply-side risk, not a demand-side risk. We do not expect political backlash to materially reduce our compute demand projections. We do, however, expect future data center projects to face greater scrutiny, with rising risks tied to permitting delays, interconnection constraints, local opposition, consumer bill impacts, and potential moratoria. This can widen the power shortfall even if chip demand, token demand, and AI adoption continue to accelerate.

This widening gap is where the next investment opportunity lies. Potential rising backlash against data center growth would lead to greater use of off-grid and behind-the-meter power supply strategies. Commitments by AI players to avoid raising consumer power bills may not be sufficient; over time, AI infrastructure would need to provide net benefits to the communities and grids in which they operate. The most relevant solutions include fuel cells, turbines, energy storage, behind-the-meter generation and Bitcoin-to-HPC site repurposing. We also see increased interest in designs that use one-way grid connections, providing power back to the grid during periods of stress, and storage-heavy architectures that serve as a “shock absorber” for the power system.

Sustainability

Rachel Fletcher, Arushi Agarwal, Ehsernta Fu

Community concerns around data center construction are growing: As highlighted in our US marketing feedback note, community backlash against AI has been a key topic in our recent investor meetings. Much of the discussion has centered on the resource intensity and environmental footprint of data centers, including concerns over large electricity loads that could strain local grids or increase power prices and significant water requirements for cooling in water-stressed regions. Communities have also raised concerns about construction-related dust and disruption, persistent noise from cooling systems, waste heat, increased traffic, and the development of greenfield or protected land. This pushback highlights the increasing overlap between environmental and social considerations, as local communities focus on the direct impacts on cost of living, quality of life, and access to shared resources.

Power is a key bottleneck: MS forecasts a large power bottleneck of 38 GW for US data center developers by 2028, before considering innovative "time to power" solutions. Community concerns have focused on the potential impact of new data center demand on grid reliability and electricity prices, highlighting the social implications of what is often viewed as an environmental issue. In our discussions, sustainability investors have also questioned the carbon intensity of interim power solutions that may be required to bridge the supply gap. The counterargument is that AI-driven demand could accelerate investment in cleaner, more reliable energy infrastructure over the longer term (see feedback from our Innovation & Impact Summit).

Carbon emissions extend beyond operational power use: We have previously projected that global data center build-out will drive cumulative GHG emissions of ~2.5 Gt by 2030 - this is equivalent to ~40% of a single year of US GHG emissions and 3x the emissions of data centres ex-AI. 60% of these emissions relate to power needs (spread across Scope 1, 2, and 3) and 40% to the embodied carbon (under Scope 3) - we think the magnitude of GHG emissions is greater than generally appreciated, particularly the embodied carbon footprint. Decarbonising data centers will likely rely on a range of solutions, including clean power, energy efficient equipment, green materials, carbon capture, and carbon dioxide removal solutions (see Global Data Centers: Sizing & Solving for CO_2).

Water requirements are likely to be a localized issue: Water represents another resource constraint, although unlike power, we expect the risks to be highly location-specific. We have previously estimated that AI data centres annual water consumption for cooling and electricity generation could be as much as 1,068 bn litres by 2028. We observe examples where local communities would raise concerns on data center projects on the back of water requirement concerns, including Tucson, Arizona's rejection of Amazon's Project Blue due to water and electricity demands, and Anglian Water' opposition towards plans for an AI data center over water supply concerns in North Lincolnshire. In Malaysia, Johor introduced a vetting committee for data centre projects that rejected ~30% applications for failing to demonstrate sustainable practices for water and energy usage. These interventions highlight the fragility of AI's physical infrastructure and the need for strategic planning. See AI's Growing Thirst for Water (2 Sep 2025) for more details.

Community benefits and local economic trade-offs are becoming increasingly important: Beyond environmental impacts, a broader debate is emerging around whether host communities receive sufficient economic benefits to justify the local costs of data center developments. Increasingly, projects are being challenged on the grounds that they impose substantial burdens on local resources and can cause disruption, while offering a relatively limited number of permanent on-site roles. A notable example was Google's proposed 468-acre data center campus in Franklin Township, Indianapolis, where residents argued that the environmental and infrastructure costs outweighed the expected local economic benefits. Following a period of community engagement and public consultation, Google withdrew the rezoning proposal in September 2025. As AI infrastructure expands, issues of community engagement, transparency and the equitable distribution of costs and benefits are likely to become increasingly important alongside traditional environmental considerations, particularly as the broader impact of AI on jobs comes into sharper focus (see AI Adoption and the Future of Work: Banks, Tech and Professional Services).

Three Levers for Improving Data Center Efficiency

In a recent expert webcast, we discussed three levers for improving data center efficiency that could not only lower the total cost of ownership but also improve community support for DC infrastructure. See Sustainability: Building Efficient Data Centres (18 Jun 2026) for more details.

Lever I: Utilization

The easiest way to improve efficiency is by improving utilization of existing capacity. Many data centers operate at surprisingly low utilization levels - often just 30-40% throughout the year. Given the significant capital required to build these facilities, such underutilization represents a major inefficiency. As a result, improving the utilization of existing infrastructure presents a significant opportunity to improve on total efficiency, rather than simply continuing to add new capacity.

Lever II: Power

There are three ways to overcome the power bottleneck. First, data centres can develop on-site power generation, typically combining renewables with energy storage systems. Ireland recently introduced this as a requirement for DC construction. This could potentially pave the way for shared energy campuses between different operators, as DCs exist in clusters, joint investments in renewable infrastructure could improve the economics of on-site power. **Second, introduction of demand response mechanisms** can allow data centres to temporarily reduce electricity consumption and help stabilize the grid, e.g., by pausing AI training workloads or shifting non-critical tasks. Rapid demand response can see grid consumption reduce from 80% to 50% and even 20% in some cases within just 15 minutes. Google has already demonstrated this at scale, building approximately 1 GW of flexible demand across its data centre fleet. **Third, and most advanced, is the ability for data centres to supply power back to the grid**

through UPS battery systems. UPS batteries kick in during power outages providing instant power, typically only for 5-7 mins, until backup generators start. Rather than keeping these UPS batteries idle for most of the time, DCs can make a small portion of their stored capacity available to support overall grid frequency i.e. injecting power to the grid when frequency falls and absorbing power from it when frequency rises. We are seeing this happen in Sweden where colo operator Conapto is using UPS systems to participate in fast frequency response markets. Beyond improving grid resilience, these services can also create an additional revenue stream for data center operators.

Lever III: Water

Regulatory frameworks and policies are gearing towards standard setting and incentives. While past actions focused on restrictions and moratoriums, emerging policies are increasingly geared to setting standards over data centers' Water Usage Effectiveness (WUE) and incentivizing sustainable practices. On top of proposing minimum performance standards on data centers' water usage, authorities are also putting incentives and tax credits for sustainable infrastructure, as well as disclosures and performance benchmark on water usage.

Enablers of water usage efficiency. Enablers provide technologies to reduce water consumption, and offer exposure to regulatory tailwinds and operational demand.

- **Liquid Cooling Solutions for AI Hardware:** Liquid cooling solutions are less water intensive when compared to traditional evaporative cooling solutions. Under the backdrop of more regulatory scrutiny, companies developing scalable liquid cooling infrastructure, as well as those providing the infrastructure for innovative solutions (such as microchannel cold plates), are likely to benefit.
- **Water Recycling & Treatment Technologies**: Investing in advanced water recycling systems is essential for data centers and semiconductor fabs, which consume vast amounts of ultra-pure water (UPW). This includes companies providing for water reuse, wastewater management and desalination solutions, as well as companies developing membranes for reverse osmosis, so as to reclaim ultra-pure water from waste streams for reuse, etc.

Valuation Methodology and Risks

Bloom Energy Corp. (BE.N)

Derived from an unlevered DCF analysis with 10.8% discount rate, based on a 4.0% risk-free rate, 1.75 Beta and 4.29% equity risk premium.

Risks to Upside

- Higher revenue growth through '35, given current low market penetration rates
- Cost reduction initiatives outpace expectations
- Customer adoption increase in light of de-energization in CA.

Risks to Downside

- Regulators impose charges on C&I customers that use distributed generation.
- Stricter emissions regulation.
- New entrants / technologies emerge with cost-competitive products.
- Cost reductions don't materialize.

Digital Realty Trust Inc. (DLR.N)

Our valuation assumes shares trade at 23.6x adj. '27E EBITDA, or 26.9x '27E AFFO / Share. We assume ~10.4% y/y revenue growth in FY26E, with 54.9% Adj. EBITDA margins and ~10.6% AFFO / share growth.

Risks to Upside

- Power supply remains constrained, reducing risk of overbuild and strengthening pricing power
- Increased latency requirements for AI inference

Risks to Downside

- Macroeconomic softness reducing investments in IT data center spend
- Excess supply coming online and pressuring pricing power
- Larger than expected power density requirements increasing obsolescence risk of current data centers
- Interest rates higher for longer

Equinix Inc. (EQIX.O)

Our valuation assumes 27x Adj. '27E EBITDA, or 26x '27E AFFO / Share. We assume ~11.1% y/y revenue growth in FY26E, with 51% Adj. EBITDA margins and ~12.3% AFFO / share growth.

Risks to Upside

- Power supply remains constrained, reducing risk of overbuild and strengthening pricing power
- Sustained growth in interconnections / billable cabinets

Risks to Downside

- Macroeconomic softness reducing investments in IT data center spend

- Excess supply coming online and pressuring pricing power
- Larger than expected power density requirements increasing obsolescence risk
- Interest rates higher for longer

Innio N.V. (INIO.O)

In our DCF-based valuation we assume 17% revenue CAGR through 2035, including 19% annual growth in Equipment and 12% annual growth in Service. Adj. EBITDA margins expand from 19% in 2026 to 29.9% by 2035. High FCF conversion (as a % of adj. EBITDA) drives ~$500bn of FCF in 2026 growing to ~$1.6bn by 2030. WACC of 9.3%, driven by a 4.25% risk-free rate, 4.60% equity risk premium, 1.25 beta, and 2.5% terminal growth rate.

Risks to Upside

- Incremental pricing power for 2029/30 orders
- Greater intensity servicing opportunity near-term
- Expanding capacity beyond 10 GW of nameplate output

Risks to Downside

- Order cancellation/softer demand from data centers
- Greater than expected capex and opex needed to grow
- Sponsor share overhang

Solaris Energy Infrastructure (SEI.N)

We value SEI's existing assets based on a DCF model through 2050 and no terminal value after that, consistent with the turbines asset life. Our consolidated WACC of 6.8% implies a terminal multiple of 8.6x EV/EBITDA, which is a blend of 10x for Power with long-term contracts, 7.5x for Power with short-term contracts, and 4x for Logistics. We separately add the NPV of 500 MW of incremental capacity procured annually in `29-`35, worth ~$25/share.

Risks to Upside

- More capacity procured, especially gas turbines
- New LT data center deals
- Increasing scope of solutions offered by SEI
- Worsening of grid bottlenecks, increasing the value of micro-grid solutions

Risks to Downside

- No new capacity procured
- No new data center deals announced
- Improvement of grid bottlenecks
- Concerns about the terminal value of SEI's gas turbines
- Costumer concentration

Disclosure Section

Mortgage Backed Securities (MBS) and Collateralized Mortgage Obligations (CMO)

Principal is returned on a monthly basis over the life of the security. Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. Yields and average lives are estimated based on prepayment assumptions and are subject to change based on actual prepayment of the mortgages in the underlying pools. The level of predictability of an MBS/CMO's average life, and its market price, depends on the type of MBS/CMO class purchased and interest rate movements. In general, as interest rates fall, prepayment speeds are likely to increase, thus shortening the MBS/CMO's average life and likely causing its market price to rise. Conversely, as interest rates rise, prepayment speeds are likely to decrease, thus lengthening average life and likely causing the MBS/CMO's market price to fall. Some MBS/CMOs may have "original issue discount" (OID). OID occurs if the MBS/CMO's original issue price is below its stated redemption price at maturity, and results in "imputed interest" that must be reported annually for tax purposes, resulting in a tax liability even though interest was not received. Investors are urged to consult their tax advisors for more information. Government agency backing applies only to the face value of the CMO and not to any premium paid.

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Global Stock Ratings Distribution

(as of June 30, 2026)
The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.
For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1544	42%	453	49%	29%	757	44%
Equal-weight/Hold	1577	43%	390	42%	25%	769	44%
Not-Rated/Hold	3	0%	1	0%	33%	1	0%
Underweight/Sell	544	15%	89	10%	16%	204	12%
Total	3,668		933			1731	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

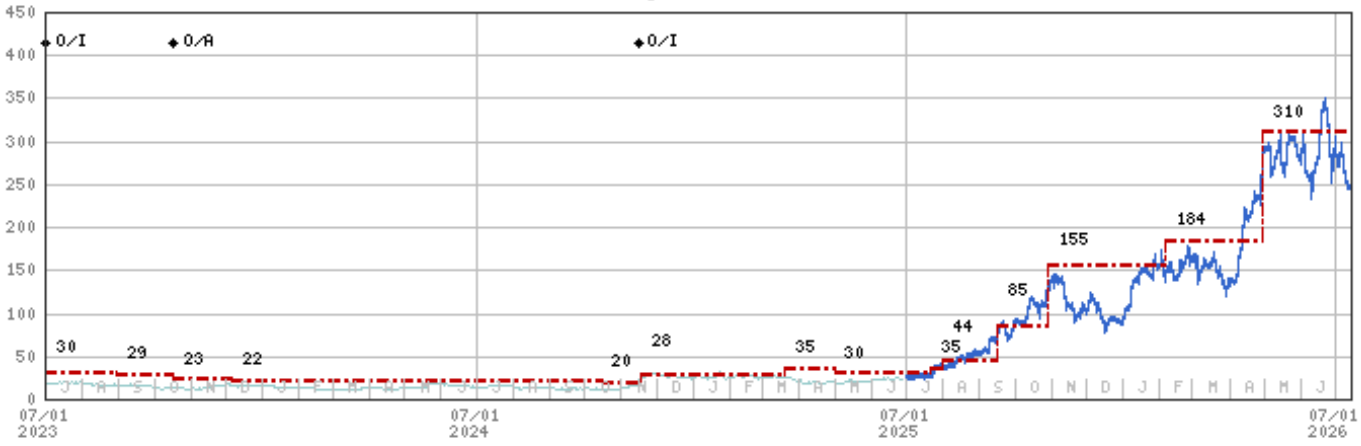
Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.
Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.
Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Stock Price, Price Target and Rating History (See Rating Definitions)

Bloom Energy Corp. (BE.N) - As of 07/13/26 GMT in USD
Industry : Clean Tech



Stock Rating History: 7/1/21 : E/I; 1/13/22 : E/A; 1/9/23 : O/A; 4/3/23 : O/I; 10/17/23 : O/A; 11/15/24 : O/I

Price Target History: 4/20/21 : 27; 7/20/21 : 26; 8/19/21 : 25; 10/26/21 : 32; 1/13/22 : 26; 4/4/22 : 25; 6/13/22 : 21; 8/18/22 : 37; 1/9/23 : 35; 4/3/23 : 32; 5/16/23 : 30; 8/31/23 : 29; 10/17/23 : 23; 12/6/23 : 22; 10/15/24 : 20; 11/18/24 : 28; 3/20/25 : 35; 5/1/25 : 30; 7/21/25 : 35; 8/1/25 : 44; 9/16/25 : 85; 10/29/25 : 155; 2/6/26 : 184; 4/29/26 : 310

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

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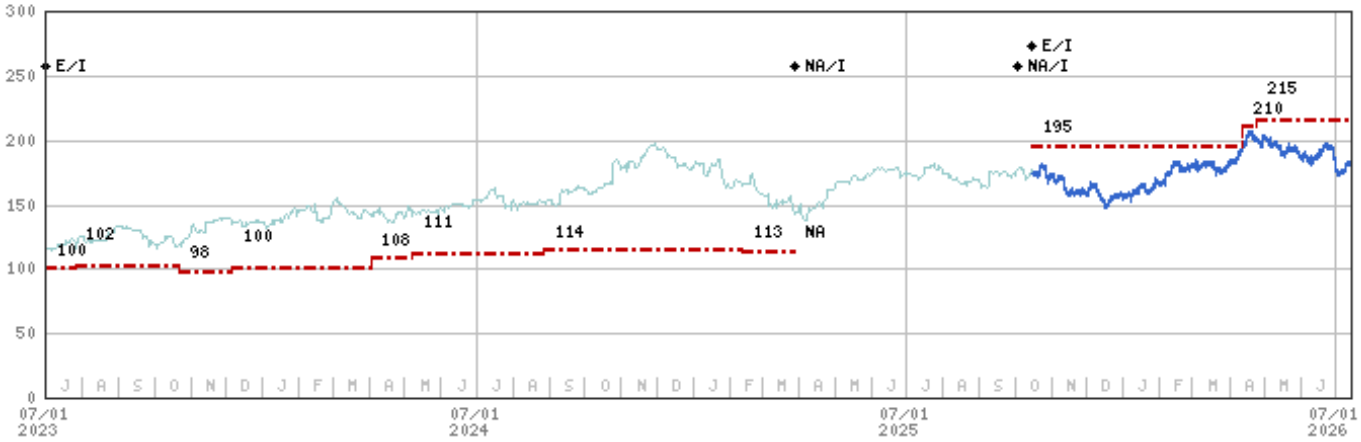
Digital Realty Trust Inc. (DLR.N) - As of 07/13/26 GMT in USD
Industry : Communications Infrastructure



Stock Rating History: 7/1/21 : E/A; 7/20/22 : E/I; 3/28/25 : NA/I; 10/3/25 : NA/I; 10/16/25 : E/I

Price Target History: 9/29/20 : 148; 12/16/21 : 154; 7/26/22 : 141; 10/25/22 : 107; 4/20/23 : 100; 7/26/23 : 102; 10/23/23 : 98; 12/7/23 : 100; 4/2/24 : 108; 5/7/24 : 111; 8/27/24 : 114; 2/11/25 : 113; 3/28/25 : NA; 10/16/25 : 195; 4/13/26 : 210; 4/24/26 : 215

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
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Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

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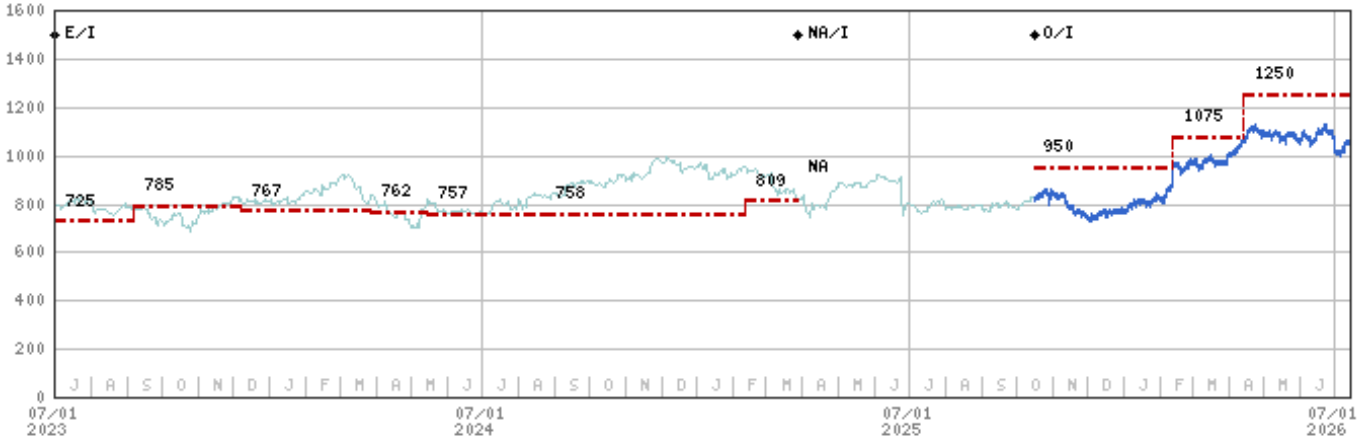
Equinix Inc. (EQIX.O) - As of 07/13/26 GMT in USD
Industry : Communications Infrastructure



Stock Rating History: 7/1/21 : E/A; 7/20/22 : E/I; 3/28/25 : NA/I; 10/16/25 : O/I

Price Target History: 9/29/20 : 712; 12/16/21 : 773; 7/26/22 : 732; 10/25/22 : 704; 2/15/23 : 702; 4/20/23 : 714; 5/29/23 : 725; 9/7/23 : 785; 12/7/23 : 767; 3/28/24 : 762; 5/15/24 : 757; 8/23/24 : 758; 2/11/25 : 809; 3/28/25 : NA; 10/16/25 : 950; 2/12/26 : 1075; 4/13/26 : 1250

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

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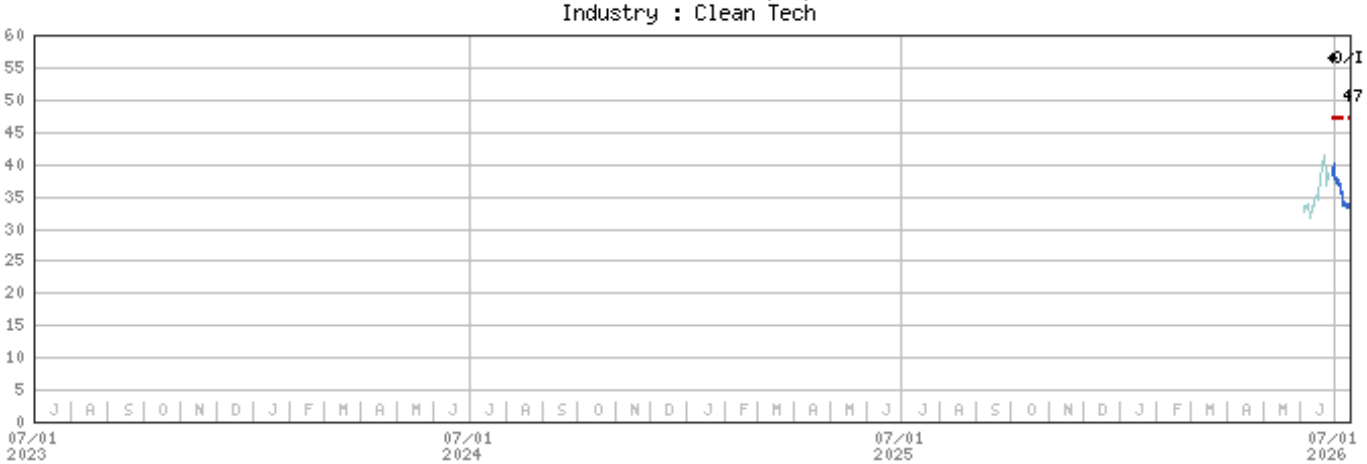
Innio N.V. (INIO.O) - As of 07/13/26 GMT in USD
Industry : Clean Tech



Stock Rating History: 6/29/26 : O/I

Price Target History: 6/29/26 : 47

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

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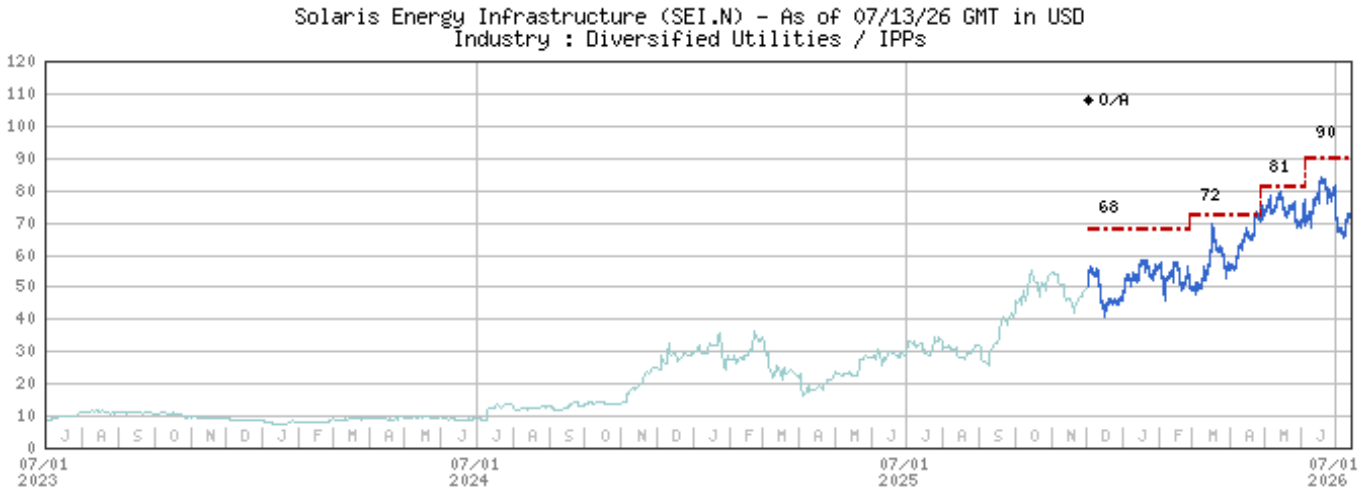

Stock Rating History: 12/2/25 : O/A

Price Target History: 12/2/25 : 68; 2/26/26 : 72; 4/27/26 : 81; 6/4/26 : 90

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

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INDUSTRY COVERAGE: Clean Tech

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/13/2026)
David Arcaro, CFA		
Array Technologies Inc (ARRY.O)	E (10/17/2023)	$6.12
Bloom Energy Corp. (BE.N)	O (01/09/2023)	$233.49
Enphase Energy Inc (ENPH.O)	U (04/23/2025)	$43.06
EVgo Inc (EVGO.O)	E (06/02/2025)	$1.73
First Solar Inc (FSLR.O)	O (12/08/2023)	$221.03
Fluence Energy Inc (FLNC.O)	E (11/22/2021)	$15.16
GE Vernova (GEV.N)	O (08/01/2024)	$1,042.60
Innio N.V. (INIO.O)	O (06/29/2026)	$31.58
Plug Power Inc. (PLUG.O)	U (12/06/2023)	$2.17
Shoals Technologies Group (SHLS.O)	E (12/16/2025)	$9.40
Solaredge Technologies Inc (SEDG.O)	E (12/16/2025)	$52.13
Sunrun Inc (RUN.O)	E (04/23/2025)	$12.41
X-Energy Inc. (XE.O)	O (05/19/2026)	$15.43

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* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Communications Infrastructure

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/13/2026)
Cameron McVeigh, CFA		
American Tower Corp. (AMT.N)	O (03/31/2025)	$169.50
Blackstone Digital Infrastructure Trust (BXDC.N)	E (06/10/2026)	$20.78
Crown Castle Corp. (CCI.N)		$79.84
Digital Realty Trust Inc. (DLR.N)	E (10/16/2025)	$177.92
Equinix Inc. (EQIX.O)	O (10/16/2025)	$1,039.53
SBA Communications (SBAC.O)	E (03/31/2025)	$187.10

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Diversified Utilities / IPPs

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/13/2026)
David Arcaro, CFA		
AES Corp. (AES.N)	E (03/06/2026)	$14.76
American Electric Power Co (AEP.O)	O (03/10/2020)	$135.63
Constellation Energy Corporation (CEG.O)	O (03/25/2026)	$257.57
MGE Energy, Inc. (MGEE.O)	U (11/17/2021)	$82.17
NextEra Energy Inc (NEE.N)	O (09/06/2022)	$88.38
NRG Energy Inc (NRG.N)	E (12/09/2022)	$139.48
Public Service Enterprise Group Inc (PEG.N)	O (07/02/2020)	$80.89
Solaris Energy Infrastructure (SEI.N)	O (12/02/2025)	$67.15
Talen Energy Corp (TLN.O)	O (03/12/2025)	$396.35
Vistra Corp (VST.N)	O (03/25/2019)	$158.12

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.