



DIGITAL POWER DIGEST

WEEK IN REVIEW

AI Has Entered the Physical Economy

PwC \$50 Trillion Number: The AI race continues to evolve as principally a battle for electricity, turbines, copper, transmission, construction labor, financing and political permission. PwC now estimates \$31.6 trillion of cumulative global data center spending through 2050, with an upside case near \$50 trillion, and says power availability will be the foremost determinant of where that capital lands. The sector's center of gravity has moved decisively from software into the physical economy.

The efficiency paradox is sharpening that transition. Representative GPT-4-class inference cost has fallen from roughly \$60 per million tokens in 2022 to about \$0.10 in 2026, while combined Microsoft, Amazon, Alphabet and Meta capex climbed from about \$130 billion to \$725 billion. Cheaper intelligence is not reducing infrastructure demand; it is expanding usage fast enough to overwhelm the efficiency gains. OpenAI's Jalapeno chip makes the new unit of competition explicit: useful AI work per unit of power.

AI's 'Blade Runner': SpaceX is laying groundwork for a Texas foundry to cast large gas turbine blades and vanes because the handful of suppliers that make them are maxed out and major turbine makers are effectively sold out to 2030. Elon Musk says in-house casting could accelerate natural-gas turbines by as much as 18 months. Australia offers the macro version of the same story: data center electricity use is projected to rise almost sevenfold, from 3% to 13% of the National Electricity Market by 2035-36.

The financing is becoming as unconventional as the infrastructure. Nvidia is defending a \$500 billion financing initiative with major Wall Street firms, credit enhancement for AI customers and nearly \$50 billion invested in frontier labs. Anthropic committed \$45 billion for roughly 460 MW at Nscale's West Virginia Monarch campus. SB Energy says OpenAI has signed 17 leases covering roughly 8 GW of compute at its Ohio project, while OpenAI received warrants recently valued at \$5.5 billion. Vendor, customer, lender and investor are increasingly the same parties.

At the same time, social license and grid rules are moving onto the critical path. A Texas poll found 57% of respondents opposed a data center in their own community, while construction unions are mobilizing in the opposite direction because the projects have become a major source of skilled-trades work. At FERC, Microsoft and PowerHouse Hillwood are contesting the terms under which gigawatt-scale loads connect and who pays for the network. The EPA is separately proposing to reduce federal public-notice requirements for some air permits, even as state and local resistance grows.

The common read-through: AI has entered an era in which the scarce asset is no longer simply compute. It is the critical path triumvirate of deliverable, financeable and politically durable megawatts - backed by equipment, materials, interconnection rights, labor and contracts that survive scrutiny. The bottleneck keeps migrating one layer down the stack. The winners will be the platforms that can integrate the entire stack faster than the constraints compound.

\$31.6T	\$500B	18 MO	57%
GLOBAL DATA CENTER CAPEX THROUGH 2050	NVIDIA / WALL STREET FINANCING INITIATIVE	POTENTIAL TURBINE ACCELERATION AT SPACEX	TEXANS OPPOSE A LOCAL DATA CENTER IN POLL

★ NUMBERS OF THE WEEK | CAPITAL, COMPUTE & SCALE

Twenty data points that show how fast AI infrastructure is hardening from a technology theme into a utility-scale capital program.

\$31.6T GLOBAL CAPEX THROUGH 2050 PwC's central case for cumulative global data center investment; the upside scenario reaches \$50T.	\$15.1T U.S. SHARE Nearly half of PwC's central-case spend lands in the United States - more than Asia-Pacific and Europe combined.
\$60 → \$0.10 TOKEN COST COLLAPSE Representative GPT-4-class inference cost per million tokens, 2022-26 - roughly a 600x decline.	\$130B → \$725B BIG FOUR CAPEX Combined Microsoft, Amazon, Alphabet and Meta capital spending over the same 2022-26 period.
70% NVIDIA NEXT-FY GROWTH Fiscal-2028 revenue guidance versus a roughly 45% Street consensus; management says demand remains supply-constrained.	\$442B ONE-DAY MARKET-CAP GAIN Nvidia's 8.7% post-earnings surge - the second-largest one-day gain by any stock, behind only Microsoft's July move.
\$89B NVIDIA DATA CENTER REVENUE Record quarterly data center revenue, up 117% year over year; companywide sales reached \$96.2B.	\$500B AI FINANCING INITIATIVE Third-party capital targeted under Nvidia's financing initiative with six major financial firms to fund AI infrastructure.
\$105B / \$350B OHIO GUARANTEE / CHIPS Cap on Nvidia's residual-value guarantee for SB Energy's Ohio campus / estimated chip financing at full buildout.	17 / 8 GW OPENAI LEASES Leases OpenAI signed covering about 8 GW of compute at SB Energy's southern Ohio campus, backed by 10 GW of power.

Sources: PwC/Bloomberg; Bloomberg; Wall Street Journal; user-provided efficiency chart. Figures reflect source reporting and indicated benchmark assumptions.

★ NUMBERS OF THE WEEK | CAPITAL, COMPUTE & SCALE

The physical constraints are now visible in megawatts, turbine lead times, construction shares, commodity balances and voter sentiment.

>\$400B SB ENERGY BACKLOG Contracted backlog in the draft IPO filing - nearly 9 GW - before a single SB Energy data center is in operation.	\$5.5B OPENAI WARRANTS Value at June 30 of warrants SB Energy issued to OpenAI, which has also invested \$500M in the developer.
\$45B / 460 MW ANTHROPIC - NSCALE Reported six-year Anthropic compute commitment covering the first building of Nscale's Monarch campus in West Virginia.	\$71B / \$47B MONARCH CAPEX / CHIPS Estimated cost to develop Monarch and its on-site power / the portion attributable to AI chips.
7x / 34 TWh AUSTRALIA LOAD GROWTH AEMO projects data center use rising from about 5 TWh (3% of the grid) to 34 TWh (13%) by 2035-36.	18 MO TURBINE ACCELERATION Musk's claimed schedule gain from casting turbine blades and vanes in-house at SpaceX's planned Bastrop foundry.
57% TEXAS LOCAL OPPOSITION Texans opposing a data center in their own community, per a UT/Texas Politics Project poll - strongest in rural areas.	75 / \$130B PROJECTS BLOCKED OR DELAYED Projects and combined value stalled by local opposition in the first quarter, per Data Center Watch via PwC.
60 / 60 / 29 / 10% CONSTRUCTION ECONOMY Approximate data center share of private non-residential construction spending in NM, WY, PA and TX.	42 Mt / 10 Mt COPPER DEMAND / DEFICIT S&P Global's 2040 copper-demand forecast and projected supply shortfall as grids, EVs and AI compete for the metal.

Sources: WSJ; Bloomberg; The Information; Data Center Watch via PwC/Bloomberg; S&P Global via Bloomberg; user-provided construction chart.

★ MARKET SPOTLIGHT | THE AI BOTTLENECK IS NOW POWER

Silicon is scaling faster than electricity - and the AI industry is moving upstream into turbines, grids, gas, renewables and the physical supply chain.

The week's most revealing infrastructure story may be SpaceX's decision to attack the turbine supply chain itself. The company has taken steps toward a Bastrop, Texas, foundry for the vanes and blades used in large industrial gas turbines. Those castings are a specialized bottleneck, and The Information reports that maxed-out suppliers are one reason major turbine makers are sold out until 2030. Musk says internal casting could accelerate natural-gas turbines by as much as 18 months.

That is the physical-economy version of the same signal coming from Nvidia. The chipmaker guided to 70% revenue growth next fiscal year - far above the roughly 45% consensus - and said it would grow even faster with more supply. If chip output and token demand keep accelerating, the relevant constraint moves downstream: first memory, then power, then the equipment and interconnection rights required to turn power into energized compute.

WHEN EFFICIENCY INCREASES DEMAND

The paradox is that efficiency is not relieving the infrastructure burden. Representative GPT-4-class inference cost falls from \$60 per million tokens in 2022 to \$0.10 in 2026 while Big Four capex rises from \$130 billion to \$725 billion. Cheaper intelligence expands the addressable workload faster than it reduces the cost per task. Power efficiency therefore matters enormously - but primarily because it determines how much useful AI can be squeezed through each scarce utility megawatt.

2030 LARGE-TURBINE SOLD-OUT HORIZON	18 MO SPACEX CLAIMED TIME SAVING	70% NVIDIA NEXT-FY REVENUE GROWTH	13% AUSTRALIA DC SHARE OF NEM BY 2035-36
---	--	---	--

BOTTOM LINE

The scarce product is no longer a chip. It is a deliverable, financeable megawatt with the equipment, gas or renewable supply, controls and interconnection position required to convert electricity into reliable compute.

FOUR IMPLICATIONS

- 1. Turbine slots are becoming infrastructure inventory.** Delivery calendars and component supply have strategic value independent of energy prices.
- 2. Behind-the-meter power is no longer a niche workaround.** It is a schedule hedge against grid and equipment scarcity.
- 3. Efficiency raises the value of each MW - and then induces more demand.** The Jevons effect means lower token cost can expand the load faster than chip efficiency reduces it.
- 4. Power teams are moving upstream.** Gas, generation equipment, interconnection and grid engineering are now core AI execution capabilities.

★ MARKET SPOTLIGHT | THE \$500 BILLION FLYWHEEL

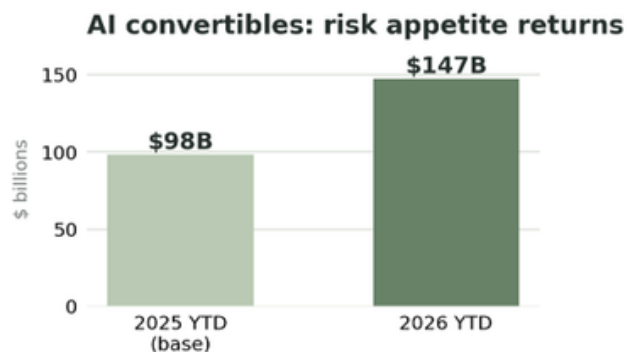
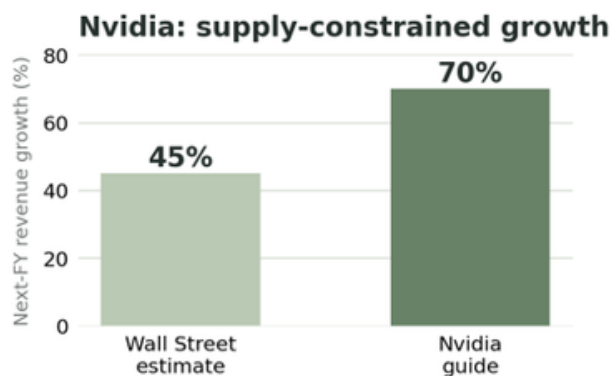
The AI infrastructure stack is becoming financially vertically integrated: vendors, customers, landlords, lenders and investors increasingly sit on both sides of the same transactions.

Nvidia's answer to the circular-financing critique is straightforward: frontier labs are growing faster than their balance sheets and credit profiles can support, so Nvidia is using guarantees, equity and credit enhancement to keep the compute flywheel turning. CFO Colette Kress cited a \$500 billion financing initiative with six Wall Street firms, selective credit enhancement for 2 GW of computing power, support for neoclouds and nearly \$50 billion invested in frontier AI labs.

The same interdependence shows up in the largest campus transactions. Anthropic agreed to pay Nscale \$45 billion over six years for about 460 MW at the Monarch campus. SB Energy says OpenAI has signed 17 leases covering about 8 GW at its Ohio project, while OpenAI received warrants recently valued at \$5.5 billion and Nvidia has provided a residual-value guarantee that SB Energy says is important to financing the campus.

CAPITAL CHANNEL	WHAT THE WEEK SHOWED	CREDIT READ-THROUGH
Nvidia ecosystem	\$500B financing initiative; ~\$50B invested in frontier labs; credit enhancement for AI buyers.	Supplier is becoming a balance-sheet intermediary.
SB Energy / OpenAI	17 leases / ~8 GW; >\$400B planned backlog; \$5.5B OpenAI warrants; Nvidia residual-value support.	Tenant, investor and financing support overlap.
Anthropic / Nscale	\$45B six-year commitment for ~460 MW; full 1.35 GW campus estimated at ~\$71B.	Long-duration compute contracts are replacing conventional project-credit history.
Convertibles	\$147B global issuance YTD; >50% above prior year; some AI deals at 0%-0.5% coupons; average delta ~64%.	Investors are giving up bond protection for equity-like AI exposure.
Broader credit	Broadcom in talks for >\$60B of debt; debt-insurance premium ~80 bps wider than January.	Credit is beginning to price the possibility that capex outruns financeability.

Sources: Wall Street Journal; Bloomberg; Nvidia; SB Energy draft IPO reporting; Nscale/Anthropic reporting.

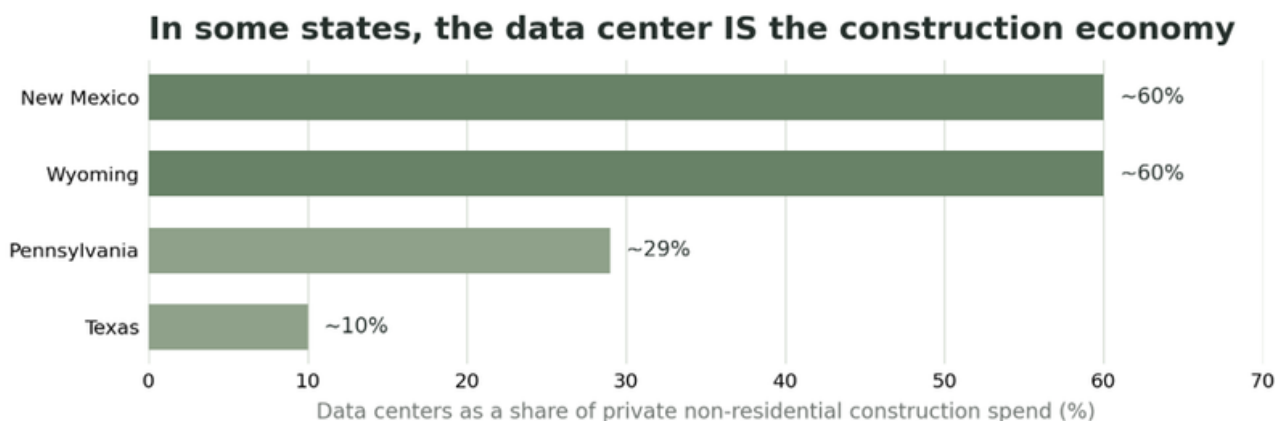


FOUR IMPLICATIONS

- 1. Contract quality is becoming the real collateral.** A long lease, parent support or residual-value guarantee can substitute for operating history - but only while counterparties remain credible.
- 2. The denominator matters.** When the same firms are customers, investors and guarantors, headline backlog can overstate independent third-party demand.
- 3. Credit is starting to discriminate.** Near-zero-coupon convertibles show risk appetite is high, while widening protection costs show lenders are no longer treating all AI capex as equivalent.
- 4. Power remains the common dependency.** Every financing structure ultimately depends on converting capital into energized, usable compute on schedule.

★ POLICY & GRID | THE NEXT CONSTRAINT IS PERMISSION

Data centers are becoming the construction economy in some states just as voters, regulators and utilities begin demanding a larger say in who gets built, who pays and who bears the risk.



Sources: User-provided construction-spend chart.

The politics are no longer confined to traditional anti-development constituencies. A UT/Texas Politics Project poll cited by Bloomberg found 57% of respondents opposed a data center in their own community, with resistance strongest in rural Texas. At the same time, the Wall Street Journal documents a backlash to the backlash: building-trade unions are threatening to withhold political support from candidates who block projects because data center work has become a major source of skilled-trades hours and upper-middle-class wages.

The grid rulebook is tightening too. Microsoft told FERC that Wisconsin large-load agreements fail to adequately protect ratepayers or the customer, while PowerHouse Hillwood accused ComEd of using monopoly power in connection with a planned 1.8 GW Joliet project. FERC's large-load show-cause process is centered on cost shifting, transparency and standardized interconnection terms - issues that were peripheral when individual loads were measured in tens rather than thousands of megawatts.

THE PERMITTING PARADOX

Federal and local policy are moving in opposite directions. The EPA has proposed eliminating a federal requirement that states provide public notice and solicit comment on certain 'minor source' air permits, including some data center and power-plant permits, while leaving states discretion to provide their own process. Meanwhile, PwC cites at least 75 projects worth about \$130 billion blocked or delayed by local opposition in just the first three months of the year.

57% TEXAS RESPONDENTS OPPOSE LOCAL DC	75 PROJECTS BLOCKED OR DELAYED	\$130B VALUE OF THOSE PROJECTS	1.8 GW JOLIET PROJECT IN COMED DISPUTE
---	--------------------------------------	--------------------------------------	--

THE NEW LARGE-LOAD RULEBOOK

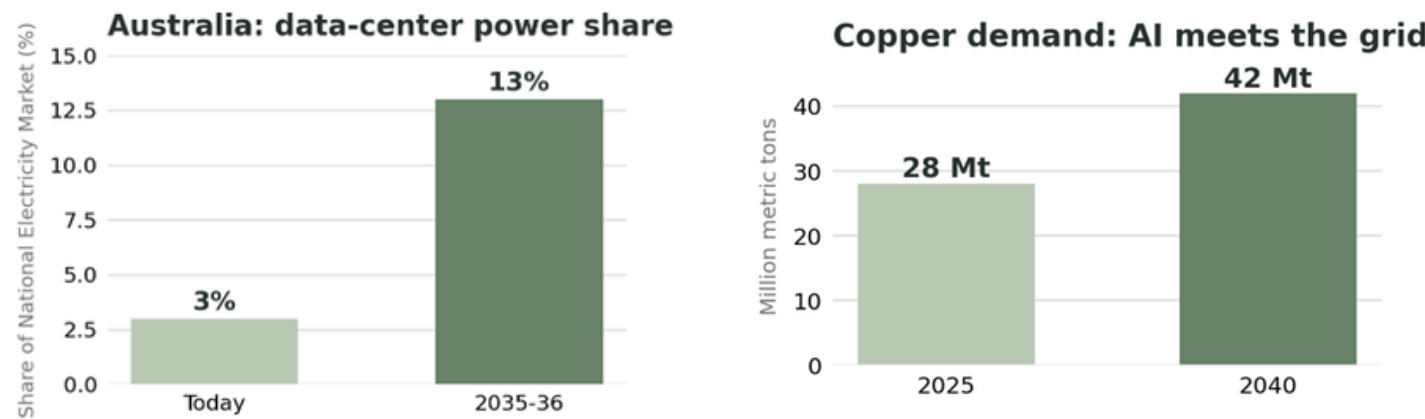
QUESTION	EMERGING STANDARD	WHY IT MATTERS
Who pays?	Large loads increasingly expected to fund directly attributable transmission and distribution upgrades.	Ratepayer protection becomes a permitting and credit requirement.
Is the load real?	Milestones, deposits, end-user identity and forecast transparency move earlier in development.	Queue position alone no longer proves demand.
Who bears exit risk?	Termination payments, collateral and parent support become more explicit.	Utilities and lenders want protection from stranded infrastructure.
Who controls the ramp?	Telemetry, curtailment and operating standards are moving into large-load agreements.	Dynamic AI load makes controllability part of grid reliability.

BOTTOM LINE

The next AI campus needs three permissions at once: electrical permission from the grid, financial permission from the capital markets and political permission from the host community. A project that lacks any one of them is not powered land - it is an option on future consent.

★ INFRASTRUCTURE STACK | BRING THE COMPUTE TO THE POWER

The development model is shifting from “find land and ask the grid for service” toward modular, vertically integrated systems that move compute to energy and stage infrastructure as demand converts.



Sources: AEMO/Bloomberg; S&P Global via Bloomberg.

POWER PROCUREMENT IS MOVING INSIDE THE PLATFORM

Amazon added almost 200 MW of long-term Swedish wind supply, taking its contracted supply there toward 1 GW as it expands data center capacity. Fossefall is pursuing more than 1 GW of Nordic-owned AI capacity by 2030 and selected Armada's modular Leviathan systems; Armada separately launched a 10 MW Orion module designed to deploy in months at distributed, low-cost power. The direction is consistent: stage generation, electrical infrastructure, cooling and compute together instead of waiting for a centralized grid buildout.

THE BOTTLENECK KEEPS MIGRATING

SILICON	NETWORKING	MATERIALS	LABOR / OPS
OpenAI says Jalapeno leads current GB300 benchmarks on throughput per unit of power and response speed; it runs at about 700 W and targets inference.	Optical Compute Interconnect members agreed on a 200 Gbps bidirectional link and are targeting a 400 Gbps specification in 2027; other optics groups are pursuing 4x density gains.	S&P Global sees copper demand rising from 28 Mt to 42 Mt by 2040 with a potential 10 Mt supply deficit; data centers now compete directly with grids and electrification.	Meta is testing robots that can swap cables, reset servers and perform repetitive maintenance while the industry simultaneously trains more electricians and skilled trades.

SOVEREIGNTY JOINS THE DESIGN CRITERIA

The infrastructure stack is also becoming geopolitical. The White House declared a national emergency over foreign-supplied bulk-power equipment and authorized restrictions where covered foreign entities create unacceptable security or supply-chain risk. In Europe, Fossefall and Armada explicitly frame local ownership of GPU infrastructure, data processing and manufacturing as a sovereign-AI requirement. Power, hardware and jurisdiction are becoming one siting decision.

FOUR READ-THROUGHS

1. **Energized land beats raw land.** A modular building can move quickly only when power rights, fuel or renewable supply and electrical equipment are already under control.
2. **The data center is becoming a manufactured product.** Repeatable power blocks, cooling modules and optical fabrics shift labor from the field toward factories and standardized installation.
3. **Sovereignty can change the capex map.** Local ownership, component provenance and jurisdictional control can redirect investment even when absolute power cost is higher.
4. **The stack is only as fast as its slowest layer.** A shortage in copper, optics, transformers, electricians or permits can strand the value of abundant GPUs.

BOTTOM LINE

The winning architecture may be less a “data center” than a repeatable industrial system: power + modular shell + cooling + silicon + networking + controls, deployed where energy and political permission already exist.

WEEKLY ROUNDUP

THIRTY STORIES, ONE PHYSICAL STACK

The week's top stories, itemized- each with its own read-through

- 1. SpaceX goes upstream into turbine blades.** A planned Bastrop, Texas, foundry would cast gas-turbine blades and vanes in-house; Musk claims up to 18 months of acceleration. Read-through: when power equipment is the constraint, AI platforms vertically integrate into heavy industry. (The Information, Aug. 29)
- 2. Optical interconnect becomes a scale-up bottleneck.** AMD, Broadcom, Meta, Microsoft, Nvidia and OpenAI agreed on a 200 Gbps optical-compute link, targeting 400 Gbps in 2027. Read-through: rack-scale electrical domains are maxing out; optics is moving inside the compute fabric. (HPCwire, Aug. 24)
- 3. Meta tests robots inside the data center.** Machines that swap cables, reset servers and handle repetitive maintenance are in trials. Read-through: at this scale, labor productivity and robotic operability are design variables, not back-office concerns. (WIRED, Aug. 28)
- 4. AI convertibles strip out investor protection.** Global convertible issuance reached \$147B, up more than 50%; some AI deals price at 0%-0.5% coupons. Read-through: investors are accepting equity-like risk for AI exposure - a 2021-style vulnerability if the stocks break. (Bloomberg, Aug. 28)
- 5. Ken Paxton turns data centers into a campaign issue.** The Texas attorney general proposed tighter controls as rural voter anger rises. Read-through: opposition is now electorally salient in the state that was supposed to be the industry's easiest large-scale market. (Washington Post, Aug. 31)
- 6. FERC large-load disputes become project risk.** Microsoft challenged Wisconsin large-load agreements at FERC; PowerHouse Hillwood challenged ComEd over a 1.8 GW Joliet project. Read-through: cost allocation and standardized terms now sit on the critical path for gigawatt customers. (Utility Dive, Aug. 24)
- 7. Nvidia defends the AI financing flywheel.** Management cited a \$500B financing initiative, credit enhancement and nearly \$50B invested in frontier labs. Read-through: Nvidia's balance sheet is financing the demand that buys its chips - powerful, and openly circular. (WSJ, Aug. 27)
- 8. Nvidia guides to 70% growth.** The fiscal-2028 outlook crushed a roughly 45% consensus, and management said growth would be faster with more supply. Read-through: the debate is no longer whether compute is needed but whether the physical stack can deliver it. (Bloomberg, Aug. 26)
- 9. Nvidia adds \$442B in one day.** The 8.7% rally produced the second-largest one-day market-cap gain ever. Read-through: equity still rewards the buildout when revenue conversion is visible, even as credit turns selective. (Bloomberg, Aug. 27)
- 10. OpenAI benchmarks Jalapeno against Nvidia.** The roughly 700 W custom inference chip reportedly led GB300 tests on work per unit of power and response speed. Read-through: token throughput per utility megawatt is becoming the strategic metric. (Bloomberg, Aug. 25)
- 11. Copper starts trading like AI infrastructure.** Copper topped \$14,300/ton, and S&P Global sees demand reaching 42 Mt by 2040 with a 10 Mt deficit. Read-through: AI now competes with grids, EVs and renewables for the same metal. (Bloomberg, Aug. 28)
- 12. PwC puts \$31.6T on the data center cycle.** The central case reaches \$31.6T through 2050, the upside \$50T; the US captures \$15.1T. Read-through: capital is not the binding constraint - deliverable power decides where it lands. (Bloomberg, Sep. 2)
- 13. Amazon adds Swedish wind to the compute stack.** Four PPAs add almost 200 MW, taking Amazon toward 1 GW of Swedish supply alongside plans for 2 million more Nvidia GPUs in 2027-28. Read-through: hyperscalers are pairing chip procurement with direct power procurement. (Bloomberg, Aug. 28)
- 14. Anthropic commits \$45B to Nscale.** The reported six-year deal covers about 460 MW at the first building of the 1.35 GW Monarch campus. Read-through: single-tenant commitments now look like generation contracts, not conventional cloud leases. (Bloomberg, Aug. 26)
- 15. Armada launches a 10 MW modular AI building block.** Orion deploys in months and scales from one unit to hundreds of megawatts. Read-through: modularization is a throughput strategy - stage power, cooling and compute together as demand arrives. (Armada, Aug. 26)
- 16. Australia sees data center power use up sevenfold.** AEMO projects 34 TWh and a 13% share of the National Electricity Market by 2035-36, up from 3% today. Read-through: load can arrive faster than generation and transmission, making policy a reliability question. (Bloomberg, Aug. 24)
- 17. Blue-collar labor joins the data center political fight.** Construction unions are threatening to withhold support from politicians who block projects; one IBEW local logged 28M work hours last year vs. 14M a decade ago. Read-through: the social-license debate now has a pro-build constituency with electoral leverage. (WSJ, Aug. 29)
- 18. Cheap tokens collide with costly infrastructure.** Bloomberg flags the widening gap between collapsing AI prices and expensive chips, power and debt; Broadcom reportedly seeks more than \$60B of financing. Read-through: the question is shifting from "does AI work?" to "who captures enough economics to pay for the stack?" (Bloomberg, Aug. 27)
- 19. Data center blowback hits deep-red Texas.** A cited poll shows 57% opposed to a local data center, strongest in rural areas. Read-through: siting risk has migrated into the geographies developers chose for cheap land, gas and friendly politics. (Bloomberg, Aug. 27)
- 20. The White House treats grid equipment as national security.** An executive order declared an emergency over foreign-supplied bulk-power equipment and restricted covered high-risk transactions. Read-through: component provenance now affects schedule, procurement and financeability. (White House, Aug. 26)
- 21. EPA proposes less federal public input on some permits.** The proposal would drop federal notice-and-comment on certain minor-source air permits, leaving states discretion. Read-through: Washington is accelerating permitting just as local politics demands more process. (NYT, Aug. 25)
- 22. SB Energy offers OpenAI a \$5.5B alignment package.** OpenAI warrants were valued at \$5.5B; the draft IPO shows nearly 9 GW contracted and >\$400B of planned backlog. Read-through: customer acquisition, equity alignment and project finance are merging into one capital structure. (WSJ, Sep. 1)
- 23. Fossefall chooses modular sovereign AI.** The Nordic platform ordered five Armada Leviathan modules toward a >1 GW plan by 2030, emphasizing local ownership of GPU infrastructure and renewable power. Read-through: sovereignty and modularity join cost and speed as siting criteria. (Armada, Aug. 25)

WHAT WE ARE WATCHING

SB Energy IPO filing: Whether investors accept >\$400B of contracted backlog before the data center segment has operating revenue - and how Nvidia's residual-value support is disclosed.

FERC large-load rulemaking: Whether RTO/ISO responses converge on standardized cost allocation, collateral and service agreements ahead of the mid-November deadline.

ERCOT/PUCT: Dec. 10 verification reports, Dec. 17 checkpoint, QSA bridge status and any April 9 study-deadline slippage signal.

SpaceX turbine foundry: Evidence the Bastrop casting line can move from aerospace-adjacent capability to bankable industrial-turbine output.

Data center politics: Whether Texas-style guardrails spread as a bipartisan response to power, water, tax and local-control concerns.

Nscale / Anthropic execution: Conversion of the 460 MW Monarch commitment into construction, chip-delivery and on-site power milestones.

BY THE NUMBERS ISSUE 2 RECAP	
50 MW - PJM Large Load Registry trigger.	25 MW - Pennsylvania EO trigger for data center permit process
June 1, 2027 - proposed PJM New Large Load cutoff.	100% - demand coverage needed for the advocated Pennsylvania curtailment exception.
2029/2030 - first BRA where uncovered New Large Load is removed from the VRR curve.	10% / 14.5% / 32% - Pennsylvania clean-firm ramp under GRID benchmarks
8.833 GW - Texas H1 2027 QSA-bridged cohort.	3.8 GW - data center load that tripped offline in PJM during the July 22 event.