



# Bring Your Own Power

## How AI is Forcing Tech to Rethink Electricity

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Artificial intelligence (AI) isn't just transforming industries and software; it's now altering the fundamental economics of the electric grid. As hyperscale data centers gobble up power, utilities, regulators, and investors are scrambling to keep up. The global AI boom has lifted productivity expectations, unleashed new business models, and catalyzed fresh waves of technological innovation. Yet in boardrooms and utility control rooms alike, a sharper question looms: Where is all the power going to come from?

Across the U.S and beyond, AI's appetite for electricity is straining aging grids, driving up costs, and shaking loose new corporate strategies that were unthinkable just a few years ago. For investors, the stakes have shifted from bits and algorithms to electrons and infrastructure.

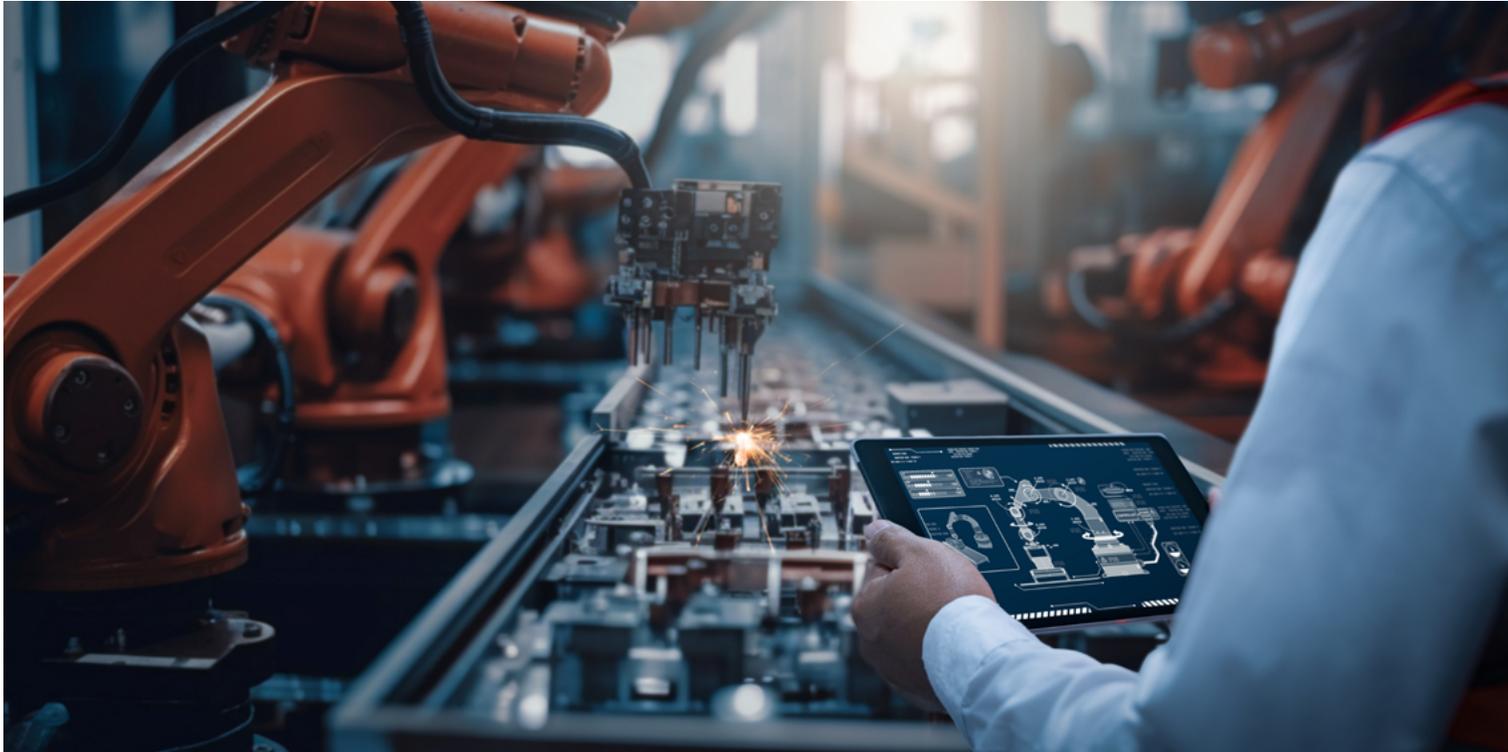
# The Hidden Power Behind AI's Snowballing Demand

The proliferation of large language models, machine learning tools, and generative AI platforms isn't just a software phenomenon, it's a massive infrastructure buildout. The data centers that house specialized chips and GPUs to train and serve these models operate 24/7, consuming electricity at scales once reserved for mid-sized cities.

In the U.S alone, data centers consumed approximately 183 terawatt-hours (TWh) of

electricity in 2024, more than 4% of national demand, and that share is projected to more than double by the end of the decade without major efficiency breakthroughs<sup>1</sup>. A single hyperscale AI data center can use as much electricity as 100,000 homes annually, and projected facilities under construction may require 20 × that amount<sup>2</sup>.

In other words, the AI revolution that's transforming software is now reshaping the physical energy grid.



## Grid Constraints, Higher Costs, and Consumer Backlash

While utilities once planned for modest demand growth, typically 1% to 2% per year, AI workloads can create 15% to 35% growth in certain regions within a couple of years. These surges have positional, not merely statistical, impacts: local electricity markets near clusters of hyperscale data centers are seeing record wholesale prices and strained capacity<sup>3</sup>.

In markets such as PJM Interconnection, which serves much of the eastern U.S., wholesale electricity

costs have climbed sharply amid surging demand forecasts. Some grid operators have reported multi-year increases in auction prices, with implications for consumer rates in the coming years<sup>4</sup>. That intersection of supply constraint and consumer discomfort has created fertile political ground for debate around who should bear the cost of powering this new digital economy, which brings us to a major recent policy development.

<sup>1</sup>IEA – Electricity 2024, <https://www.iea.org/reports/electricity-2024>

Goldman Sachs Research – AI and US Power Demand, <https://www.goldmansachs.com/insights/pages/ai-power-demand.html>

<sup>2</sup>U.S. Department of Energy – Data Center Energy Consumption Report, <https://www.energy.gov/eere/buildings/data-centers>

McKinsey – The Coming AI Power Surge, <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/the-coming-ai-power-surge>

<sup>3</sup>Bloomberg – America's Power Grid Is Not Ready for AI, <https://www.bloomberg.com/graphics/ai-data-centers-power-grid>

<sup>4</sup>PJM Interconnection – Capacity Auction Results, <https://www.pjm.com/markets-and-operations/rpm.aspx>

# Political Heat on Hyperscalers: Trump’s “Pay Your Own Power” Push

In January 2026, U.S. President Donald Trump announced a high-profile policy initiative aimed directly at major technology companies: **tech giants that drive new load growth from AI should help finance additional electricity generation capacity rather than leaving consumers and local utilities to cover it**<sup>5</sup>.

The proposal would make tech companies participate in the construction of new power plants, envisioned through long-term contracts potentially worth billions, and cover the costs regardless of whether they actually consume all the energy produced. This marks a significant shift from past practice, where utilities and ratepayers bore most of the generation and grid expansion costs. Trump and allied governors argue that this approach is necessary to prevent rising electricity bills, which have trended upward in many regions as demand surges. Hyperscalers, for their part, appear poised to absorb some added expense.

## The “Bring Your Own Power” Imperative

Even before the political spotlight, hyperscalers were quietly pioneering new strategies to meet energy demand<sup>6</sup>. Grid interconnection queues in key markets can stretch three to five years, while regional grid upgrades have struggled to keep pace with explosive AI buildouts. Faced with these constraints, major technology firms are turning toward Bring Your Own Power (BYOP) models, building or contracting for their own on-site power generation and bypassing traditional grid bottlenecks.

BYOP takes many forms. Some companies are investing in behind-the-meter natural gas plants

to meet immediate needs, while others are signing long-term contracts with renewable and nuclear providers<sup>7</sup>. Meta, for example, has inked deals to secure more than 6 gigawatts of nuclear power for its AI data centers—an amount of electricity roughly equivalent to the entire demand of small industrial nations.

These moves underscore a broader shift: energy is no longer an ancillary utility; it is a strategic asset for technology platforms.

# BYOP

<sup>5</sup> Reuters – Trump Targets AI Power Costs, <https://www.reuters.com/world/us/trump-ai-data-centers-power-costs-2026>

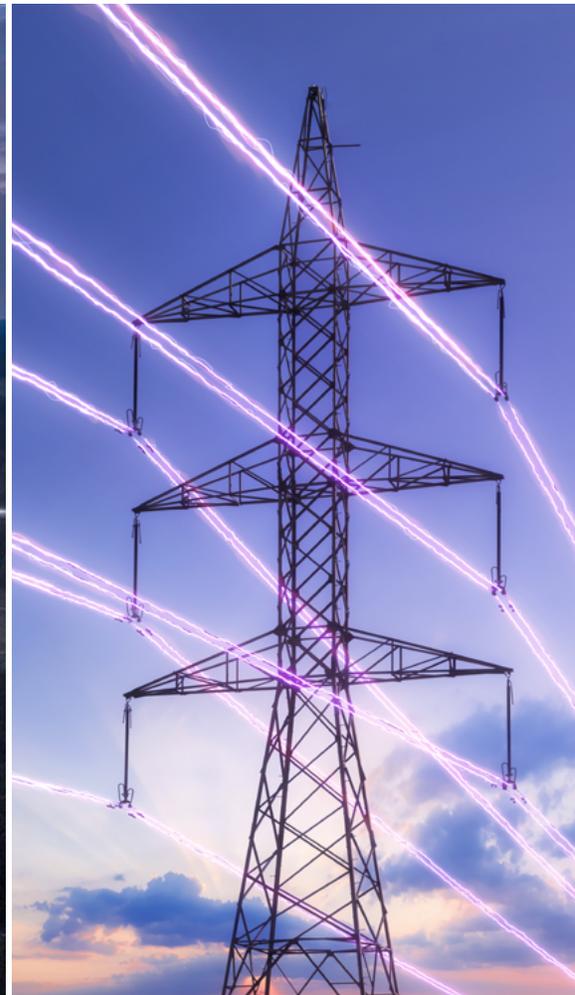
<sup>6</sup> Facility Executive – Bring Your Own Power Becomes Reality, <https://facilityexecutive.com/bring-your-own-power-becomes-reality-for-data-centers/>

<sup>7</sup> Microsoft – Data Center Sustainability Commitments, <https://www.microsoft.com/sustainability/datacenters>

# More than Power Bills: Environmental and Grid Planning Dimensions

**For investors and policymakers alike, electricity demand from AI isn't merely a cost issue, it's a long-term planning challenge.** That rapid growth has secondary implications for emissions, water usage, and grid stability. Advanced cooling systems and power-dense racks increase both energy demand and operational complexity, while reliance on fossil fuels for on-site generation creates trade-offs with corporate sustainability goals.

There is a common emphasis for the need for joint planning between grid operators and data center developers to optimize power allocation and emissions outcomes over multi-decade time horizons.



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# Investment Implications: Winners, Risks, and Surprises

The shifting energy landscape around AI creates distinct investment themes and opportunities, including:



## Power Infrastructure and Utilities

Traditional utilities, regulated rate base investments, and companies involved in grid modernization (transmission, smart grid tech, storage) may see rising demand for capital. What we'll be watching for is how political intervention changes the earnings profile for these companies against a backdrop of rising utility bills.



## Renewable and Alternative Energy Producers

Corporations are increasingly turning to clean energy procurement, including virtual power purchase agreements and direct investments in renewables. Firms leading in solar, wind, battery storage, and nuclear technologies could see accelerated adoption as BYOP and corporate purchase power agreements grow. Meta's nuclear strategy, for example, signals institutional confidence in non-traditional, low-carbon baseload power as part of digital transformation.



## Electricals, Energy Services and Efficiency Technologies

Rising power demand may amplify the value of companies that reduce energy waste or optimize infrastructure. This includes data center cooling innovators, energy management platforms, and firms enabling more efficient grid integration.



## Data Center REITs and Real Estate Markets

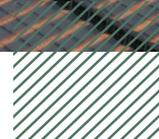
Real estate investment trusts and infrastructure funds that own and operate data centers could gain from elevated leasing demand and the premium valuations commanded by AI-ready facilities. However, they may also inherit exposure to energy cost inflation and supply constraints.



## Regulatory and Policy Risk Premiums

Investors should account for shifting policy environments. Mandates for corporate contribution to grid infrastructure or new cost allocations—as seen in recent U.S. political proposals, could materially affect profit margins for hyperscalers and hyperscale tenants.





## AI's Electric Future

**The AI revolution has unquestionably redefined digital markets and business models, but the electricity grid now stands as a central battleground in that transformation. As hyperscale data centers continue to proliferate, traditional utility planning, grid financing models, and energy markets are being remapped in real time.**

For investors, the emerging story isn't solely about data or chips, it's about electrons, infrastructure, and strategic power procurement. Companies that pivot quickly to secure reliable and cost-effective energy stand to unlock durable competitive advantages, while those that ignore the energy dimension could see profitability erode under surging costs and political scrutiny. In the coming decade, understanding the intersection of AI and energy will be as essential to investors as understanding computing architectures once was. The watts that power artificial intelligence may well determine the next phase of industrial, and investment, leadership. ■

# Power

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