



DIGITAL POWER DIGEST

WEEK IN REVIEW

The Buildout Enters the Execution Era

Hyperscaler ambitions keep climbing - Microsoft, OpenAI and Anthropic are now planning in tens of gigawatts - but announced gigawatts are not the scarce input. Deliverable power, equipment slots, skilled labor, community permission and balance-sheet capacity remain the chokepoints.

Power is where the shift is most visible. ERCOT's gas queue jumped by nearly a quarter in three months, dominated by simple-cycle turbines and reciprocating engines, while short-duration batteries kept stacking up beside them. The two are complements, not competitors: storage clears ramps and peaks; fast-start gas delivers firm megawatts on a schedule. Regulators are converting that engineering logic into contract terms - Pennsylvania's PJM adequacy study and the PUCs new curtailment and cost-allocation dockets make interruptibility and behind-the-meter supply credit inputs rather than design preferences.

Capital remains abundant but is repricing structure. The fortnight produced a landmark chip-collateralized syndication, record data center CMBS issuance, an upsized convertible at a higher coupon and hyperscaler capex that compressed margins even as bookings surged. Lenders are underwriting collateral, contracted utilization and residual value - not narrative.

The social license is being repriced in parallel. The industry's most mature county—Loudon--advanced a development pause, states are clawing back tax incentives, Thailand froze approvals mid-boom, and the first credible study put a number on what data centers do to nearby home values. Community friction now shows up as schedule risk, mitigation capex and, at the margin, stranded capital.

The market's answer is industrialization: factory-built data centers, multi-year equipment reservations, vertical integration into microgrids and fiber. The valuable asset is no longer an announced gigawatt. Increasingly, it is a financed, permitted, equipped and controllable megawatt that reaches commercial service on time.

80 GW ERCOT ACTIVE GAS QUEUE	\$22B CRUX AI	20.2 GWh U.S. Q2 BATTERY ADDITIONS	13.20 PJM 2030 HIGH-LOAD LOLE
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INSIDE Numbers of the Week p.2 Power Is the Product p.3 Bring Your Own Power p.4 Permission Is Capital p.5 Bigger and Smaller p.6 The New Asset Class p.7 The Supply Stack p.8 The Strategic Stack p.9 Forty-Story Roundup p.11

★ NUMBERS OF THE WEEK | 20 SIGNALS FROM THE PHYSICAL AI STACK

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

\$50 / \$20 / \$15 AI CAPEX SPLIT BNP Paribas allocates each \$100 of AI capex roughly \$50 to semiconductors, \$20 to power and \$15 to networking; cooling and facilities absorb the balance.	9.2 GW PROPOSED OHIO GAS CAMPUS The Pike County generation complex would out-scale Grand Coulee (6.81 GW); the neighboring GW Ranch proposal adds another 7.65 GW.
+\$50B / -\$120B CONSTRUCTION DIVERGENCE Versus December 2023, data center construction is running about \$50B SAAR higher while all other private construction is down roughly \$120B.	80 GW ERCOT GAS QUEUE Combined Microsoft, Amazon, Alphabet and Meta capital spending over the same 2022-26 period.
19 OF 26 FAST-START GAS REQUESTS Simple-cycle turbines and reciprocating engines dominate ERCOT's newest gas applications; only five are combined-cycle.	166 GW / 398 GWh ERCOT BATTERY QUEUE Roughly 2.4 hours of average duration - built for ramps and peaks, not multi-hour firm energy.
474 GW TEXAS LARGE-LOAD REQUESTS Connection requests under review exceed five times the state's 91.1 GW record peak.	2.9% -> 1.8% 2027 U.S. POWER GROWTH The national electricity-sales forecast was cut after Texas paused new data center projects pending an audit.
\$360 -> <\$30/MWh ERCOT PEAK PRICES July day-ahead South Zone peaks averaged under \$30/MWh at record demand, versus about \$360 in August 2023.	20.2 GWh RECORD BATTERY QUARTER Q2 grid-storage additions equaled about a tenth of the entire installed U.S. base, at 6.7 GW of power.

Sources: BNP Paribas Equity Research; EIA; U.S. Commerce Department; ERCOT; Bloomberg; Canary Media; supplied charts.

★ NUMBERS OF THE WEEK | CAPITAL, CAPACITY AND THE SUPPLY STACK

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

720 TESLA MEGAPACKS AT xAI Satellite imagery at Colossus 2 implies about 2.8 GWh; company and utility figures run to 3.3 GWh and roughly 2 GW of discharge.	\$3.9B / \$30.9B CRUSOE RAISE / VALUATION New equity funds the shift toward factory-built Spark facilities alongside hyperscale campuses.
2.1 GW CRUSOE ABILENE CAMPUS Planned capacity includes a 900 MW on-site gas plant serving Microsoft's portion of the site.	\$17B / 8% DATA CENTER CMBS Issuance since the start of 2025 - more than triple the prior two years and about 8% of new commercial-property bond deals.
~\$419B GLOBAL AI DEBT ISSUANCE Borrowing tied to the AI funding wave this year, per Bloomberg, as funding costs began rising for some issuers.	\$20B-\$30B 2030 INSURANCE PREMIUMS Swiss Re's forecast for annual data center premiums; single hyperscale sites can carry insured values above \$20 billion.

233 / \$1.3B LOUDOUN SCALE / TAXES Facilities built or under construction, against projected FY2027 local tax revenue - while a new-application pause advances.	49 / \$27B THAILAND PAUSE / APPROVALS Projects placed on hold after 88 AI and data center approvals worth \$27 billion in the first half.
80M+ MILES VERIZON / CORNING FIBER A multi-billion-dollar high-density fiber agreement running through 2032, including AI backbone capacity.	<4% HUAWEI VS. NVIDIA COMPUTE Epoch AI's estimate of Huawei's 2026 effective output; on Chinese-made HBM alone, it could stay near 1% through 2028.

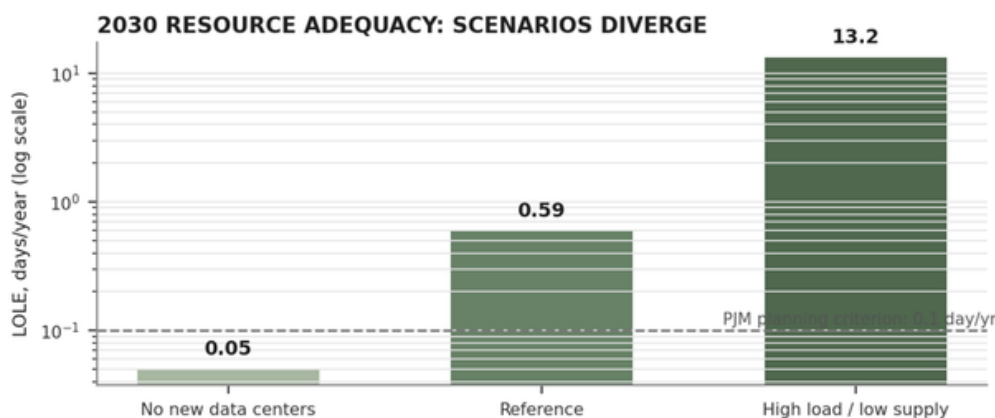
Sources: Canary Media; Wall Street Journal; Bloomberg; Swiss Re; Loudoun County; Verizon / Corning; Epoch AI.

★ MARKET SPOTLIGHT | POWER IS THE PRODUCT

PJM RESOURCE ADEQUACY MOVES FROM FORECAST TO UNDERWRITING INPUT

What is financeable is not nameplate electricity; it is deliverable, curtailable megawatts. (Loss of Load Expectation = LOLE)

0.59	13.20	6,831 MW	+18.56%
2030 REFERENCE LOLE, DAYS/YR	2030 HIGH-LOAD LOLE, DAYS/YR	PJM 2028-29 CAPACITY SHORTFALL	PA INDUSTRIAL LOAD, 5-YR FORECAST



THE SCENARIOS ISOLATE THE DATA CENTER VARIABLE

The Synapse analysis commissioned by Pennsylvania is useful precisely because it holds the supply framework largely constant while varying the large-load path. Without new data centers, modeled 2030 loss-of-load expectation stays at 0.05 day/year - half the 0.1 planning criterion. The reference case breaches that criterion six-fold, and the stress case produces 264 GWh of expected unserved energy and a maximum modeled outage of 22.3 GW. The point is not a specific outage forecast; it is that incremental large load now moves the reliability distribution enough to price.

REGULATION IS CONVERTING SYSTEM RISK INTO CONTRACT TERMS

Pennsylvania's PUC has moved past monitoring: it voted to develop explicit emergency-curtailment sequencing, convene a technical conference on large-load cost allocation, and revisit ratemaking as utility capex accelerates. MISO is pursuing the same logic through large-load reliability requirements and zero-injection concepts. The emerging bargain: faster service for loads that bring supply, cap their grid draw, or shed reliably when the system is tight.

UNDERWRITING VARIABLE	WHAT CHANGES	INFRASTRUCTURE READ-THROUGH
Resource adequacy	Curtailment and conditional service become contractual	Firm MW and interruption rights carry option value
Cost allocation	Large loads face pressure to fund network upgrades	Self-funded infrastructure protects schedule
Dynamic behavior	Static MW forecasts no longer satisfy grid studies	Controls and telemetry enter the bankability checklist

INVESTMENT READ-THROUGH | FOUR CONSEQUENCES

1. Probability-weight queue megawatts for study maturity, power procurement, site control and customer commitment - never at face value.

2. Curtailment capability is an asset: flexible load buys service where inflexible load creates a reliability obligation.
3. Customer-funded substations, generation and storage pull cost and schedule inside the project perimeter.

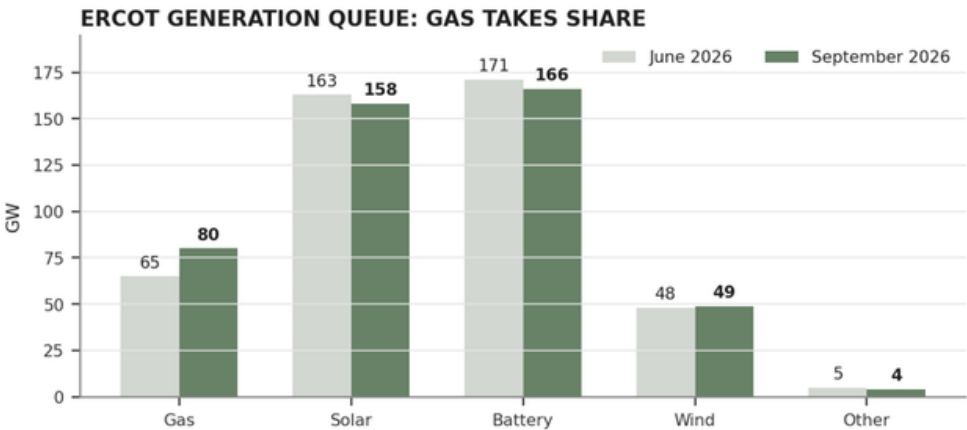
4. Dynamic load models, telemetry and ride-through are entering lender diligence because controllability protects utilization.

SOURCE ARTICLES / PRIMARY SOURCES | [Synapse PA/PJM adequacy study](#) | [PA PUC rates & curtailment](#) | [MISO zero-injection](#) | [MISO large-load reliability](#)

MARKET SPOTLIGHT | BRING YOUR OWN POWER BECOMES THE STANDARD CASE

GAS + BATTERIES + CONTROLS: THE GRID-PARALLEL CAMPUS
Behind-the-meter supply has moved from workaround to core data center architecture.

+15 GW ERCOT GAS ADDS, JUN-SEP	-10 GW ALL OTHER QUEUE CATEGORIES	3.3 GWh xAI STATED STORAGE	\$1.45B VERTIV / UIG ACQUISITION
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THE QUEUE IS NOW A SPEED-TO-POWER SIGNAL

Between ERCOT’s June and September board updates, gas requests grew while every other category shrank - and the composition matters more than the totals. Applicants are overwhelmingly choosing modular, fast-start machines over baseload designs and pairing them with storage whose duration profile suits ramps rather than overnight energy. The system is building two products because they solve two different constraints: time-to-power and hourly flexibility.

xAI SHOWS THE HYBRID END STATE

At Colossus 2, batteries are structural: they smooth AI load swings, support ride-through, provide hours of curtailment capability and can eventually clear as a grid resource. The vendor layer is converging on the same architecture - Vertiv’s UtilityInnovation acquisition adds microgrid controls, on-site generation orchestration and behind-the-meter switchgear to a cooling-to-distribution portfolio. The design unit is now a campus-level power system, not a backup-generator line item.

GRID Imports when available	ONSITE GAS Firm / bridge power	BESS Ride-through / peaks	CONTROLS Dispatch / islanding	AI LOAD Training + inference
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BTM BANKABILITY | WHAT HAS TO CLEAR

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|--|---|
| 1. Contract: the compute customer must underwrite fixed-capacity economics long enough to finance generation and electrical plant. | 2. Fuel and permits: gas moves fast only when pipeline capacity, emissions limits and local approvals are solved in parallel. |
| 3. Equipment and labor: turbine, recip, switchgear and electrician availability can set COD before the interconnection study does. | 4. Controls: islanding, black start, ride-through and dispatch must be engineered as one power system, not assembled as backup parts. |

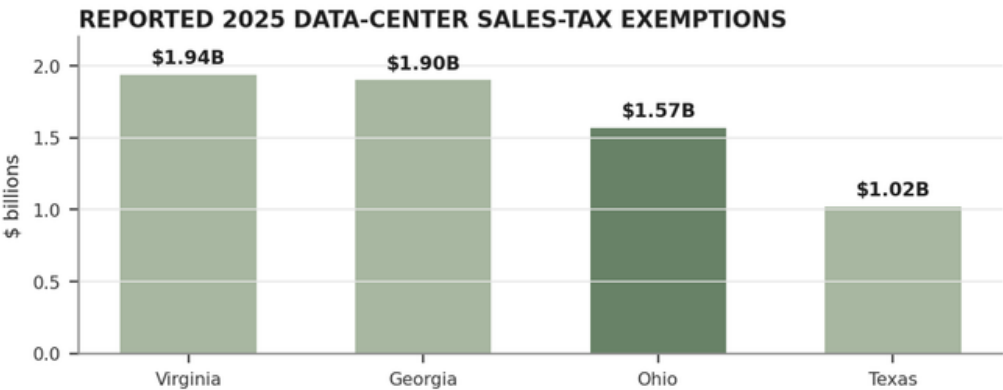
SOURCE ARTICLES / PRIMARY SOURCES | [ERCOT Sept. board materials](#) | [xAI Memphis battery](#) | [Vertiv-UIG acquisition](#) | [SemiAnalysis BTM power](#)

MARKET SPOTLIGHT | PERMISSION IS CAPITAL

THE SOCIAL LICENSE IS NOW A SITING AND COST-OF-CAPITAL VARIABLE

Tax abatements, property values and infrastructure burdens are being re-underwritten together.

17,000 LOUDOUN DATA CENTER JOBS	12 MO PROPOSED APPLICATION PAUSE	10X OHIO EXEMPTION VS. ESTIMATE	-7.2% HOME VALUES WITHIN 1 MILE
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OPPOSITION HAS OUTGROWN THE ZONING FIGHT

Loudoun County - the industry’s most mature U.S. cluster - advanced a measure that could pause new data center and substation applications for a year despite the sector’s local employment and tax base. Ohio’s 2025 sales-tax exemption reached roughly \$1.57 billion against an original estimate a tenth that size, and more than ten states have paused or reversed similar incentives. Thailand halted approvals mid-boom to rewrite power, water and siting rules. When the friendliest jurisdictions start rationing permission, siting risk has become systemic rather than idiosyncratic.

LOCAL EXTERNALITIES ARE GETTING A PRICE

A September housing study makes the first serious attempt to quantify the neighborhood discount: 3% average value erosion within three miles of large announcements over five years, steeper close-in, and an estimated \$20.6 billion of aggregate housing-wealth loss. The methodology will be argued; the financing implication will not. Community opposition now converts directly into schedule delay, incentive reversal, mitigation capex and a higher probability of stranded development capital.

57% TEXAS RESPONDENTS OPPOSE LOCAL DC	75 PROJECTS BLOCKED OR DELAYED	\$130B VALUE OF THOSE PROJECTS	1.8 GW JOLIET PROJECT IN COMED DISPUTE
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COMMUNITY VARIABLE	OLD ASSUMPTION	NEW UNDERWRITING QUESTION
Tax incentives	Durable location subsidy	Can the benefit survive the next fiscal cycle?
Power/ water	Utility responsibility	Who funds network expansion and scarcity costs?
Property/ noise	Soft community issue	Does opposition create delay, mitigation capex or litigation?
Jobs/ taxes	Primary benefit case	Is the benefit visible enough to sustain permission?

DEVELOPMENT READ-THROUGH THE NEW SOCIAL-LICENSE CHECKLIST	
1. Model tax benefits as contingent, not permanent: incentive reversal is a live downside case in several large data center states.	2. Host-community agreements are schedule infrastructure; benefits must be visible before opposition hardens into a moratorium.
3. Ratepayer-protection politics favor dedicated generation, explicit cost allocation and interruptible-service structures.	4. Price noise, land value, water and transmission visibility as mitigation capex and delay risk, not soft issues.

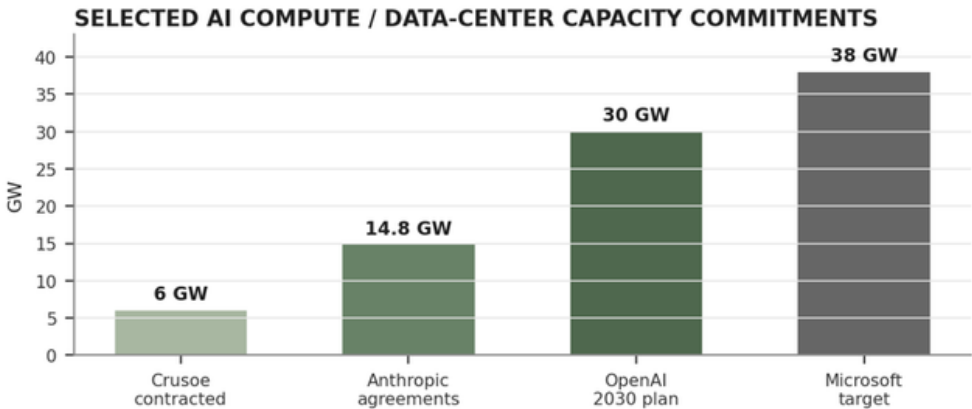
SOURCE ARTICLES / PRIMARY SOURCES | [Data-center tax breaks](#) | [Loudoun application pause](#) | [Thailand freezes 49 projects](#) | [Housing-value study](#)

MARKET SPOTLIGHT | AI IS GETTING BIGGER - AND SMALLER - AT THE SAME TIME

GIGAWATT TRAINING CAMPUSES COEXIST WITH MODULAR INFERENCE

The market is bifurcating, not shrinking.

38 GW MICROSOFT TARGET CAPACITY	30 GW OPENAI 2030 COMPUTE PLAN	1 GW/YR CRUSOE SPARK FACTORY TARGET	6+ GW CRUSOE CAPACITY UNDER CONTRACT
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THE SCALE RACE IS INTACT

Frontier training still rewards tightly coupled clusters, deep networking and large blocks of firm electricity, which is why hyperscaler targets keep compounding: Microsoft intends to more than triple its footprint, and Anthropic’s recent compute agreements alone cover at least 14.8 GW. Nothing in the period suggested the top of the market is getting smaller.

INFERENCE IS CREATING A SECOND DELIVERY MODEL

Crusoe’s Spark strategy is the counterpoint: manufacture standardized facilities offsite and ship them to where power already exists. Its Denver plant is built to that cadence, and managed inference went from near-zero revenue in January to a \$100 million-plus run rate by summer. Palantir and Nebius are pursuing a parallel sovereign model built on modular deployments at powered sites. The effect is to re-rate sub-50 MW and brownfield power positions without denting hyperscale demand.

WORKLOAD	INFRASTRUCTURE FORM	POWER / SITE IMPLICATION
Frontier training	100s of MW to multi-GW, tightly networked campuses	Concentrated firm power, transmission, large construction program
High-volume inference	Factory-built, repeatable modules; distributed clusters	Existing powered sites and manufacturing cadence gain value
Sovereign / enterprise AI	Regional or customer-controlled nodes	Jurisdiction, data control and local power become product features

CAPACITY READ-THROUGH WHY THE BIFURCATION MATTERS	
1. Training keeps rewarding concentrated power blocks; inference monetizes sites that could never justify a frontier campus.	2. Factory-built modules move labor offsite, compress field schedules and make manufacturing throughput a delivery metric.
3. Powered brownfields and sub-50 MW interconnections re-rate as distributed inference values available megawatts over scale.	4. Sovereign and enterprise deployments add jurisdiction, latency and data control to the siting decision.

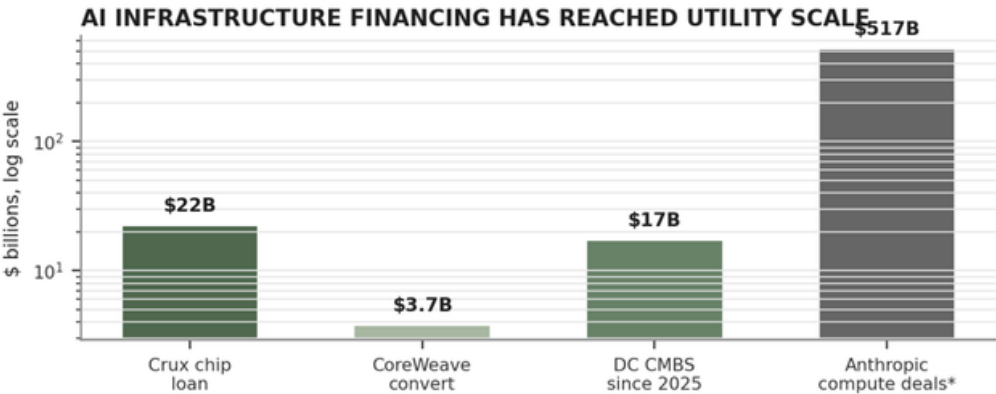
SOURCE ARTICLES / PRIMARY SOURCES | [Microsoft targets 38 GW](#) | [Anthropic: 14.8 GW / \\$517B](#) | [Crusoe goes smaller](#) | [Palantir-Nebius sovereign AI](#)

MARKET SPOTLIGHT | AI INFRASTRUCTURE BECOMES AN ASSET CLASS

WALL STREET IS FINANCING CHIPS, POWER AND REAL ESTATE AS ONE STACK

Capital is abundant; structure, collateral and residual value set the clearing price.

10 BANKS CRUX AI LENDING GROUP	\$5B BLACKSTONE EQUITY, CRUX	2.875% COREWEAVE 2033 COUPON	\$664B ORACLE REMAINING OBLIGATIONS
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CRUX.AI COLLATERAL STACK

The Google-Blackstone platform announced a \$22 billion financing syndicate secured by Google TPUs and customer contracts, alongside Blackstone equity and a \$1 billion revolver. Anthropic’s announced compute agreements achieved a critical mass, with The Information tallying up to \$517 billion of commitments. AI hardware and offtake have become financeable collateral at infrastructure scale.

THE DEBT WINDOW IS OPEN; THE RISK MODEL HAS CHANGED

Data center CMBS is forcing real-estate investors to underwrite power availability, cooling density, hardware obsolescence and tenant concentration. CoreWeave’s upsized convertible priced more than a point above its April issue even as aggregate AI-linked borrowing kept climbing. Oracle shows the operating side of the trade: \$28.5 billion of quarterly capex and 850 MW of new capacity drove 121% cloud-infrastructure growth - and five points of gross-margin compression. Money is available; it is no longer indiscriminate.

CAPITAL CHANNEL	WHAT SUPPORTS THE CREDIT	WHAT GETS PENALIZED
Chip / equipment loan	Hardware collateral + contracted customers	Obsolescence, utilization, residual value
Project / CMBS	Powered asset + lease + completion support	Tenant concentration, grid risk, retrofit capex
Convertible / corporate	Scale, growth, equity option value	Serial issuance, cash burn, rising coupons
Insurance / captives	Diversified pool + engineering controls	Concentration, outage severity, replacement cost

CREDIT READ-THROUGH FOUR QUESTIONS THAT NOW MATTER	
1. What is the collateral at maturity - a powered shell, chips, contracts - and how quickly can it be remarketed?	2. How much utilization is contracted versus forecast, and who absorbs downtime, power-price and completion risk?
3. Can the electrical and cooling plant accept the next chip generation without a retrofit that impairs residual value?	4. What is the takeout if debt, CMBS or equity windows narrow before construction converts to recurring cash flow?

SOURCE ARTICLES / PRIMARY SOURCES | [Crux \\$22B TPU financing](#) | [Data-center CMBS](#) | [CoreWeave \\$3.7B convert](#) | [Oracle capex & margins](#) | [Anthropic compute commitments](#)

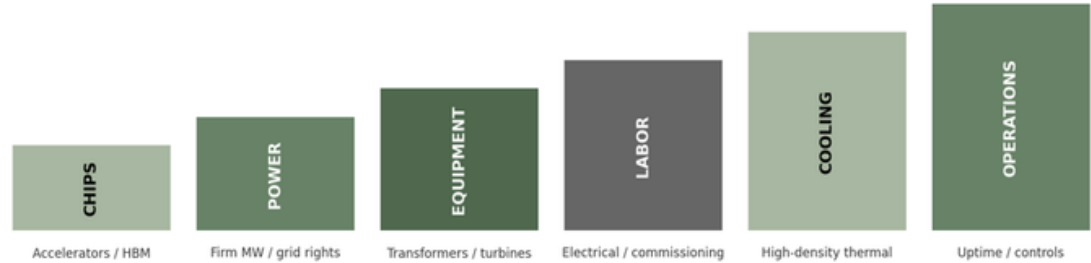
MARKET SPOTLIGHT | THE PHYSICAL STACK INDUSTRIALIZES

THE BOTTLENECK KEEPS MOVING DOWN THE BILL OF MATERIALS

Transformers, generators, fiber, switchgear and skilled labor are becoming schedule assets.

2029 HITACHI GALLMAN FIRST OUTPUT	~220 GW TURBINE BACKLOG / RESERVATIONS*	3x CATERPILLAR OUTPUT VS. 2024	10 GW/YR INNIO 2030 CAPACITY PATH
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Scarcity premium migrates as each constraint is solved.



DEMAND IS RESERVING THE FACTORY, NOT JUST THE PRODUCT

Hitachi's Gallman, Mississippi plant will more than double U.S. small- and medium-transformer output - and ships nothing until after many current campuses expect first energization. Amazon's multi-year Generac generator commitment, the Verizon-Corning fiber pact and Vertiv's push into microgrids follow the same pattern: customers locking manufacturing capacity years forward, suppliers integrating into adjacent bottlenecks.

TURBINE SCARCITY HAS CREATED A MARKET FOR TIME

Compiled backlogs and reservations across GE Vernova, Siemens Energy and Mitsubishi approach a fifth of a terawatt, and SemiAnalysis notes released delivery slots trading at material premiums - buyers are paying for years, not iron. Reciprocating engines are the faster valve, with Caterpillar and INNIO both on steep multi-year expansion paths from a 3.5 GW/year 2025 base. In a sold-out market, the delivery calendar is the asset.

CONSTRAINT	SUPPLY RESPONSE	VALUATION EFFECT
Transformers / switchgear	New factories, larger advance orders	Earlier procurement, more working capital
Gas generation	OEM expansion + recips + secondary slots	Schedule premium, stronger vendor pricing
Fiber / electrical	Long-term material agreements	Backbone capacity becomes contracted inventory
Operations / cooling	M&A and integrated service platforms	Uptime capability becomes a recurring-value layer

PROCUREMENT READ-THROUGH SCHEDULE IS NOW INVENTORY	
1. Reserve long-lead electrical equipment ahead of FID where the option cost is below the value of preserving COD.	2. Standardize repeatable electrical blocks so switchgear, UPS, cooling and controls are manufactured, not redesigned per site.
3. Dual-source wherever qualification allows; single-source dependence converts supplier backlog into project-duration risk.	4. Budget more working capital: deposits, slot payments and owner-furnished equipment move cash out early to protect revenue start.

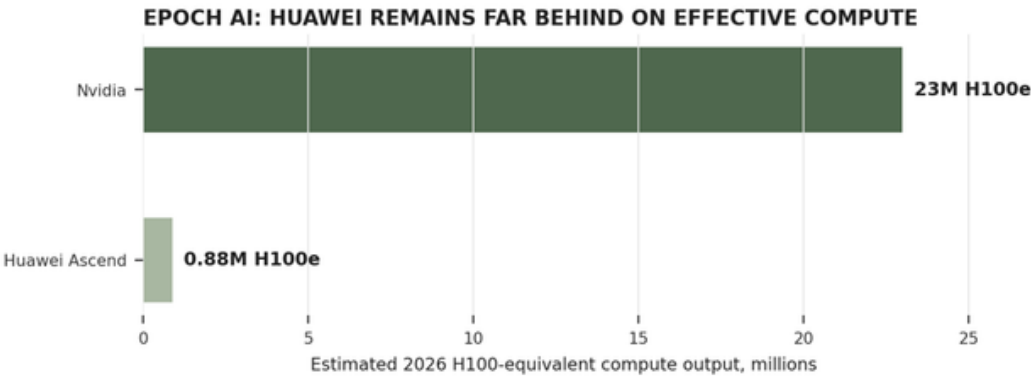
SOURCE ARTICLES / PRIMARY SOURCES | [Hitachi transformer expansion](#) | [Amazon-Generac \\$8B pact](#) | [Verizon-Corning fiber pact](#) | [SemiAnalysis BTM supply chain](#) | [Turbine bottleneck analysis](#)

MARKET SPOTLIGHT | THE STACK BECOMES STRATEGIC

ALL-OF-THE-ABOVE POWER MEETS SOVEREIGN COMPUTE

Energy technology and semiconductor access are now national-infrastructure variables.

20 YR GOOGLE / LOVIISA NUCLEAR TERM	50% SHARE OF LOVIISA OUTPUT	5 SMRs BLUE ENERGY MAXIMUM PLAN	160K DEEPSEEK PLANNED HUAWEI CHIPS
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THE POWER ANSWER IS PRAGMATIC, NOT IDEOLOGICAL

Google tied up two decades of Finnish nuclear output; Blue Energy's Texas plant starts on gas turbines with an option on small modular reactors; the U.S. Army picked five microreactor developers; Oracle and Meta kept layering Texas wind and solar beneath firmer products. Batteries, geothermal and demand flexibility each fill an operating niche. The winning portfolio is whichever one delivers firm power on the required timetable at an acceptable marginal cost.

COMPUTE SOVEREIGNTY MEETS THE MANUFACTURING STACK

Epoch AI puts Huawei's 2026 effective compute output at a low-single-digit fraction of Nvidia's, with HBM the binding constraint and a three- to four-year per-chip lag. DeepSeek's planned Inner Mongolia cluster is the counter-move: use system scale and domestic procurement to offset chip-level disadvantage. Palantir-Nebius supplies the Western commercial analog - compute, models and data inside the customer perimeter, deployed where power already exists. The contest now spans lithography, memory, power, facilities, networks and software.

RESOURCE/TECHNOLOGY	ROLE IN AI INFRASTRUCTURE	PRIMARY CONSTRAINT
Natural gas	Fast firm MW; bridge power; islanding	Turbines, permits, pipelines, emissions
Batteries	Ride-through, ramps, peak curtailment	Duration, cycling, recharge source
Renewables / geothermal	Low-cost energy; contracted clean supply	Intermittency or resource geography
Nuclear	Long-duration clean firmness	Licensing, construction time, capital intensity
Domestic AI chips	Sovereign compute; supply-chain control	HBM, process nodes, software ecosystem

STRATEGIC READ-THROUGH THE STACK IS THE MOAT	
1. Diversified power portfolios reduce dependence on any single interconnection, fuel or permitting path.	2. Nuclear is most valuable where an existing plant, license or interconnection can be extended; greenfield stays schedule-bound.
3. Semiconductor sovereignty is gated by HBM, process nodes and software as much as chip-design IP.	4. Geographic resilience now includes war risk, subsea connectivity and control of compute - not just power price.

SOURCE ARTICLES / PRIMARY SOURCES | [Google-Loviisa nuclear deal](#) | [Blue Energy gas-to-nuclear](#) | [Army microreactor awards](#) | [DeepSeek 160K Huawei chips](#) | [Epoch AI: Huawei roadmap](#)

WEEKLY ROUNDUP | GRID, POWER AND THE SUPPLY CHAIN

FORTY STORIES, ONE PHYSICAL STACK

The top developments from the source packet, each with the takeaway that matters for infrastructure.

- 1. PA PUC moves from monitoring to rulemaking.** Curtailment sequencing, large-load cost allocation and ratemaking are now formal dockets - tariff design is catching up to the load book.
- 2. MISO advances zero-injection architecture.** Google and Xcel backed connections that cap net grid withdrawals - withdrawal limits are becoming a faster-service bargaining chip.
- 3. MISO adds large-load reliability obligations.** Service would be conditioned on operating performance, not granted to passive demand - dynamic behavior moves into the tariff.
- 4. PJM / Oklo dispute exposes queue fragility.** Oklo asked FERC to restore a 750 MW nuclear-gas-fuel-cell project to the study cycle - procedure can destroy schedule value after site strategy is set.
- 5. Google contracts Loviisa for 20 years.** The Fortum deal supports roughly EUR 1 billion of life-extension investment - existing reactors are becoming duration hedges.
- 6. Duane Arnold restart draws \$1.9B of DOE support.** NextEra adds a second restart template - federal credit is converting idle interconnection back into firm capacity.
- 7. Blue Energy files with the NRC.** The Crusoe-linked Texas plant runs gas first, reactors later - bridge-to-nuclear is now an explicit speed-to-power design.
- 8. Army taps five microreactor developers.** Defense procurement seeds a 1-20 MW supply chain - an early customer base ahead of commercial proof.
- 9. Fervo and Google expand geothermal.** Around-the-clock matching keeps pulling geothermal into contracted infrastructure - the firm-clean toolkit is widening.
- 10. Oracle signs 1.7 GW of Texas wind.** Cheap bulk energy still underpins firmer products - all-of-the-above includes renewables.
- 11. Meta adds a 144 MW Texas solar PPA.** Low-cost energy keeps stacking beneath firm capacity - the layering strategy holds.
- 12. xAI's Memphis battery reaches utility scale. Possibly the largest of its kind in the U.S. - storage is now interconnection equipment, not backup.**
- 13. Hitachi commits \$528M to transformers.** Gallman more than doubles U.S. small / medium output - a real manufacturing response on a late clock.
- 14. Amazon signs Generac for up to \$8B.** Initial deliveries of \$2.4B land in 2027-28 - hyperscalers are pre-buying scarce power hardware.
- 15. Verizon and Corning lock 80M+ miles of fiber.** The agreement runs to 2032 - the network layer is industrializing on generation timelines.
- 16. Vertiv acquires UtilityInnovation.** Controls, orchestration and switchgear join the portfolio - equipment vendors are becoming power-architecture integrators.
- 17. Flex buys EPC Power.** Inverters and power conversion join the lineup - suppliers keep converging on the electrical control layer.
- 18. Salute acquires T5 Operations.** Uptime and skilled-labor depth consolidate - operations expertise is itself a scarce input.
- 19. Crux AI closes its \$22B chip loan.** Syndicated bank debt sized against TPU collateral sets a template others will copy - hardware finance has gone mainstream.
- 20. Crux site delays reset assumptions.** Delivery confidence has slipped on switchgear, labor and site issues - committed capital does not erase execution risk.

SECONDARY SIGNALS | WHAT ELSE MOVED

Gas demand: Bloomberg sees data center gas use reaching country-scale by 2035 - a pipeline and basis-risk issue.

Marcellus: Producers flag tightening regional balances just as the power market asks for more gas-fired capacity.

Grid-responsive AI: Emerald AI / Alderbuck are building compute that modulates as a grid resource rather than sitting as fixed load.

Accountability: Virginia-style frameworks now require power, water and community disclosures before approval.

New York: State mechanisms aim to capture more infrastructure funding from AI loads as the fiscal bargain shifts.

Custom silicon: Qualcomm / Amazon work widens accelerator procurement beyond GPUs and TPUs.

12-inch masks: ASML, TSMC, Samsung and Intel back larger photomasks as AI chips press reticle limits.

Subsea fiber: New transpacific investment shows AI needs redundant international bandwidth, not just domestic power.

Sources: Company disclosures; Bloomberg; Utility Dive; Wall Street Journal; The Information; DCD; Canary Media; SemiAnalysis.

WEEKLY ROUNDUP | CAPITAL, COMPUTE AND WHAT TO WATCH

21. CoreWeave upsizes converts to \$3.7B. The 2033 notes priced at 2.875% versus 1.75% in April - money is available at a rising marginal cost.

22. Crusoe raises \$3.9B - and goes smaller. Factory-built Spark units now complement hyperscale campuses - manufacturing cadence becomes a capacity metric.

23. Crusoe and Perplexity deepen managed inference. The book has compounded from a standing start in January - owners are monetizing tokens, not just racks.

24. Blockfusion signs CoreWeave at Niagara Falls. Another crypto footprint converts to AI - energized brownfields keep clearing ahead of the queue.

25. Microsoft plans for 38 GW. Roughly 26 GW of additions would more than triple the footprint - the hyperscale ceiling keeps rising.

26. TCS targets a 1 GW India campus. Sovereign compute and power access are widening the map beyond core U.S. markets.

27. Anthropic lines up at least 14.8 GW. Eleven months of compute deals now stretch across most of the next decade - tenant obligations rival utility systems.

28. Theseus forms around Anthropic demand. GIC and Macquarie built the platform on a contracted anchor - dedicated vehicles are replacing speculative shells.

29. Nscale files for an IPO. Steep revenue growth arrives with steep losses - public markets will separate booked capacity from cash conversion.

30. Nscale signs \$3.5B with Figure. Robotics compute extends demand beyond model labs - physical AI is a second channel for dense capacity.

31. OpenAI weighs funding above a \$1.2T valuation. A private round would extend the pre-IPO runway - the compute plan increasingly sets the financing need.

32. Anthropic moves toward public markets. Nasdaq selection keeps the IPO calendar - and its capacity obligations - in front of investors.

33. ByteDance raises ~\$30B of bank debt. Its largest-ever loan part-funds AI investment - the Chinese buildout is leveraging up too.

34. Nvidia commits \$2B to Brookfield's AI fund. The chip vendor is buying into the assets that house its silicon - vertical integration runs upstream.

35. Apollo expands hardware financing. Private capital is bankrolling equipment makers pre-revenue - balance sheet is becoming a supplier advantage.

36. CMBS learns to underwrite megawatts. Power rights, cooling density and obsolescence are now commercial-real-estate credit variables.

37. Insurance becomes a growth market. Concentration, uptime and replacement-value risk are forming a new specialty pool.

38. Huawei stays compute-constrained. HBM, process access and software cap effective output despite system-level gains.

39. DeepSeek plans a 160,000-chip Ascend cluster. Inner Mongolia would dwarf prior deployments - scale as the answer to a per-chip deficit.

40. Palantir and Nebius productize sovereign AI. Software control plus modular compute at powered sites - sovereignty and time-to-power converge.

LAYER	LATEST SIGNAL	UNDERWRITING READ-THROUGH
Power	Fast-start gas and storage queues both at records	Firm capacity and flexibility are separate products being built simultaneously
Credit	Chip-collateralized syndication; convert coupons rising	Collateral, contracted offtake and residual value set the clearing price of AI debt
Siting	Mature-market pause; incentive clawbacks spreading	Permission and fiscal durability are schedule variables that can strand financeable projects
Compute	Hyperscale targets rise; sovereign supply stays gated	Demand is not the constraint; hardware, efficiency and access decide where capacity lands

THE WEEK AHEAD | PA PUC: tentative load-management order Oct. 1, then a January vote path. | Loudoun: formal vote on the application pause and the 2027 zoning rewrite. | Crux AI: whether the 500 MW 2027 target converts from financing into energized capacity. | Anthropic / OpenAI: listing and funding disclosures that clarify compute commitments. | NERC / RTOs: large-load ride-through, telemetry, curtailment and cost-allocation rules. | Equipment: transformer, turbine and generator order books as 2027-29 delivery windows tighten.

ABOUT DIGITAL POWER DIGEST | Keel Infrastructure's institutional briefing on the intersection of power markets and digital infrastructure - interconnection, generation, gas supply, capital markets, regulation and the physical AI stack. **Editor - Chris Ruppel, SVP - Power.** Analysis reflects public information and the editor's judgment as of the issue date.