

The Race to Energize AI

Time to energization, the electrical bottleneck, and the economics of the AI power build-out

Central question. The market has spent a year pricing the fact that artificial intelligence consumes enormous quantities of electricity. What decides the next phase?

Finding: the differentiating variable is no longer contracted gigawatts but time to energization — how quickly generation, transformers, switchgear, cooling, controls and skilled field labour arrive together. A second and independent test then applies: a severe physical bottleneck is not the same thing as an investable scarcity rent, and most of 2026's performance dispersion is the market learning to tell the two apart.

Report scope Fourteen analytical sections · eighteen exhibits · one original model · Rule of 40 analysis · backlog-quality taxonomy · investment opportunity map · risk register · investor dashboard · three appendices

Company evidence runs through results published to 28 August 2026; market data to the close of 28 August 2026.

Evidence discipline Every material quantitative claim is classified as observed data, company-reported result, announced target, third-party estimate or author calculation. Framework agreements, slot reservations and firm orders are never conflated.

Not investment advice The investment section identifies capital-allocation categories and diligence tests. It contains no security recommendations, ratings, price targets or return expectations.

RESEARCH METHOD

How this report was built

This report treats the AI power build-out as a delivery problem rather than a demand story. The organising chain runs: announced capacity → contracted capacity → equipment orders → manufactured equipment → installed equipment → commissioned equipment → energised megawatts → revenue-generating compute. Each link is tested separately, and the report's argument is that the market has moved its attention from the first link to the last.

Source discipline

Company evidence is taken from earnings releases, exhibits filed with the Securities and Exchange Commission, results presentations and earnings-call transcripts — never from secondary summaries where a primary document exists. Grid and equipment evidence comes from Lawrence Berkeley National Laboratory, the Federal Energy Regulatory Commission, ERCOT and the Texas Public Utility Commission, and from named industry bodies. Journalism is used only where it carries a figure that no primary record publishes, and is labelled as such. Market data is computed by the author from a single price source, stated in Exhibit 6.

Six distinctions enforced throughout

Most confusion in public commentary on this subject comes from collapsing categories that are economically different. This report keeps them apart: a *financing framework* is not an order; an “*up to*” *ceiling* in a master services agreement is not contracted capacity; a *slot reservation* is a priced queue position, not booked revenue; *backlog* and *remaining performance obligations* are not revenue; *shipped equipment* is not *energised capacity*; and a *physical bottleneck* is not a *pricing power*. Exhibit 5 sets the resulting taxonomy out in full.

Evidence taxonomy

Material evidence carries one of five labels. Nothing in this report presents an announced capacity ambition as operating capacity.

Label	Meaning
OBSERVED DATA	Measured and published by a statistical agency, regulator, grid operator or independent counting body.
COMPANY-REPORTED	Stated by the company about its own operations, in a filing or results release. Not independently verified.
ANNOUNCED TARGET	A plan, ceiling, framework or capacity ambition. Never treated as output.
THIRD-PARTY ESTIMATE	Produced by a research house, bank or consultancy from a proprietary method.
AUTHOR CALCULATION	Derived here from labelled inputs using a stated formula.

What would make this report wrong

The thesis fails if equipment lead times normalise faster than order books convert, if the announced hyperscaler capital expenditure of 2026 moderates before the current backlogs are delivered, or if a change in cooling or power architecture makes today's scarce components ordinary. Section 9 sets out the register of counterarguments and the observable indicator that would confirm each one.

BEFORE WE BEGIN

The terms used in this report

A handful of terms recur throughout, and several of them are routinely used loosely in public commentary. Each is explained where it first appears; for anyone who wants them in one place:

Time to energization — the interval between committing capital to a data-centre campus and the moment it can draw power and sell compute. The central variable in this report.

Backlog — the value of signed work a company has not yet delivered. Not revenue, and not all of equal quality; see Exhibit 5.

Behind the meter — generation built on the customer's own site, connected directly to its load rather than through the public grid. Bypasses the utility's interconnection calendar.

Remaining performance obligations (RPO) — the accounting equivalent of backlog, disclosed under revenue-recognition rules. Comparable across companies; backlog often is not.

Interconnection queue — the administrative line in which a generator or a large load waits for permission to connect to the grid. In the United States the median wait from request to operation exceeded five years for plants built in 2025.

Slot reservation agreement — a priced position in a manufacturer's production queue. It is not an order and is not counted in backlog until it converts.

GW / MW — gigawatt and megawatt, units of electrical power. One gigawatt is 1,000 megawatts, roughly the draw of a very large data-centre campus.

Master services agreement — a framework under which a customer *may* purchase up to a stated ceiling. The ceiling is an option, not a commitment.

Transformer, GSU — the equipment that changes voltage between the generator, the transmission system and the site. A generator step-up unit sits directly on the generator and has the longest lead time in the chain.

Book-to-bill — orders received divided by revenue recognised in a period. Above 1.0 the backlog is growing; below 1.0 the company is consuming it.

Medium-voltage switchgear — the assemblies that switch, protect and isolate circuits between the transformer and the building distribution. One of the two most frequently binding lead times in 2026.

Commissioning — testing and energising a completed electrical system and handing it over. The last step before revenue, and the one with no factory to expand.

Scarcity rent — the part of a price that cost cannot explain: the excess paid because supply is short. This report's recurring question is who captures it.

Rule of 40 — revenue growth (%) plus profit margin (%). A software heuristic, borrowed in Section 7 and stress-tested there.

Book-to-bill above 1.0 — see *book-to-bill*. Sustained readings above 1.0 mean a company is signing work faster than it can deliver, which is the arithmetic definition of a shortage on that company's own books.

Organic growth — revenue growth excluding acquisitions and currency. The difference between reported and organic growth is how much of the expansion was bought rather than generated; Appendix A shows both.

Energised megawatts — capacity that is live and drawing power, as distinct from contracted, shipped or installed. The metric this report argues investors should track, and which almost nobody publishes.

Commissioning capacity — see *commissioning*. Its scarcity is a labour constraint rather than a factory constraint, which is why it cannot be relieved by capital expenditure alone.

Hyperscaler — the largest cloud operators: Amazon, Microsoft, Alphabet, Meta. Between them they guide to more than \$700 billion of capital expenditure in 2026.

Depreciation life — the number of years over which hardware is expensed. Contested for AI accelerators, and in Section 9 treated as a supply-chain variable rather than an accounting one.

Slot conversion rate — the proportion of reservation agreements that become firm orders in a period. GE Vernova is the only company in this report that publishes one.

RPO against backlog — remaining performance obligations are defined by accounting standards and are comparable between companies; backlog is defined by the company and is not. Where both exist this report quotes both.

Behind-the-meter premium — the extra cost per megawatt-hour paid for on-site power against a grid alternative: roughly \$100–165 against \$90–95 in 2026. Treated here as the price of a schedule rather than of energy.

Same-store or organic backlog — backlog growth excluding businesses acquired during the period. The honest measure of whether demand grew or whether the company bought more of it.

Load interconnection — a request to connect a large consumer of electricity, such as a data centre, as distinct from a request to connect a generator. The two queues are administered and counted separately, which is why Exhibit 11 keeps them apart.

Scarcity rent capture — whether the owner of a bottleneck can price against the customer's cost of delay rather than against its own cost of production. The test applied in Exhibit 10.

PART I — WHAT HAS ALREADY BEEN PRICED

1. The gigawatt headline arrives late

On 3 August 2026 the Governor of Texas ordered an audit of the data centres queuing to connect to the state's grid. The number that prompted it was arresting: roughly 474 gigawatts of interconnection requests sitting in ERCOT's queue, about nine-tenths of its data-centre load.^[2] Across 2024 and 2025 the same system actually added 23 gigawatts of new generation.^[3]

The headline was treated as a revelation. For anyone who has held electrical-equipment shares since early 2025 it was closer to the fourth act. The claim that artificial intelligence requires an extraordinary quantity of electricity is now among the most thoroughly priced propositions in the industrial complex. It is true, it is important, and it is no longer a differentiated investment thesis. Every listed company with a plausible connection to it has already been bid; several have been bid and then partly given back.

What has changed is subtler and more useful. Over eighteen months the binding constraint has migrated down the physical stack, and at each stage the market has re-priced a different set of companies. The migration is worth stating precisely, because the current position in the sequence is what determines where the remaining opportunity sits.

STAGE ONE	STAGE TWO	STAGE THREE	STAGE FOUR
Bypass the grid	Build the electrical room	Forecasts became orders	Backlog is graded
Behind-the-meter generation moved first, because it was the only lever that removed the utility interconnection calendar from the critical path.	Generation alone energises nothing. The trade broadened into transformers, medium-voltage switchgear, uninterruptible power, cooling, controls and commissioning.	Announcements converted into signed equipment orders, recorded backlog, reported revenue, margin expansion, capacity investment and corporate restructuring.	The market began to separate nominal backlog from backlog that can become energised, revenue-generating infrastructure before the installed silicon ages.

The migration of the binding constraint, 2025 to 2026. Each stage did not replace the last; it was added to it. A company can be exposed to more than one stage, and the most durable businesses in this report are exposed to three.

Stage four is where the argument of this report begins. The distinction it rests on is that **an announced gigawatt and an energised megawatt are separated by a physical process with a duration**, and that duration is now the scarce good. Time to energization — the interval between a capital decision and the moment a campus can draw power and sell compute — is what the industry is actually short of. It is also, unlike a gigawatt number, hard to announce and easy to miss.

Physical scarcity is not the same thing as investable scarcity rent. A component can be a severe bottleneck without its owner capturing superior economics.

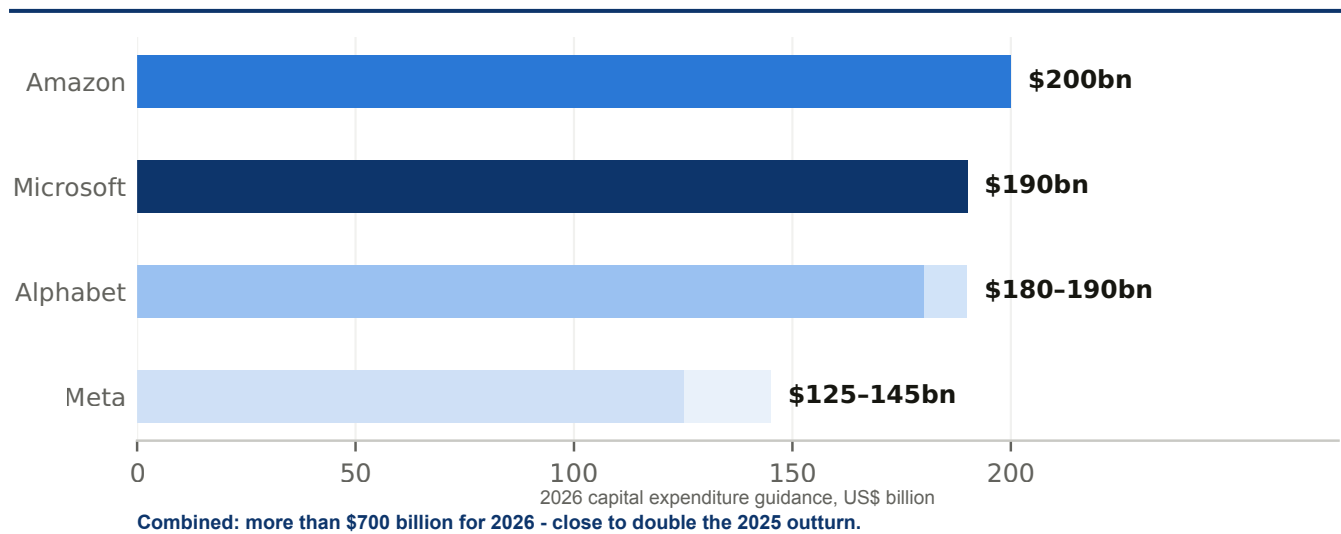
That second proposition is the report's other spine, and it does most of the analytical work in Sections 5 and 6. Grid interconnection is the most severe bottleneck in the entire system and it is largely uninvestable, because the entity that controls it is regulated and does not sell an equity claim on the queue. Small modular reactor developers own a genuine long-run technology and, on the evidence of the last twelve months, are being marked down against businesses that already ship certified nuclear components today. Severity and rent are separate variables and must be measured separately.

2. The demand side, and why it is not the interesting variable

Before turning to supply it is worth stating the demand plainly, because it is both the reason this trade exists and the reason it is no longer differentiated. In the spring of 2026 the four largest buyers of AI infrastructure guided to combined capital expenditure of more than \$700 billion for the year — Amazon at about \$200 billion, Microsoft at about \$190 billion, Alphabet at \$180–190 billion and Meta at \$125–145 billion, close to double the 2025 outturn.^[37] COMPANY-REPORTED

Exhibit 1 • The buyers: 2026 capital expenditure guidance

Research question: how large is the committed demand behind the order books in this report? • **Units:** US\$ billion • **Period:** full-year 2026 guidance as most recently updated before 28 August 2026



Source: company guidance as compiled in reporting of the first-quarter 2026 results season^[37]. **COMPANY-REPORTED** Guidance is a plan, not an outturn, and each of these figures has been revised upward at least once during 2026. Shaded portions of a bar indicate a guidance range rather than a point estimate.

Takeaway: this is the single most important number in the report and also the least useful one. It is known to everybody, it is already in every order book discussed below, and it says nothing about which supplier captures it. Note also what it is not: capital expenditure is not power. Only a minority of it buys the electrical infrastructure this report is about; most of it buys silicon.

Two things follow. The first is that the demand is large enough that the constraint has to be physical rather than financial: at this rate of spending, the question of whether a buyer can afford a transformer never arises, only whether one exists. The second is that guidance of this kind is revised annually and can be revised down. Section 12 treats that as the single thesis-breaking risk, and it is worth holding in mind through everything that follows: the entire supply-side argument of this report rests on a demand assumption made by roughly four management teams.

What guidance does not tell you is the delivery date. That is the variable this report is about, and it is set by a completely different set of companies.

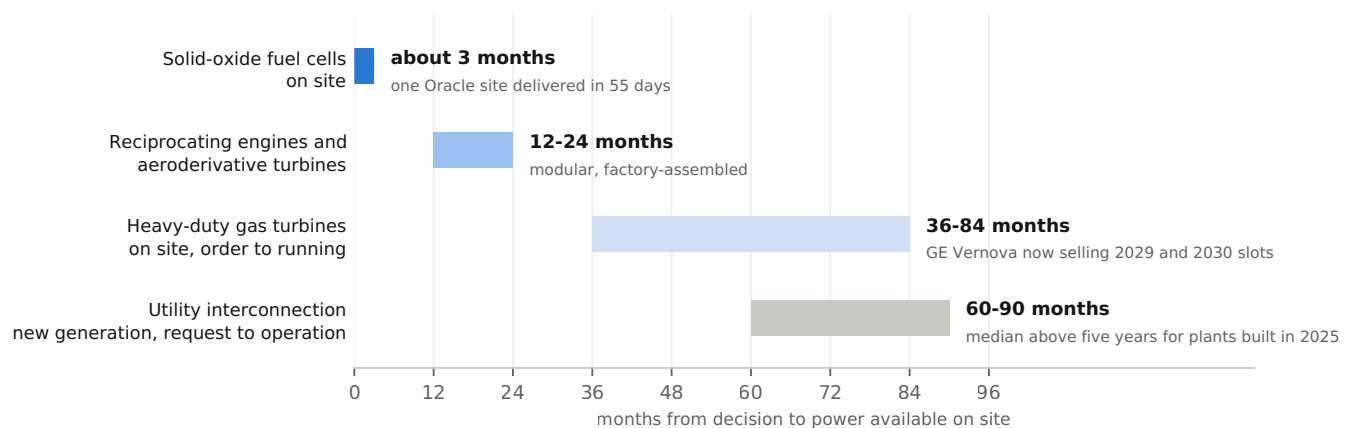
3. The first trade: bypass the grid

The reason on-site generation moved first is arithmetic, not ideology. Lawrence Berkeley National Laboratory's 2026 survey of United States interconnection queues found roughly 8,200 projects seeking connection at the end of 2025, representing about 1,312 GW of generation and 749 GW of storage. The median duration from interconnection request to commercial operation for plants that were actually built in 2025 was **over five years**. Of the capacity that entered a queue between 2000 and 2020, only **13 per cent** had reached commercial operation by the end of 2025; 75 per cent was withdrawn.^[1] **OBSERVED DATA**

A data-centre campus can be built in well under three years. If the power takes five, the power is the project. Behind-the-meter generation is the only intervention that removes the utility's calendar from the critical path altogether, and it is bought for exactly that reason: not because it is cheap, but because it is early.

Exhibit 2 • Time from decision to power available on site, by route

Research question: how much time does each route to power actually cost? • Units: months • Period: conditions reported 2025–26



Sources: Rabobank research, May 2026, for the fuel-cell, engine and heavy-duty turbine ranges [THIRD-PARTY ESTIMATE](#) ^[5]; Lawrence Berkeley National Laboratory for interconnection duration [OBSERVED DATA](#) ^[1]; Bloom Energy for the 55-day delivery [COMPANY-REPORTED](#) ^[6]; GE Vernova for turbine slot availability [COMPANY-REPORTED](#) ^[12].

Takeaway: the gap between the fastest and slowest route is not marginal — it is roughly two orders of magnitude in elapsed time. That gap, not the levelised cost of energy, is what the on-site generation market is selling.

The price of that speed is visible. Rabobank's May 2026 survey of the behind-the-meter pipeline put more than 130 GW of on-site energy resources proposed across United States data centre projects, of which it expected 22 to 32 GW to deploy by 2030 — roughly a quarter of new capacity — with gas accounting for more than 80 per cent of announced behind-the-meter capacity. The cost premium it estimated was \$100–165 per megawatt-hour for behind-the-meter power against \$90–95 for grid alternatives. ^[5] [THIRD-PARTY ESTIMATE](#)

A premium of that size is rational whenever the alternative is idle capital. An accelerated revenue start on a campus of a few hundred megawatts, filled with hardware that is depreciating from the day it is bought, dominates a per-megawatt-hour saving that only begins once the grid arrives. This is the whole economic content of “time to power”: it converts an energy cost into a schedule option, and the option is worth more than the cost.

3.1 What the fuel-cell evidence actually establishes

Bloom Energy is the clearest case, and also the clearest illustration of why announcements must be graded. Three distinct things have been announced, and only one of them is contracted capacity.

In October 2025, Brookfield and Bloom announced a partnership under which Brookfield would invest up to \$5 billion to deploy Bloom's fuel cells. On 30 June 2026 that framework was raised fivefold, to \$25 billion. ^{[7][8]} Both figures describe capacity to finance projects. Neither is an order, and Bloom's own releases do not present them as one. [ANNOUNCED TARGET](#)

On 13 April 2026 Bloom and Oracle expanded a master services agreement under which Oracle may procure up to 2.8 GW, of which **1.2 GW is contracted and deploying**. The same release stated that Bloom had delivered a fully operational fuel-cell system to Oracle in 55 days, ahead of an anticipated 90-day schedule. ^[6] [COMPANY-REPORTED](#) The distinction between 2.8 and 1.2 is the difference between a ceiling and a commitment, and it matters more than the headline.

What is unambiguous is the revenue. In the second quarter of 2026 Bloom reported revenue of **\$1,065 million**, up 165.5 per cent year on year, with product revenue of \$935.4 million; GAAP gross margin of **33.4 per cent**, up 668 basis points; and GAAP operating income of **\$182.2 million** against a \$3.5 million loss a year earlier. Full-year guidance was raised to \$3.9–4.2 billion. ^[9] [COMPANY-REPORTED](#) Bloom does not disclose a backlog figure, which is itself a data point: the fastest-growing company in this report offers the least visibility into what it has yet to deliver.

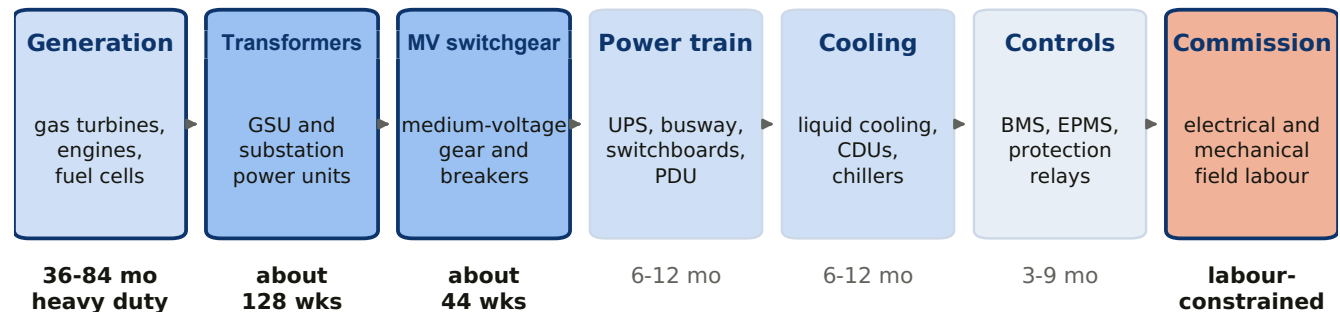
4. Building the electrical room

Generation is necessary and nowhere near sufficient. Between a running turbine and a rack drawing current sits a chain of equipment, each element of which has its own factory, its own lead time and its

own labour requirement. A campus energises at the speed of the slowest link, which is why the trade broadened out of generation within months.

Exhibit 3 · The campus power stack, with the lead time attached to each link

Research question: where in the chain does the delay actually accumulate? · Units: weeks or months of published lead time · Period: conditions reported 2025–26



Sources: transformer and switchgear lead times as compiled by POWER, 2026, from Wood Mackenzie data [THIRD-PARTY ESTIMATE](#) ^[32]; turbine timing from GE Vernova disclosure [COMPANY-REPORTED](#) ^[12]; remaining ranges are Rabobank estimates [THIRD-PARTY ESTIMATE](#) ^[5]. Note: lead times vary by voltage class, specification and customer; the figures are market averages, not quotations.

Takeaway: the two links most often reported as binding in 2026 are not the generator and not the chip. They are the transformer and the medium-voltage switchgear — and, increasingly, the crews who install and commission them.

The transformer numbers are the most striking. Wood Mackenzie's data, as compiled by POWER in 2026, put average lead times at **128 weeks** for power transformers and **144 weeks** for generator step-up units, against 44 weeks for switchgear; prices for power transformers had risen 77 per cent since 2019, distribution transformer classes by up to 95 per cent, and medium-voltage switchgear by 50 per cent. ^[32] [THIRD-PARTY ESTIMATE](#) The American Public Power Association put average acquisition time for high-voltage transformers at roughly three years, with about 80 per cent of high-voltage units imported. ^[33] [THIRD-PARTY ESTIMATE](#)

Capacity is being added, and this is where the honest accounting matters. POWER counted close to \$1.8 billion of announced North American transformer manufacturing investment, including Hitachi Energy's \$457 million plant in South Boston, Virginia, Eaton's \$340 million three-phase facility in South Carolina, Siemens Energy's \$150 million large-power-transformer plant in Charlotte, and over \$300 million across Prolec GE sites. ^[32] [ANNOUNCED TARGET](#) Most of those plants start production in 2027 or later. Siemens Energy's own planned 50 per cent expansion in transformer and gas-insulated switchgear capacity is not scheduled to arrive until 2030. ^[23]

THE COUNTERARGUMENT THAT DESERVES THE MOST WEIGHT

An announced lead time is a market clearing price for delay, not a law of physics. POWER's own reporting carries a dissenting voice from inside the industry — an electrical contractor arguing that standard substation transformers can be delivered in twelve to fourteen months and that shortage claims are “exaggerated to drive pricing.” ^[32] That view should not be dismissed. Every capital cycle in industrial equipment has ended the same way: the scarcity is real, the pricing power is real, and then the capacity that was ordered at the peak arrives. The \$1.8 billion of announced North American transformer investment is precisely the mechanism by which today's 128-week lead time becomes tomorrow's ordinary one. The question for an investor is not whether that happens but whether it happens before or after the current backlogs are converted to revenue.

PART II — WHAT THE EVIDENCE NOW SHOWS

5. When forecasts became orders

The empirical centre of this report is straightforward: across the first half of 2026, the forecasts stopped being forecasts. They appear in order intake, in recorded backlog, in reported revenue, in margin, in announced factory capacity and in corporate structure. The table below is the record, taken in every case from the company's own results release or filed exhibit.

Exhibit 4 • The 2026 record: orders, backlog, revenue and margin

Research question: has demand converted into booked, reported results? • **Units:** as stated per row • **Period:** most recent quarter reported on or before 28 August 2026 • **Evidence status:** **COMPANY-REPORTED** throughout

Company	Period	Orders / backlog	Revenue	Margin and other evidence
GE Vernova	Q2 2026	Orders \$24.2bn, +88% organic; RPO \$176bn; Electrification equipment backlog \$40.6bn, up \$16.6bn; data-centre orders over \$5bn year to date, more than double all of 2025	\$11.1bn, +22% (+12% organic)	Electrification segment EBITDA margin 18.4%, up 390bp; guidance raised to \$45.5–46.5bn revenue ^[12]
Vertiv	Q2 2026	Not disclosed in the quarter. Last published: Q4 2025 book-to-bill about 2.9× and backlog \$15.0bn, +109% ^[15]	\$3,274m, +24% (+18% organic)	Adjusted operating margin 22.6%, up 410bp; full-year guidance \$13.8–14.2bn and 23.3–24.3% margin ^[17]
Powell Industries	Q3 FY26	Orders \$934m, +158%; backlog \$2.4bn, +69%; includes a data-centre order above \$400m for a behind-the-meter on-site generation design — the largest in company history	\$312m, +9%	Gross margin 30.6%; Jacintoport fabrication expansion due to complete in FY2026 ^{[13][14]}
Eaton	Q2 2026	Electrical Americas rolling 12-month orders +41% organic, backlog +33%, book-to-bill 1.2; Electrical Global backlog +103%	\$8.5bn, +21% (+14% organic)	Segment margin 23.1%; guidance 24.1–24.5% for the year ^[18]
Hubbell	Q2 2026	Utility Solutions first-half book-to-bill about 1.2×; data-centre sales up about 65% in the quarter, guided to about +50% for the year	\$1,712m, +15% (+10% organic)	Adjusted operating margin 23.9%, down 50bp; Electrical Solutions margin down 130bp ^{[19][20]}
Schneider Electric	H1 2026	Not published as an order figure; data centres and semiconductors described as delivering triple-digit demand growth in Q2	€21.2bn, +14% organic (Q2 +17%)	Adjusted EBITA margin 19.3%, up 120bp; guidance raised to 10–13% organic growth ^[21]
Siemens Energy	Q3 FY26	Group orders €17.9bn, a record; group backlog €162bn; Grid Technologies orders €5.4bn (+28%), backlog €51bn, book-to-bill 1.48	€11.4bn, +18.5% comparable	Profit before special items €1,623m; Grid full-year margin guidance 18–20% ^{[22][23]}
Quanta Services	Q2 2026	Total backlog \$53.4bn (from \$35.8bn a year earlier); 12-month backlog \$32.3bn; RPO \$33.6bn	\$9.56bn, +41%	Electric Power operating margin 11.5% against 10.1%; guidance raised to \$39.3–39.7bn ^[24]
Comfort Systems USA	Q2 2026	Backlog \$14.06bn against \$8.12bn a year earlier, +73%; modular bookings \$510m in the quarter	\$3.27bn, +50%	Gross margin 25.9% against 23.5%; technology was 58% of first-half revenue against 40% ^{[25][26]}
EMCOR Group	Q2 2026	Remaining performance obligations \$17.14bn, +43.9%; growth led by network and communications	\$5.15bn, +19.8% (+19.6% organic)	Operating margin 10.6%; guidance raised to \$20.0–20.5bn revenue and 9.5–9.8% margin ^[27]
Curtiss-Wright	Q2 2026	Orders \$1.1bn, +8%; book-to-bill 1.16×; backlog \$4.5bn, +10% since December 2025	\$924m, +5%	Operating margin 19.3%; Naval & Power sales \$410m, +7%, including commercial nuclear for advanced reactors ^[29]
Oklo	Q2 2026	No power purchase agreements disclosed; Meta relationship described as a “long-term commitment”; Centrus letter of intent for fuel	\$1.2m in the quarter	Year-to-date net loss \$81.6m; cash and securities \$3.0bn; Aurora-INL commercial operation targeted 2028 ^[30]

Takeaway: the conversion is not in doubt. GE Vernova, Bloom, Vertiv, Eaton, Hubbell, Schneider, Quanta, EMCOR and Curtiss-Wright all raised full-year guidance in the same reporting season, and margin expanded at GE Vernova, Vertiv, Bloom, Quanta, Comfort Systems and Schneider simultaneously — which is what a genuine supply shortage looks like in a profit-and-loss account, as distinct from a volume boom. Hubbell is the informative exception: data-centre sales up about 65 per cent, and adjusted operating margin down 50 basis points.

5.1 The distinction GE Vernova makes and most commentary does not

GE Vernova is unusual in publishing the taxonomy this report argues for. In the first quarter of 2026 it signed “21 gigawatts of new gas equipment contracts, including 19 GW of slot reservation agreements and 2 GW of orders,” converted 6 GW of existing slot reservations into orders, and shipped 4 GW — with backlog rising from 40 to 44 GW and slot reservations from 43 to 56 GW.^[11] In the second

quarter it signed 20 GW, of which 18 GW were slot reservations and 2 GW orders; backlog rose to 53 GW and slot reservations to 63 GW.^[12] **COMPANY-REPORTED**

Read carefully, that is a company telling investors that roughly nine-tenths of its incoming gas commitments are queue positions rather than orders, and separately reporting how many convert. It is the most useful disclosure in the sector, and it is the template against which everything else in this report should be read.

Exhibit 5 • The backlog-quality ladder: what an announcement actually commits

Research question: how firm is each category of commitment that this sector announces? • **Units:** ordinal, most binding at the top • **Period:** announcements to 28 August 2026 • **Bar length:** illustrative of certainty, not a measured quantity

FIRMEST

Energised capacity

Bloom Energy: about 1.5 GW deployed across more than 1,200 installations, stated October 2025

Shipped, revenue recognised

GE Vernova shipped 4 GW of gas equipment in the first quarter of 2026; Vertiv Q2 net sales of \$3,274m

Firm order in backlog or RPO

GE Vernova 53 GW gas backlog and \$176bn RPO; Powell \$2.4bn; Comfort Systems \$14.1bn; EMCOR \$17.1bn

Slot reservation agreement

GE Vernova held 63 GW of gas slot reservations at 30 June 2026 - a priced queue position, not an order

Framework ceiling: 'up to'

Bloom-Oracle master services agreement: up to 2.8 GW available to draw, of which 1.2 GW contracted

Financing framework

Brookfield-Bloom: a \$25bn framework to finance projects, raised from \$5bn - capacity to invest, not orders

Non-binding commitment

Oklo-Meta 'long-term commitment'; Centrus letter of intent to fuel up to five Aurora powerhouses

SOFTTEST

Sources: each example is taken from the company's own release or filing, cited in the sections above.^{[6][7][8][11][12][13][14][17][25][27][30]} **COMPANY-REPORTED** throughout; the ordering is an **AUTHOR FRAMEWORK**.

Takeaway: the two largest headline numbers this sector produced in 2026 — a \$25 billion partnership and a 2.8 GW agreement — sit on the two softest rungs of this ladder. Neither is dishonest; both are precisely described by the companies that issued them. The error is made downstream, when a financing framework is reported as though it were an order book.

A DISCLOSURE CHANGE WORTH NOTICING

In its fourth-quarter 2025 release Vertiv reported organic order growth of 252 per cent, a book-to-bill of about 2.9 times and backlog of \$15.0 billion, up 109 per cent.^[15] Its first- and second-quarter 2026 releases and results presentations report neither an orders figure nor a backlog figure, describing instead “strong pipeline momentum.”^{[16][17]} This report draws no inference about the underlying demand, which by every other measure remains strong: second quarter net sales rose 24 per cent and adjusted operating margin expanded 410 basis points. But the observation stands on its own terms. In a market that is beginning to grade backlog rather than count it, a company that stops publishing its backlog has removed the number investors most need. The same reasoning applies to Bloom Energy, which has never disclosed one.

5.2 Capacity, acquisitions and corporate structure

The clearest evidence that participants believe the demand is durable is that they are spending against it. Comfort Systems' modular capacity stands at over 3.5 million square feet, with more than 4 million targeted by the end of 2026 and approximately 5 million by summer 2027 — and management was explicit that the expansion is tied to customer commitments: “we're not going to invest in buildings just on speculation.”^[26] Quanta acquired Phalcon, with fabrication and modular facilities spanning more than 400,000 square feet serving data-centre and mission-critical markets.^[24] Vertiv

guided capital expenditure to the high end of its range, about 4 per cent of 2026 sales.^[17] Schneider is building a prefabricated power-module plant at Dunkirk.^[21]

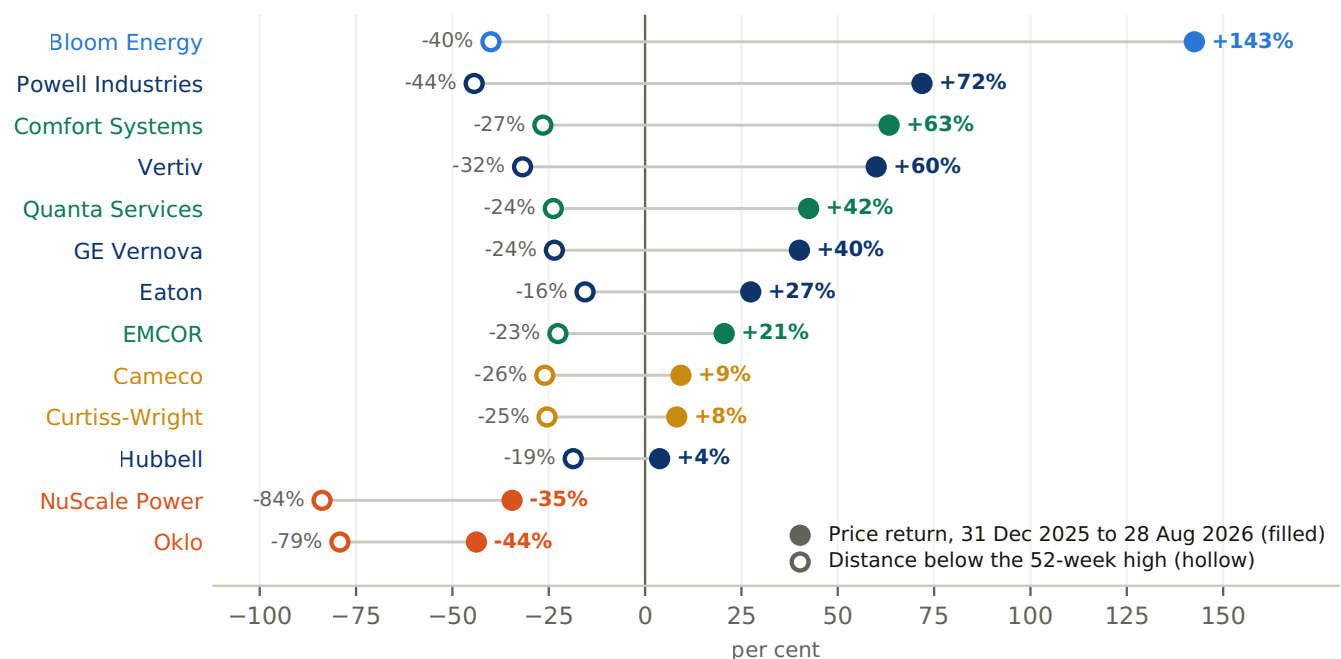
The most structural response is Flex's. On 5 May 2026 the board approved a plan to spin off its Cloud and Power Infrastructure segment into an independent public company, targeting 65–75 per cent revenue growth in fiscal 2027 and above 80 per cent in fiscal 2028, with the transaction targeted to close in the first calendar quarter of 2027.^[28] **ANNOUNCED TARGET** It has been announced and approved by the board; it has not been completed, and nothing in this report treats it as though it has.

6. The great sorting

The initial re-rating of the power complex told us that the market had understood the demand. What has happened since is more informative, because it is dispersion rather than direction.

Exhibit 6 • The sorting: year-to-date return against distance below the 52-week high

Research question: is the market still buying the theme, or has it begun to grade the companies inside it? • **Units:** per cent • **Period:** 31 December 2025 to 28 August 2026 • **Currency:** US dollars, all names US-listed



Basket construction: not an index. Thirteen US-listed companies named in this report, shown individually and unweighted; no aggregation, no rebalancing. Companies were selected because they appear in the evidence above, which is a deliberate selection and not a representative sample of the sector.

Definitions: the filled marker is the price return from the close of 31 December 2025 to the close of 28 August 2026. **Price return only: dividends are excluded**, so the figures understate total return for the dividend-paying names (Eaton, Hubbell, Curtiss-Wright, EMCOR, Cameco) and are unaffected for the non-payers. The hollow marker is the last price on 28 August 2026 divided by the highest price of the preceding 52 weeks, less one; because the 52-week high is an intraday high, this is a maximum-to-current measure and is not directly comparable with a close-to-close return.

Source: Interactive Brokers price data, retrieved 30 August 2026^[36]. **AUTHOR CALCULATION** from that source. No figure in this exhibit is taken from any secondary commentary.

Three things in that picture are worth stating carefully, and one of them complicates the thesis this report is testing.

6.1 Everything worked, and everything then corrected

Eleven of the thirteen names rose over the period; the two that fell are both small modular reactor developers. But every one of the thirteen also sits below its own 52-week high, and the median distance below that high is about 26 per cent. The trade has not been abandoned. It has been re-graded, and the re-grading has been violent enough that a company can be up 72 per cent for the year and 44 per cent off its high at the same time. Powell Industries is exactly that case — the purest behind-the-meter campus-power exposure in the group, with orders up 158 per cent, and also the deepest drawdown among the operating businesses.

6.2 The nuclear comparison holds; the transformer comparison only half holds

The comparison the market appears to have made most decisively is between existing certified industrial capacity and long-duration promises. Curtiss-Wright, which sells into naval nuclear and commercial nuclear supply chains today and reported a \$4.5 billion backlog and a 19.3 per cent operating margin,^[29] is modestly higher for the year. Oklo, which reported \$1.2 million of quarterly revenue, an \$81.6 million half-year loss and a target of 2028 for the commercial operation of its first Aurora plant,^[30] is down 44 per cent and roughly 79 per cent below its 52-week high; NuScale is down 35 per cent and about 84 per cent below its high. Both retain substantial cash — Oklo reported \$3.0 billion — and neither observation is a judgement about the technology. It is a judgement about *when*.

The expectation that transformer-exposed businesses would hold up better is only partly borne out, and the honest reading is instructive. Hubbell, the most utility-transformer-weighted name in the group, has the second-smallest drawdown from its high — but it is up only 3.8 per cent for the year. Its data-centre sales grew about 65 per cent in the quarter, yet Utility Solutions organic growth was 6 per cent and the company's adjusted operating margin fell 50 basis points.^{[19][20]} The lesson is not that transformers are a bad business. It is that **a fast-growing exposure inside a large, slower business does not re-rate the business**. Purity of exposure and rate of margin change explain the 2026 dispersion better than any statement about which component is scarcest.

7. Rule of 40, borrowed and stress-tested

The Rule of 40 is a software heuristic: a company is judged healthy when revenue growth plus profit margin exceeds forty. It became popular because it captures a real trade-off in a single number — a business can buy growth with margin or margin with growth, and the sum is harder to manipulate than either part. Applying it to capital-goods companies is unorthodox, and this section does so deliberately, because the AI power complex is currently producing software-shaped financial statements out of industrial assets. Whether that is durable is exactly the question worth asking.

WHY THIS METRIC MISLEADS IN INDUSTRIALS, AND HOW THE REPORT HANDLES IT

Growth here is not recurring. Software growth compounds off a renewing subscription base. The growth in Exhibit 8 is backlog conversion in a capital cycle: it can stop in a single quarter when order intake turns, and it has no annuity underneath it. A score of 67 in software implies a durable franchise; the same score here implies a favourable position in a cycle.

The margin definitions are not identical. Not every company in this group publishes a GAAP operating margin. GE Vernova's release reports adjusted EBITDA rather than operating income; Eaton's headline profitability measure is segment operating margin; Schneider reports adjusted EBITA and Siemens Energy profit before special items. Appendix A names the exact measure used for every company. Mixing them is a real weakness in the comparison and the reader should treat differences of two or three points as noise.

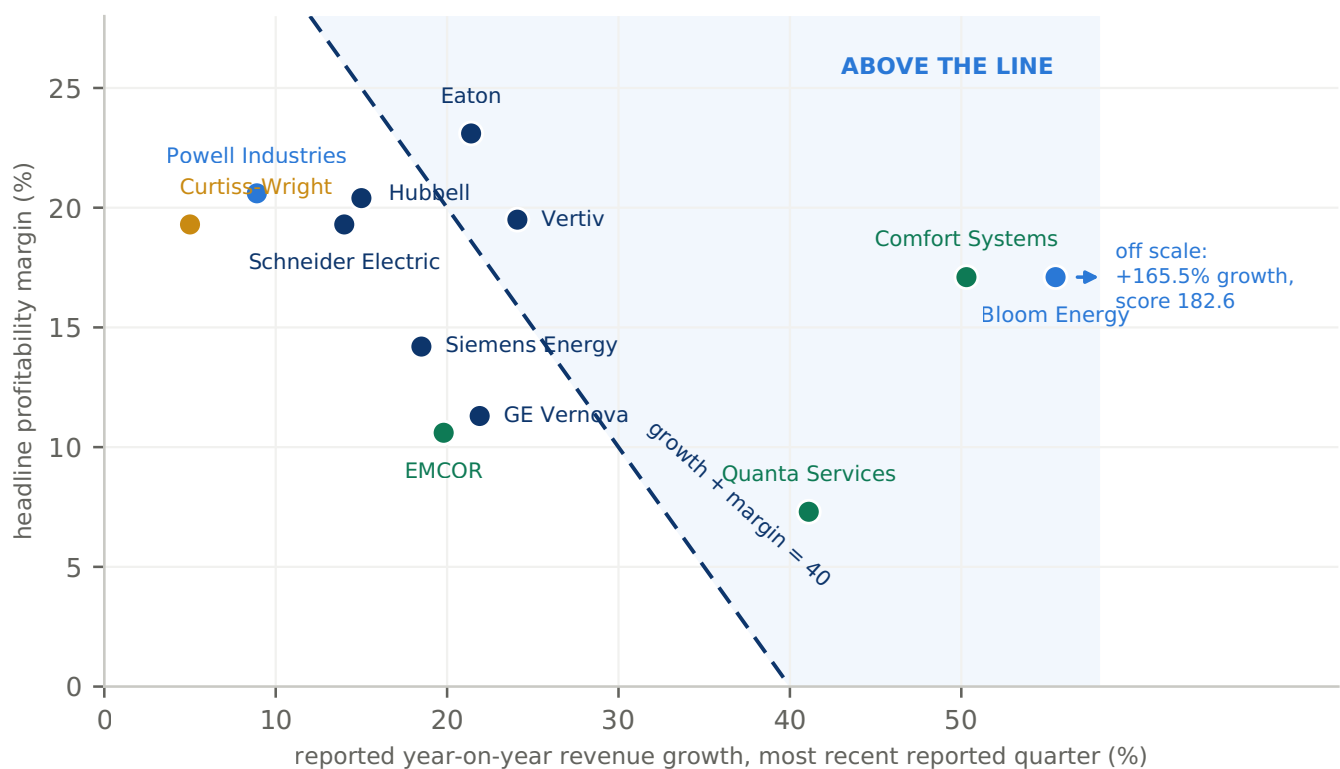
One quarter is a small sample. Every score below rests on a single reported period. Where organic growth is separately disclosed the score is recomputed on that basis and shown as a marker — which moves GE Vernova by ten points and Eaton by seven, and is the most important sensitivity in this section.

It is silent on the balance sheet and on price. A high score says nothing about leverage, customer concentration or what the security costs. Section 12 supplies those.

With those caveats stated, the construction is simple. For each company the report takes the most recent reported period, adds the year-on-year revenue growth to the profitability margin, and plots the two components separately so that the reader can see which one is doing the work. Two companies can arrive at the same score from opposite directions, and the direction matters more than the total: growth without margin is a company buying revenue, margin without growth is a company harvesting a position. In a shortage, the combination that should appear is margin rising *while* volume rises, because that is what pricing power looks like in an income statement.

Exhibit 7 • Growth against margin, with the 40 line

Research question: which of these companies are producing growth and profitability simultaneously? • **Units:** per cent • **Period:** most recent reported quarter, or half-year for Schneider Electric • **Definition:** reported year-on-year revenue growth plus the company's own headline profitability margin



Source: company results releases and filed exhibits, as cited throughout this report. **AUTHOR CALCULATION** from **COMPANY-REPORTED** figures. The exact profitability measure used for each company is listed in Appendix A; they are not all the same measure.

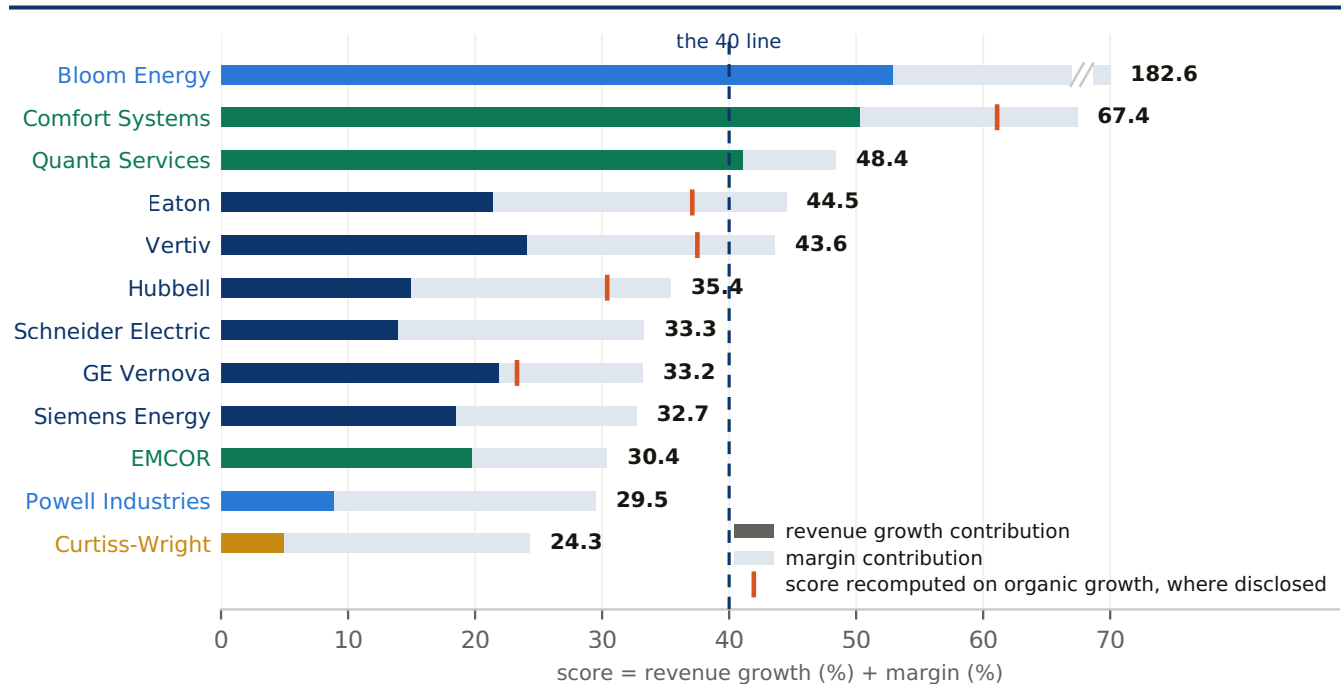
Takeaway: the group splits along the diagonal rather than along any industry boundary. Above the line sit the businesses selling scarce delivery — on-site power, power and thermal management, integration. Below it sit the diversified compounders and the established nuclear supply chain, which are profitable but growing at ordinary industrial rates. Note where the margin comes from: Eaton, Powell, Hubbell, Schneider and Curtiss-Wright all earn about 19 to 23 per cent, and their scores differ almost entirely because of growth.

One feature of the scatter deserves emphasis because it is easy to miss. The vertical spread is narrow: eleven of the twelve companies earn between 10 and 24 per cent, and six of them cluster between 19 and 24. Margin, in other words, is not what separates these businesses. Growth is — and growth here is a function of how much of each company is pointed at data centres. That is the same conclusion Section 6 reached from price behaviour, arrived at independently from the income statement, and it is the strongest internal cross-check in this report.

The horizontal spread also carries a warning. Growth of 40 or 50 per cent in a capital-goods business is not a run rate; it is a position in a cycle, and it is being compared against a prior-year quarter that will itself become a demanding comparison twelve months from now. The decomposition below is therefore worth reading as a statement about the present rather than a projection: it shows which companies currently convert scarcity into profit, not which will do so in 2028.

Exhibit 8 • The score, ranked and decomposed

Research question: how much of each score is growth, how much is margin, and how much survives the removal of acquisitions? • **Units:** percentage points • **Period:** as Exhibit 7



Note: Bloom Energy's bar is truncated; its score is 182.6, of which 165.5 points are revenue growth. The orange marker recomputes the score on organic or comparable revenue growth where the company discloses it. Quanta Services, Comfort Systems and Curtiss-Wright are shown on reported growth only; Comfort Systems disclosed 44 per cent same-store growth on its earnings call, which is reflected in the marker. ^[26] **AUTHOR CALCULATION**

Takeaway: only five of the twelve clear forty on reported growth, and only three still clear it once acquisitions are stripped out. GE Vernova falls from 33.2 to 23.3 and Eaton from 44.5 to 37.1 — which is not a criticism of either company, but is a reminder that a meaningful part of the reported growth in this sector was bought rather than generated. Eaton acquired Boyd Thermal for \$9.55 billion; Quanta acquired Phalcon; Comfort Systems acquired Hunt Electric in May. ^{[18][24][26]}

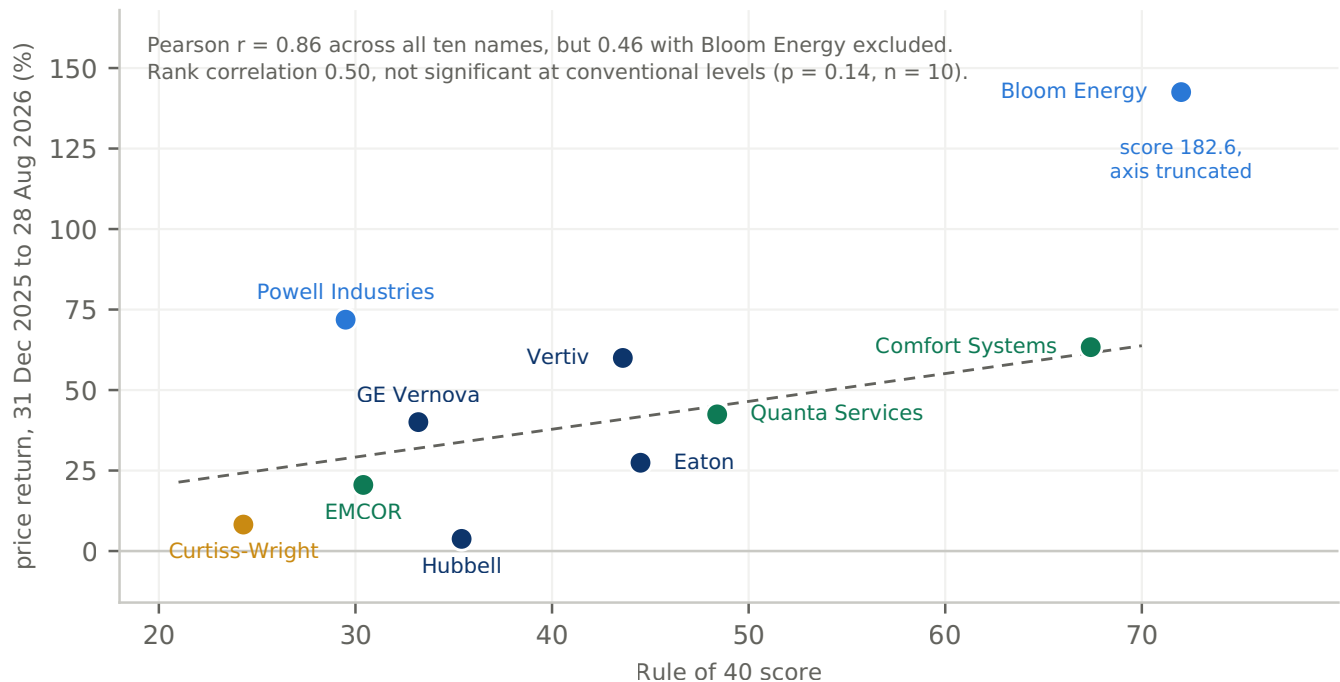
The acquisition point deserves one further remark, because it cuts both ways. Buying capacity in a shortage is a rational response to a shortage: Eaton acquired thermal-management capability because liquid cooling is on the critical path, and Quanta and Comfort Systems bought fabrication and modular capacity because crews and factory space are the binding constraint on their own growth. None of that is financial engineering. But an acquired revenue line tells you less about a company's competitive position than an organic one, and it is bought at a price set in the same hot market that makes it attractive. The organic markers in Exhibit 8 are therefore the conservative reading of this sector, and the conservative reading is that most of it is running at high-twenties to high-thirties rather than above forty.

7.1 Does the market pay for the score?

The more interesting test is whether the metric has any explanatory power over what actually happened to these securities in 2026. It has some, and less than it first appears.

Exhibit 9 • Rule of 40 score against 2026 price return

Research question: has the market rewarded the combination of growth and margin? • **Units:** score, and per cent price return • **Period:** scores from the most recent reported quarter; returns 31 December 2025 to 28 August 2026 • **Universe:** the ten US-listed names for which both are available



Method: scores as Exhibit 7; returns as Exhibit 6, price only and excluding dividends. Schneider Electric and Siemens Energy are excluded because they trade in euros and a currency conversion would confound the comparison. The fitted line excludes Bloom Energy. Correlation statistics are **AUTHOR CALCULATION**; with ten observations they are indicative and nothing more.

Takeaway: the headline correlation of 0.86 is almost entirely one point. Remove Bloom Energy and it falls to 0.46 ; the rank correlation across all ten is 0.50 and does not reach conventional significance. In plain terms: the market paid enormously for the single extreme combination of growth and profitability, and was close to indifferent to the ordering among everything else.

The residuals are where the argument of this report reappears. Powell Industries has the second-lowest score in the group, 29.5 , and the second-highest return, 71.9 per cent. Hubbell has a higher score, 35.4 , and returned 3.8 per cent. Nothing in the Rule of 40 distinguishes them. What distinguishes them is that Powell's growth is concentrated in behind-the-meter data-centre work — its order book grew 158 per cent and it booked a single award above $\$400$ million for on-site generation^[14] — while Hubbell's comparable exposure grew about 65 per cent inside a company whose largest segment grew 6 per cent organically.^{[19][20]}

A single-period score measures the financial statement. It does not measure how much of the company is attached to the thing that is scarce.

That is the honest limit of the metric, and the reason this report treats it as a screen rather than a conclusion. Used properly it does three things well: it identifies companies converting scarcity into profit rather than merely into volume; it exposes how much of the sector's growth was acquired; and it flags, by its own extremity, that a score of 182 is a cyclical artefact rather than a franchise. Used carelessly it will rank Hubbell above Powell and be wrong for the whole of 2026.

7.2 What the score would have to do next

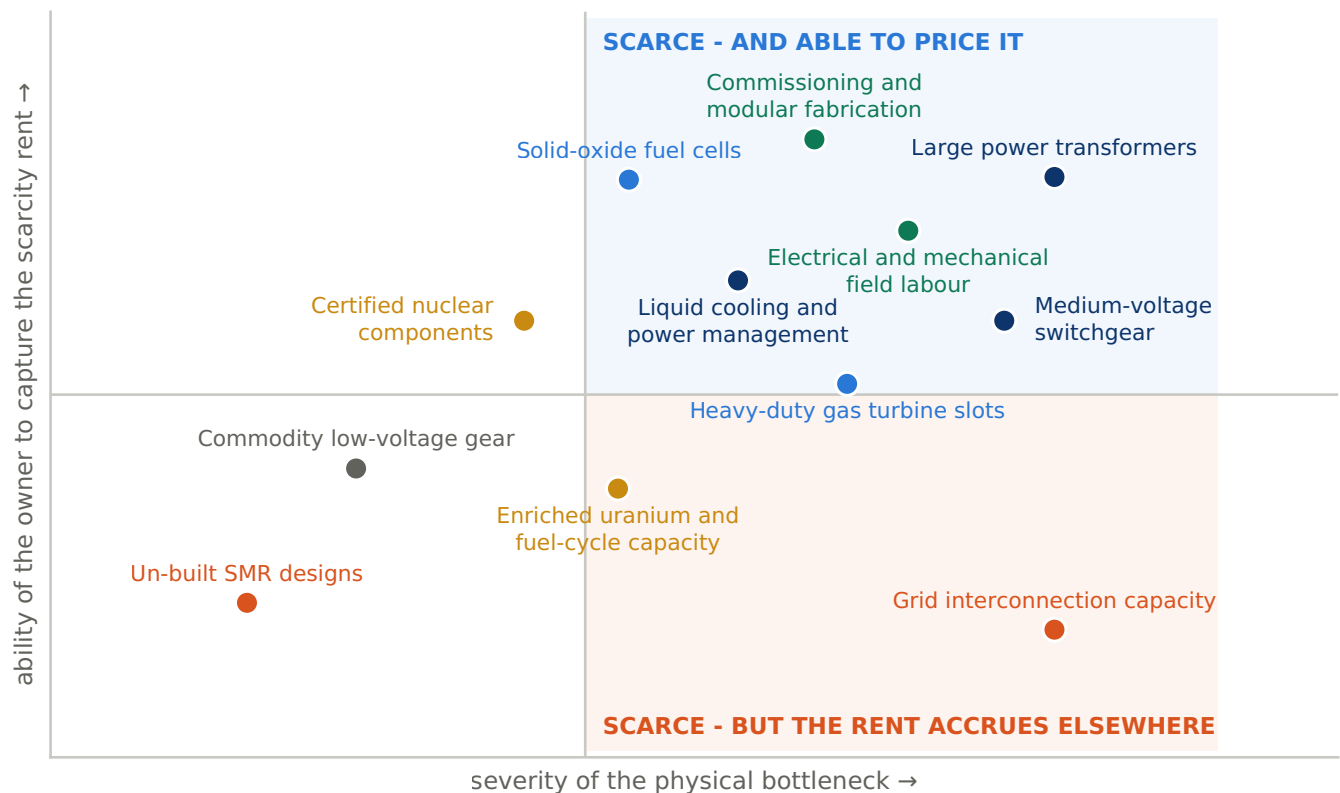
The forward test is straightforward and worth writing down now, because it can be checked against the third-quarter results in the autumn. If the thesis of this report is right, the scores of the integration and on-site names should decay from the growth side while the margin side holds or improves — scarcity converting into pricing rather than into volume. If instead margin falls while growth holds, the sector is buying revenue with price, and the scarcity was weaker than the order books implied. The two paths look identical in a revenue line and opposite in this metric, which is the strongest argument for tracking it.

8. Physical scarcity and investable rent

The second spine of the argument can now be made concrete. A bottleneck becomes a business only when three conditions hold together: the owner can decline to expand quickly; the owner can price against the customer's cost of delay rather than against its own cost of production; and the owner is neither rate-regulated nor readily substituted. Remove any one and the scarcity is real but the rent accrues to somebody else.

Exhibit 10 · Severity of the physical bottleneck against ability to capture the rent

Research question: where does a real constraint coincide with the ability to price it? · **Units:** ordinal, both axes · **Period:** assessed August 2026 · **Evidence status:** **AUTHOR FRAMEWORK** throughout, informed by the cited evidence



Method: position on the horizontal axis reflects published lead times, queue durations and capacity-utilisation evidence. Position on the vertical axis reflects observed pricing outcomes — reported gross and operating margin change, book-to-bill, and whether the supplier or the customer bears the cost of delay. Both are ordinal judgements, not measurements, and are offered as a way to organise the evidence rather than as a score.

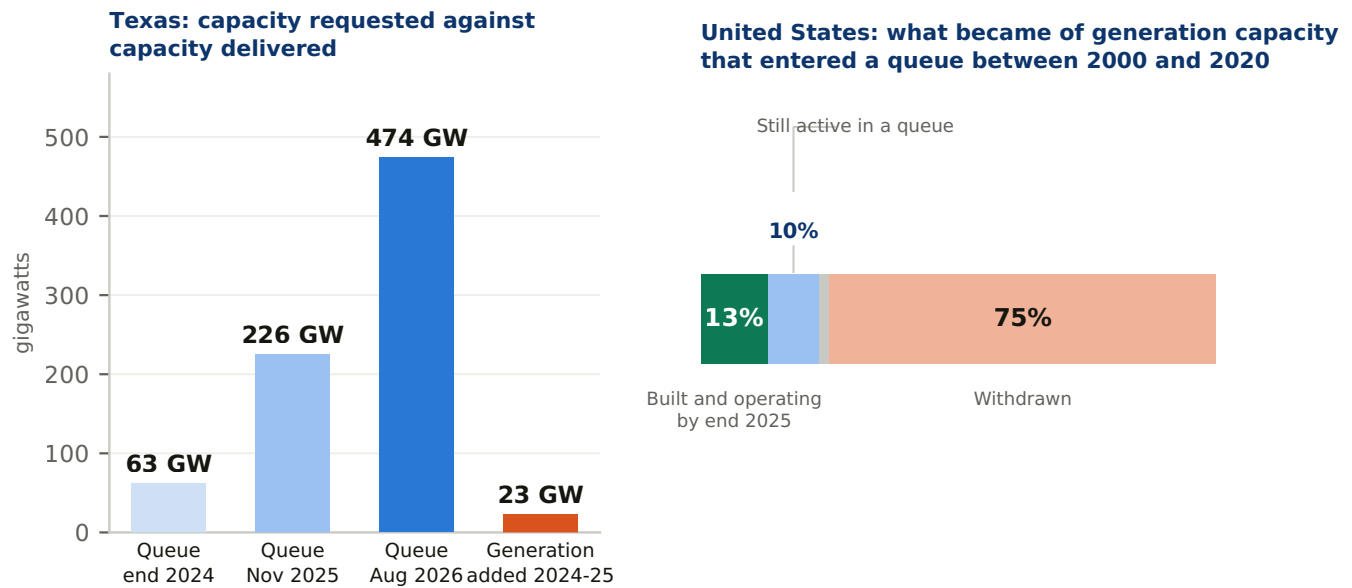
Takeaway: the lower-right quadrant is the important one. It contains the two most severe constraints in the whole system — interconnection queue capacity and fuel-cycle capacity — neither of which offers a clean listed claim on the rent it creates.

8.1 Interconnection: the purest example

Nothing in this system is scarcer than a position in a large-load interconnection queue. ERCOT's large-load queue went from 63 GW at the end of 2024 to 226 GW by November 2025 to about 474 GW by August 2026.^{[2][3]} Roughly 77 per cent of the November 2025 figure was data centres seeking connection by 2030; ERCOT is now auditing roughly 300 data centres of 75 MW and above, with a filing targeted for 10 December 2026.^{[2][3]} **OBSERVED DATA**

Exhibit 11 • Requested capacity against delivered capacity

Research question: what proportion of announced or queued capacity historically becomes operating capacity? • **Units:** gigawatts, and per cent of requested capacity • **Period:** ERCOT 2024–26; US cohort 2000–2020



Sources: ERCOT queue figures as reported by Latitude Media, December 2025, and Utility Dive, August 2026^{[2][3]}; cohort outcomes from Lawrence Berkeley National Laboratory, *Queued Up: 2026 Edition*, May 2026^[1]. **OBSERVED DATA** **Note:** the two panels are not directly comparable. The Texas panel counts load interconnection requests; the LBNL cohort counts generation interconnection requests, and LBNL explicitly excludes load and behind-the-meter projects. They are shown together because the same withdrawal dynamic governs both, not because the units are equivalent.

Takeaway: a queue position is an option, not a project. Historically three-quarters of requested generation capacity was withdrawn. There is no reason to assume the current load queue behaves better, and considerable reason — the same site being shopped to several utilities at once — to assume it behaves worse.

The scarcity is unambiguous. The investable claim on it is not. The entity that controls the queue is a regulated transmission provider, and on 18 June 2026 the Federal Energy Regulatory Commission issued show-cause orders to six grid operators requiring them to address large-load interconnection, co-location, behind-the-meter policy and cost allocation.^[4] Regulatory attention of that kind is the opposite of a rent. Whatever value the queue position holds is captured privately, by whoever secured it, and does not reach a public shareholder through the operator's income statement.

8.2 Why nuclear splits in two

The nuclear complex illustrates the same principle from the other direction. Existing certified industrial capacity — components that are qualified, in production and sold into programmes with committed funding — carries a business model today. A reactor design that will produce its first commercial electricity toward the end of the decade carries an option on one. The market appears to have re-weighted heavily toward the first over the last twelve months, and the mechanism is not sentiment but discounting: a delivery date in 2028 or later sits beyond the horizon over which today's AI capital expenditure has to be justified.

PART III — WHERE THIS GOES NEXT

9. A model of what delay actually costs

The report has argued that time to energization is the scarce good. It is worth making that claim arithmetic rather than rhetorical, because the size of the effect is larger than the language usually suggests.

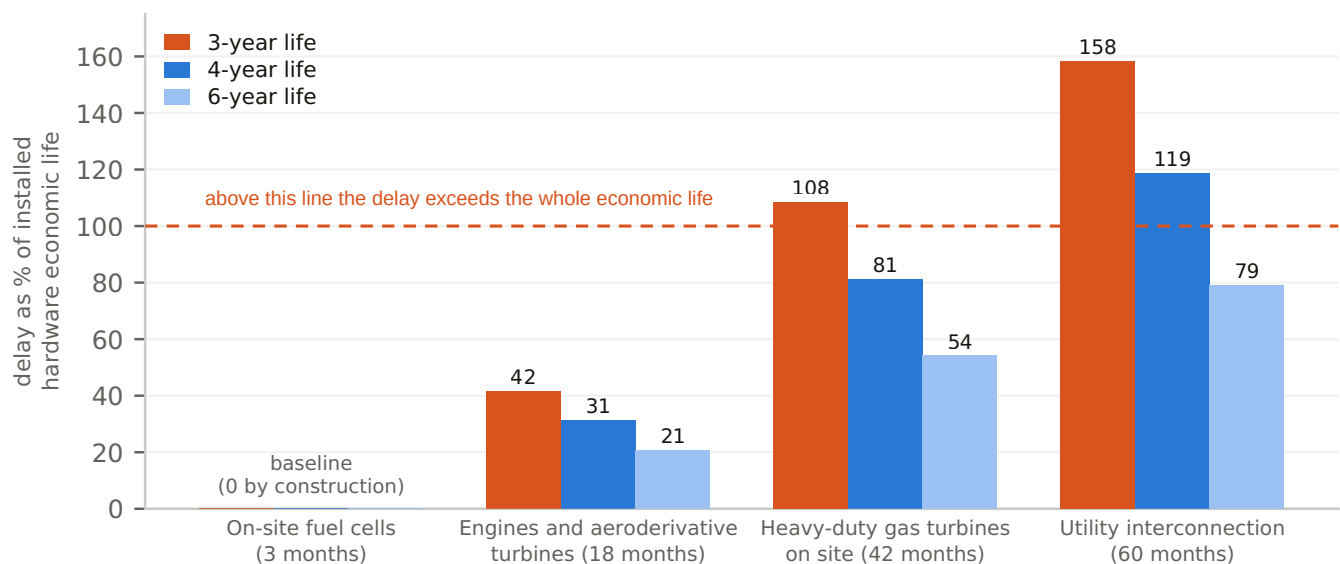
MODEL 1 — DELAY AS A CLAIM ON HARDWARE ECONOMIC LIFE

Take a campus committed today. The accelerators intended for it have an economic life of L months, which is contested: hyperscalers generally depreciate over four to six years, and critics argue the effective replacement cycle is closer to two or three.^[35] Let T be the months from commitment to power available on site, and take the fastest published route — on-site fuel cells at roughly three months — as the baseline. The delay penalty relative to that baseline is $D = T - 3$, and the share of hardware economic life consumed by waiting is D/L .

The routes are taken at the midpoint of their published ranges: engines and aeroderivative turbines 18 months, heavy-duty gas turbines on site 42 months, utility interconnection 60 months.^{[1][5]} The model assumes the hardware procurement decision is made at commitment rather than deferred until power is visible. That assumption is deliberately unfavourable and is the model's principal weakness: a disciplined operator defers the purchase, converting the loss from wasted life into deferred revenue. Both are costs; the model prices the first.

Exhibit 12 · Model 1 output: delay as a percentage of hardware economic life

Research question: how much of an accelerator's useful life is spent waiting for the electrical system? · Units: per cent of economic life · Period: lead times as published 2025–26



Source: AUTHOR CALCULATION, Model 1. Route durations from Rabobank and Lawrence Berkeley National Laboratory^{[1][5]}; economic-life scenarios span the range in the public depreciation debate^[35]. Illustrative arithmetic under stated assumptions — not a forecast, and not a claim about any specific project.

Takeaway: at a four-year life, waiting for a utility interconnection consumes more than the whole of it. Even the heavy-duty turbine route, which is the conventional behind-the-meter answer, consumes 81 per cent. Only the two fastest routes leave most of the asset's life available to earn. This is the entire economic case for paying \$100–165 per megawatt-hour instead of \$90–95.^[5]

Two conclusions follow, and they pull in different directions. The first supports the behind-the-meter trade: the premium paid for speed is small relative to the value of the life it preserves, which is why the market for on-site generation exists at all and why it has supported the margins in Exhibit 4. The second qualifies it: the same arithmetic says the advantage is a function of the gap between routes, and that gap narrows as interconnection reform proceeds and as equipment lead times fall. The premium is a payment for a queue, and queues can shorten.

The model also reframes the depreciation argument. Much of the public discussion treats the useful life of an accelerator as an accounting dispute. In this framing it is a supply-chain variable: at a six-year life, a 39-month delay costs 54 per cent of the asset's earning window; at three years it costs more than all of it. Anyone who believes the shorter-life case should, on their own logic, place a higher value on time to energization than anyone who believes the longer one — which is a testable disagreement rather than a rhetorical one.

10. Where the scarcity rent moves next

If the constraint has migrated from generation to equipment, the natural question is where it goes when the equipment arrives. The answer suggested by the evidence is that it moves to **integration**:

the capacity to make the components turn up in the right order, on a date, with crews able to install and commission them.

This is not a speculative claim. It is already visible in the accounts of the businesses that sell it. Comfort Systems grew revenue 50 per cent while expanding gross margin from 23.5 to 25.9 per cent and grew backlog 73 per cent; technology rose from 40 to 58 per cent of first-half revenue.^{[25][26]} A contractor does not expand gross margin by 240 basis points in a competitive bidding market unless the buyer is paying for something other than price. Quanta's Electric Power operating margin rose from 10.1 to 11.5 per cent on 41 per cent revenue growth.^[24] EMCOR earned a 10.6 per cent operating margin with remaining performance obligations up 44 per cent.^[27]

What the buyer is paying for is schedule certainty, and the supply of it is genuinely constrained. Comfort Systems' management framed the constraint as a self-imposed discipline rather than a growth opportunity: “we only take work that we know we can perform... we don't out-kick our coverage.”^[26] That sentence is the whole thesis of this section. When a supplier's binding constraint is its own crews, revenue growth is a choice and margin is the variable it optimises.

10.1 The specific forms integration capacity takes

Form	What it actually is	Why it shortens time to energization
Firm delivery slots	A contractual date backed by reserved factory capacity, often with a payment attached	Converts an equipment lead time from a range into a date the campus schedule can be built around
Standardised power blocks	A repeatable electrical design of fixed capacity, engineered once and replicated	Removes bespoke engineering, the least scalable input in the chain, from every subsequent site
Factory pre-assembly	Skids and modules built and tested in a plant, delivered as units	Moves work from a congested site with scarce local labour to a factory with a fixed workforce
Modular construction	Whole rooms and plant assemblies fabricated off site — Comfort Systems is at 3.5m sq ft and targeting about 5m by summer 2027 ^[26]	Parallelises construction against site works instead of sequencing after them
Commissioning capacity	The engineers who energise, test and hand over an electrical system	The last step before revenue, the least substitutable, and the one with no factory to expand
Multi-layer coordination	A single provider spanning generation, electrical, mechanical and controls	Eliminates the interface risk between trades, which is where schedule slippage originates

Exhibit 13. Every row is a description of a capability, not of a company. Several listed businesses sell more than one; none sells all six. The diligence question is not whether a company mentions these in its materials but whether its gross margin is rising while it does them.

11. The investment map

SCOPE AND LIMITS OF THIS SECTION

What follows is a framework for organising exposures, not advice. It contains no recommendations, no ratings, no price targets and no return expectations. Companies appear as evidence for or against a category, with the status of each claim stated. Valuation is deliberately excluded from the categorisation and treated separately, because a good business and a good entry price are different questions and this report can only answer the first. Nothing here is a substitute for professional advice; readers should form their own view and consult a qualified adviser before acting.

The categories below are ordered by thesis risk rather than by expected return, and each is tested against the same six questions: what the company actually sells, why it matters to energization, whether demand is visibly converting into revenue, how good the backlog is, what the principal risk is, and what observation would invalidate the case. The last column is the important one. A category that cannot be falsified by anything a company might report is not an analysis; it is a preference.

Category	What is actually sold	Evidence that demand is converting	Backlog quality	Principal risk	What would invalidate it
Lower thesis-risk compoundingers Eaton, Schneider Electric, Hubbell	Broad electrical portfolios in which data centres are a fast-growing minority of a large, diversified base	Eaton: Electrical Americas orders +41% organic on a 12-month rolling basis, backlog +33%. Schneider: +14% organic in H1 with 120bp margin expansion ^{[18][21]}	High. Disclosed order and backlog metrics, long customer lists, low single-name concentration	Dilution of the thesis: the exposure is real but too small to move the whole company, as Hubbell's 2026 shows	Data-centre revenue growth decelerating while the rest of the portfolio does not accelerate

Category	What is actually sold	Evidence that demand is converting	Backlog quality	Principal risk	What would invalidate it
Structural-scarcity equipment GE Vernova, Siemens Energy, Vertiv	The specific components with multi-year lead times: turbines, transformers, grid equipment, power and thermal management	GE Vernova orders +88% organic, \$176bn RPO, Electrification margin +390bp. Siemens Energy Grid backlog €51bn, book-to-bill 1.48 ^{[12][22][23]}	Mixed. GE Vernova separates slot reservations from orders; Vertiv no longer publishes either ^{[15][17]}	Capacity arriving into a normalising market — about \$1.8bn of announced North American transformer investment is already committed ^[32]	Book-to-bill falling below 1.0 for two consecutive quarters while lead times shorten
Integration and execution Quanta, Comfort Systems, EMCOR	Engineering, modular fabrication, installation and commissioning — the labour and schedule, not the box	Backlog +49%, +73% and +44% respectively, with operating or gross margin expanding at all three ^{[24][25][27]}	High, but shorter-dated. Comfort Systems states most construction backlog burns within 18–24 months ^[26]	Labour. Growth is capped by crews, and mispricing a fixed-price contract is punished immediately	Gross margin compressing while backlog still grows — the signature of work taken at the wrong price
Higher-beta on-site power Bloom Energy, Powell Industries	The equipment that removes the utility calendar from the critical path: fuel cells, behind-the-meter electrical systems	Bloom revenue +165.5% with GAAP gross margin +668bp. Powell orders +158%, backlog +69%, including a \$400m+ behind-the-meter award ^{[9][14]}	Asymmetric. Powell publishes backlog; Bloom publishes none, and its largest announced figures are ceilings and financing frameworks ^{[6][8]}	Customer concentration and the gap between a framework ceiling and contracted capacity	A published order intake that fails to convert, or a single large customer deferring
Established nuclear supply chain Curtiss-Wright, Cameco	Qualified components and fuel-cycle capacity that exist, are certified, and ship today	Curtiss-Wright: backlog \$4.5bn, book-to-bill 1.16x, 19.3% operating margin ^[29]	High but slow. Long qualification cycles cut both ways — they protect the position and cap the growth rate	The AI linkage is thinner than the narrative implies; most of the revenue is naval and conventional	Reactor programmes slipping, or the data-centre nuclear pipeline failing to reach financial close
Long-duration and speculative Oklo, NuScale	A reactor design and a development pipeline; not, at present, delivered energy	Oklo Q2 revenue \$1.2m against a year-to-date net loss of \$81.6m; first commercial operation targeted 2028 ^[30]	Lowest in this report: non-binding commitments and letters of intent, not power purchase agreements ^[30]	Time. The delivery date sits beyond the horizon over which current AI capital expenditure must be justified	Nothing in 2026 confirms or refutes it — which is precisely the problem for a security priced today
Bottlenecks whose rent goes elsewhere interconnection, queue positions	Nothing purchasable. The constraint is regulated capacity and a place in line	ERCOT queue about 474 GW against 23 GW of generation added in 2024–25; FERC show-cause orders issued 18 June 2026 ^{[2][3][4]}	Not applicable	Mistaking a real constraint for an investable one — the single most common error in this theme	Not applicable; the category exists to be excluded

Exhibit 14. Research question: where does a genuine constraint coincide with a business that can price it and disclosure that lets an investor verify it? • **Evidence status:**

AUTHOR FRAMEWORK, built on the company-reported figures cited in each cell. Companies are named as evidence for a category, never as recommendations. Valuation is excluded by design.

11.1 Lower thesis-risk compounders

Eaton, Schneider Electric and Hubbell sell broad electrical portfolios in which data centres are a fast-growing minority of a large diversified base. The attraction is that the thesis does not have to be right for the investment to work: Eaton's Electrical Americas orders rose 41 per cent organically on a rolling twelve-month basis with backlog up 33 per cent, and Electrical Global backlog rose 103 per cent^[18]; Schneider grew 14 per cent organically in the first half with adjusted EBITA margin up 120 basis points and raised guidance to 10–13 per cent.^[21] Both publish order and backlog metrics and both serve customer bases too broad for any single hyperscaler to matter.

The cost of that safety is visible in the same evidence. Hubbell is the demonstration: its data-centre sales grew about 65 per cent and it still returned 3.8 per cent for the year, because Utility Solutions — the larger segment — grew 6 per cent organically and company adjusted operating margin fell 50 basis points.^{[19][20]} These are good businesses that are only partly the trade. An investor should hold them for the compounding, not for the theme, and should read a claim about data-centre exposure alongside the share of revenue it represents.

11.2 Equipment with structural scarcity

GE Vernova, Siemens Energy and Vertiv sell the specific components with multi-year lead times. The evidence that scarcity is being converted into economics rather than merely into volume is the margin: GE Vernova's Electrification segment EBITDA margin rose 390 basis points to 18.4 per cent while orders grew 66 per cent organically^[12]; Siemens Energy's Grid Technologies backlog reached €51 billion on a book-to-bill of 1.48^{[22][23]}; Vertiv expanded adjusted operating margin 410 basis points to 22.6 per cent.^[17] Margin expanding alongside volume is the clean signature of pricing power, and it is present at all three.

The risk is symmetrical and slower-moving. About \$1.8 billion of North American transformer capacity has been announced, most of it starting production in 2027 or later^[32]; Siemens Energy's own

50 per cent expansion in transformer and gas-insulated switchgear capacity arrives in 2030.^[23] These are commitments made at the top of a shortage, and they will arrive whether or not the shortage persists. The diligence question is therefore not whether the current backlog is real — it plainly is — but how much of it converts before the capacity lands.

11.3 Integration and execution

This is where the report's own argument points, and where the financial evidence is currently strongest. Quanta, Comfort Systems and EMCOR grew backlog 49, 73 and 44 per cent respectively while expanding margin: Quanta's consolidated operating margin rose from 5.5 to 7.3 per cent, Comfort Systems' from 13.8 to 17.1 per cent, and EMCOR held 10.6 per cent.^{[24][25][27]} A contractor expanding operating margin by 330 basis points on 50 per cent revenue growth is not winning on price.

What they sell is schedule certainty, and the supply of it is capped by people. Comfort Systems' management described the constraint as a discipline rather than an opportunity — “we only take work that we know we can perform... we don't out-kick our coverage”^[26] — and tied its capacity expansion, from 3.5 million square feet of modular space toward roughly 5 million by summer 2027, explicitly to customer commitments rather than to a forecast. The corresponding risk is the mirror image: these are largely fixed-price businesses, and a contract mispriced today is recognised as a loss immediately rather than amortised. Gross margin falling while backlog still grows is the single most diagnostic warning in this category.

11.4 Higher-beta on-site power

Bloom Energy and Powell Industries sell the equipment that removes the utility calendar from the critical path, and they have been repriced accordingly — up 143 and 72 per cent for the year and down 40 and 44 per cent from their highs. The operating evidence is genuine: Bloom grew revenue 165.5 per cent with GAAP gross margin up 668 basis points and swung to a \$182.2 million operating profit^[9]; Powell's orders rose 158 per cent to \$934 million with backlog at \$2.4 billion.^[14]

The asymmetry is in disclosure and concentration. Powell publishes a backlog and disclosed the single order above \$400 million that sits inside it; Bloom publishes no backlog at all, and its two largest announced figures are a \$25 billion financing framework and a 2.8 GW ceiling of which 1.2 GW is contracted.^{[6][8][14]} Neither company is doing anything improper — both describe their arrangements accurately — but an investor is underwriting a reported revenue line without the forward book that peers provide. This is the category where Exhibit 5 should be consulted before the headline.

11.5 The established nuclear supply chain

Curtiss-Wright and Cameco represent capacity that exists, is certified and ships today. Curtiss-Wright reported a \$4.5 billion backlog, a book-to-bill of 1.16 times and a 19.3 per cent operating margin, with Naval & Power sales up 7 per cent including commercial nuclear work for advanced reactors.^[29] The qualification cycles that make this business slow are the same cycles that make the position defensible.

The honest caveat is that the AI linkage is thinner than the narrative implies. Most of Curtiss-Wright's revenue is naval and conventional industrial; the data-centre nuclear pipeline is a call option on top of a functioning business, not the business itself. An investor buying it as an AI-power exposure is paying for something the company does not yet substantially do.

11.6 A note on geography and currency

The demand in this report is overwhelmingly American. The interconnection queues, the ERCOT audit, the FERC orders, the local opposition and the great majority of the announced campuses are United States phenomena. The supply is not: two of the largest beneficiaries, Schneider Electric and Siemens Energy, are European companies reporting in euros, and Siemens Energy's first American large-power-transformer plant does not start production until 2027.^[32]

Three consequences follow, and none of them is a reason to prefer one side. A euro-reporting supplier selling into a dollar build-out carries a translation exposure that has nothing to do with the thesis and can dominate a year's reported return; this is why Exhibits 6 and 9 exclude both European names rather than converting them. Localisation is itself becoming a competitive variable, since domestic-

content requirements and tariff exposure now shape who can bid: about 80 per cent of high-voltage transformers used in the United States are imported.^[33] And European industrial policy is building a second, smaller demand pool on the same supply base — Schneider's arrangement with SoftBank targets 3.1 GW of AI data-centre capacity in France by 2031^[21] — which competes for the same factory slots that American campuses are queuing for. An investor holding both an American and a European supplier is less diversified than the geography suggests, because both are constrained by the same transformer plants.

11.7 Long-duration exposures, and the bottleneck that is not for sale

Oklo and NuScale own a technology and a development pipeline. Oklo reported \$1.2 million of quarterly revenue against an \$81.6 million half-year loss, with first commercial operation of Aurora-INL targeted for 2028 and no power purchase agreements disclosed^[30]; NuScale's second-quarter revenue fell sharply as the RoPower engineering phase completed, with its partner still working “toward a definitive power purchase agreement” that has not been executed.^[38] Both hold substantial cash — \$3.0 billion and \$1.9 billion respectively — so the question is duration, not solvency. Nothing that happens in 2026 will confirm or refute either case, which is precisely the difficulty for a security priced today.

Finally, the category that exists to be excluded. Grid interconnection capacity is the most severe constraint in the entire system and there is no way to own it. The queue is administered by regulated transmission providers now under direct regulatory pressure, following FERC's show-cause orders of 18 June 2026.^[4] Whatever the scarcity is worth accrues privately to whoever holds a queue position. Mistaking this for an investable exposure is the most common analytical error in the theme, and it is the reason this report separates severity from rent in Exhibit 10.

12. The risk register

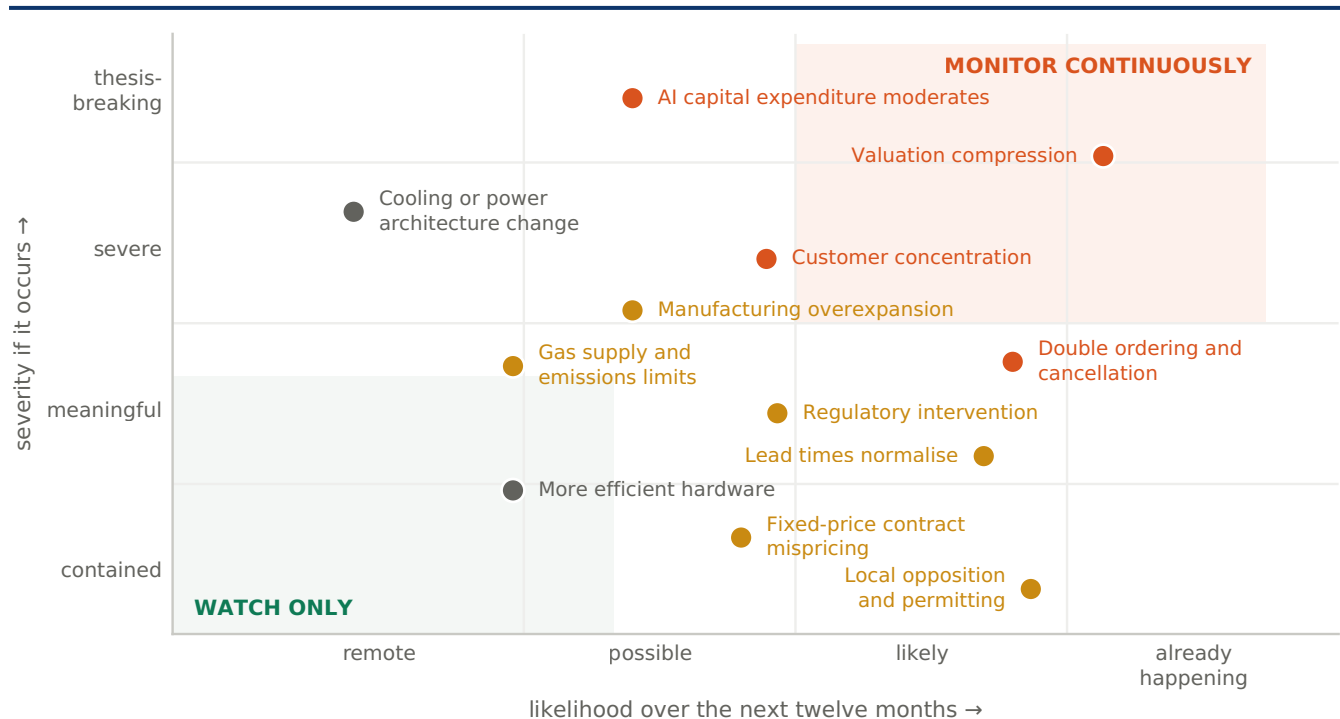
An opportunity map without a risk map is advocacy. This section sets out what can go wrong, ordered by how much it would matter and how likely it is, and — more usefully — what each risk would look like in a published number before it appeared in a share price.

Two framing points before the map. First, the risks in this sector are not independent. A moderation in hyperscaler capital expenditure would simultaneously deflate order books, expose the manufacturing capacity being added, and validate the suspicion that queues were padded — so the correlations run in the wrong direction, and a portfolio spread across several names in this report is less diversified than it looks. Second, most of these risks arrive slowly and visibly. Lead times do not halve in a quarter; capacity does not appear without having been announced two years earlier; cancellations are counted and published. This is a sector in which the warning signs are legible if an investor is willing to read quarterly disclosures rather than headlines.

The map below places each risk by how likely it is over the coming twelve months and how much of the investment case it would remove. The vertical axis is the more important one: a high-likelihood, contained risk is a cost of doing business, whereas a low-likelihood, thesis-breaking risk is the one that justifies position sizing rather than monitoring.

Exhibit 15 • Risk map: likelihood against severity

Research question: which risks deserve continuous monitoring and which merely deserve awareness? • **Units:** ordinal, both axes • **Period:** assessed for the twelve months from August 2026 • **Evidence status:** [AUTHOR FRAMEWORK](#)



Method: likelihood reflects whether the risk is already observable in published data. Severity reflects how much of the investment case it removes if it occurs. Both are judgements, not measurements, and the placement of any single point is arguable; the structure of the map is the part worth using.

Takeaway: the two risks in the upper-right quadrant are the ones that have already begun. Valuation compression is not a forecast — it happened during 2026, to companies whose operating results improved throughout. Order-book inflation is not a suspicion either: ERCOT is auditing it, with a filing due 10 December 2026.^[2]

12.1 The risks that would actually break the thesis

Three deserve separate treatment because they operate on the argument itself rather than on one company.

Capital expenditure moderation. Every order book in Exhibit 4 is underwritten by roughly four buyers. Their combined 2026 guidance exceeds \$700 billion and has been revised upward repeatedly;^[37] it can be revised downward just as easily, and a single-digit percentage change in that number is a double-digit percentage change in the marginal order flow reaching a mid-cap electrical supplier. This is the one risk against which diversification within the sector offers no protection, because every name in this report is exposed to the same four decisions. The observable leading indicator is not the capital expenditure number itself but the language around it: a shift from “capacity-constrained” to “disciplined” in hyperscaler commentary has historically preceded the number.

Order-book inflation. ERCOT's large-load queue grew from 63 GW to about 474 GW in twenty months.^{[2][3]} Nobody, including ERCOT, believes all of that is real. The mechanism is straightforward: a developer with one site approaches several utilities and enters several queues, and every queue counts the same megawatt. The same behaviour can appear one level up the chain, where a customer reserves equipment slots with more than one supplier to protect a schedule. Where a company discloses reservations separately from orders — as GE Vernova does — an investor can see the conversion rate. Where it does not, the backlog number carries an unknown amount of duplication.

Valuation compression, which has already happened. This is the risk that has actually cost money in 2026. Every operating figure in Exhibit 4 improved. Every one of the thirteen securities in Exhibit 6 nonetheless sits below its 52-week high, at a median of about 26 per cent below and, for Powell and Bloom, more than 40 per cent below. That combination — improving fundamentals, falling prices — is the signature of multiple compression rather than deterioration, and it is a reminder that in this sector the entry price has recently mattered more than the operating result.

12.2 Company-specific risks that the sector-level view hides

Exposure	The specific risk	Why it is not a sector risk	The number that would show it first
Bloom Energy	No published backlog. The largest announced figures are a financing framework and a capacity ceiling, and a single customer relationship is unusually prominent	The revenue is real and the margin expansion is real; the disclosure gap is specific to this company	Sequential product revenue, and any move to publish or continue not to publish a backlog figure
Vertiv	Orders and backlog have not been published since the fourth quarter of 2025 ^{[15][16][17]}	Peers in the same end market continue to publish theirs, so this is a choice rather than an industry convention	Resumption of the disclosure, or the contract-liability line in the balance sheet as a proxy for customer advances
Powell Industries	Single-order concentration. One award above \$400 million against a \$2.4 billion backlog is a large share of one book ^{[13][14]}	A large-cap supplier absorbs a cancelled megaproject; a company of this size does not	Backlog composition disclosure, and the gross margin trend as that order is executed
Comfort Systems, EMCOR, Quanta	Fixed-price execution. Growth is capped by crews, and a mispriced contract is recognised immediately rather than amortised	Equipment makers can raise prices into a shortage; contractors have already signed theirs	Gross margin falling while backlog still grows — the specific signature of work taken at the wrong price
GE Vernova, Siemens Energy	Slot reservations converting more slowly than assumed, and capacity additions arriving into a normalising market	Both companies are adding capacity on multi-year lead times against demand visible today ^{[23][32]}	The published reservation-to-order conversion rate, quarter by quarter
Eaton, Hubbell, Schneider	Thesis dilution: the exposure is real but too small a share of the whole company to move it, as Hubbell's 2026 demonstrates	This is a portfolio-construction problem, not an operating problem — these are good businesses that are only partly the trade	Segment-level disclosure of data-centre revenue as a share of the total
Oklo, NuScale	Time. Neither has a binding power purchase agreement; NuScale's second-quarter revenue fell to a fraction of the prior year as the RoPower engineering phase completed ^{[30][38]}	Both hold large cash balances — Oklo \$3.0bn, NuScale \$1.9bn — so this is a duration risk, not a solvency risk	Execution of a definitive power purchase agreement, or its continued absence

Exhibit 16. AUTHOR FRAMEWORK built on the company-reported figures cited. **Takeaway:** the risks are not the same risk. Four of these seven are disclosure risks rather than operating risks — which is a statement about how young this reporting cycle is, and an argument for weighting companies that publish more.

12.3 Valuation, treated honestly

This report contains no multiples, no target prices and no view on whether any security is cheap. That is a deliberate limit, and readers should understand what it costs. Everything above identifies where operating value is being created. It does not tell you what has already been paid for that value, and in 2026 the second question determined the outcome more often than the first: the highest-scoring operating performers in Exhibit 8 include both the best and among the worst share-price outcomes in Exhibit 6.

What the report can offer instead is the discipline. The evidence supports three statements about price. Multiple compression has already occurred across the group while results improved, so the starting point today is materially different from a year ago. The dispersion of drawdowns — from 16 per cent at Eaton to 44 per cent at Powell to 79 per cent at Oklo — tracks duration and purity of exposure rather than operating quality. And a score in Exhibit 8 is a statement about a quarter, whereas a multiple is a statement about a decade; the two should never be compared directly.

13. The number to watch: energised megawatts per quarter

If the argument of this report is right, the reporting metric that matters is not announced or contracted gigawatts. It is **energised megawatts per quarter**: capacity that is live, drawing power and capable of generating revenue. Almost nobody publishes it. That absence is the single largest disclosure gap in the sector, and the companies that close it first will be the easiest to underwrite.

In its place, the following indicators are the best available proxies. Each is chosen because it is published by at least some companies in the group, and because a change in it precedes a change in reported results rather than confirming one.

Indicator	What good looks like	Why it leads, and where it is available today
Energised MW per quarter	Live capacity, reported separately from shipped and from contracted	The metric the whole thesis reduces to. Essentially undisclosed; Bloom's cumulative deployment figure is the closest public analogue ^[7]
Order-to-commissioning time	Days from order to energisation, and whether it is falling across a customer cohort	Distinguishes a supplier that is genuinely accelerating from one that is merely selling further out. Not published by any company in this report
Book-to-bill	Sustained above 1.0, with the composition disclosed	Published by Eaton (1.2 rolling 12-month), Siemens Energy Grid (1.48), Curtiss-Wright (1.16×), Hubbell Utility (about 1.2×) ^{[18][19][22][29]}
Backlog conversion rate	Backlog burning at a stable or rising rate, with the duration stated	Comfort Systems states most construction backlog burns within 18–24 months ^[26] . Rising backlog with lengthening duration is a warning, not a strength

Indicator	What good looks like	Why it leads, and where it is available today
Reservations converting to orders	A published conversion figure, quarter by quarter	GE Vernova is the only company in this report that discloses it: 6 GW converted in Q1 2026 ^[11]
Cancellation and withdrawal	Disclosed, low, and not rising	Baird counted 25 US data-centre project cancellations in 2025 against 6 in 2024 and 2 in 2023 ^[34] THIRD-PARTY ESTIMATE
Deposits and slot payments	Customer advances rising with orders — cash committed against a date	Visible in the cash-flow statement and contract-liability line before it is visible in revenue
Gross and operating margin	Expanding while volume grows	The clean test of scarcity against mere volume. Present at GE Vernova, Vertiv, Bloom, Quanta, Comfort Systems, Schneider; absent at Hubbell in Q2 2026
Lead times	Long, but tracked in both directions	Shortening lead times are good for the industry and bad for the pricing power thesis. Currently about 128 weeks for power transformers ^[32]
Manufacturing capacity added	Tied to committed customer demand, not to a forecast	Comfort Systems states expansion follows customer commitments ^[26] ; about \$1.8bn of North American transformer capacity is already announced ^[32]
Customer concentration	Disclosed, and falling as the order book broadens	The most under-disclosed risk in the group. A single hyperscaler deferring is a different event from a market slowing
Funded against unfunded sites	Backlog attached to sites with financing closed and permits granted	Baird counted at least 188 local opposition groups across 40 states ^[34] ; ERCOT's audit reports 10 December 2026 ^[2]

Exhibit 17. Research question: which observable indicators change before reported results do? · **Evidence status:** **AUTHOR FRAMEWORK** with company-reported and third-party figures as cited. **Takeaway:** four of the twelve are disclosed by nobody in this report. That is the opportunity and the risk in the same observation.

13.1 Counterargument register

The thesis of this report is a probability, not a certainty. The following are the arguments against it that deserve weight, each with the indicator that would confirm it.

Counterargument	The case for it	What would confirm it
AI capital expenditure moderates	The order books above are underwritten by a handful of buyers spending at an unprecedented rate. Spending plans are revised annually and can be revised down	Hyperscaler capital expenditure guidance cut at two or more of the four largest buyers in consecutive quarters
Double ordering and cancellation	ERCOT's queue grew from 63 to 474 GW in twenty months, which no one believes is all real. The same site shopped to several utilities inflates every queue it enters	ERCOT's audit, reporting 10 December 2026, quantifying the speculative share ^[2]
Lead times normalise	About \$1.8bn of announced North American transformer investment, plus Siemens Energy's 50% capacity expansion, will eventually arrive ^{[23][32]}	Published transformer lead times falling below about 80 weeks while order intake holds
Manufacturing overexpansion	Every industrial capital cycle ends with capacity ordered at the peak arriving into a softer market. This one has an unusually visible pipeline of announced plants	Capacity utilisation and pricing falling together across two or more equipment makers
Regulatory intervention	FERC issued show-cause orders to six grid operators on 18 June 2026; Texas has ordered an audit and imposed a review process ^{[2][4]}	Rules that socialise interconnection costs or restrict behind-the-meter configurations, reducing the premium paid for speed
Local opposition and permitting	At least 188 local opposition groups across 40 states; 25 project cancellations in 2025 against 2 in 2023 ^[34]	Cancellation counts rising again in 2026, or state-level moratoria taking effect
Gas availability and emissions	More than 80% of announced behind-the-meter capacity is gas ^[5] . Fuel supply, pipeline capacity and air permits are all separate constraints	Behind-the-meter projects delayed at the permitting rather than the equipment stage
Architecture change	A shift in cooling or power architecture — higher-voltage DC distribution, different thermal design — could make today's scarce components ordinary	A major buyer standardising on an architecture that bypasses a currently constrained component
More efficient hardware	If performance per watt improves faster than demand for compute, the electricity requirement per unit of AI output falls	Announced campus power requirements falling for a constant compute ambition
Valuation compression	The most likely way to lose money here. All thirteen names in Exhibit 6 sit below their 52-week high, eleven of them having risen during 2026 — with operating results strengthening throughout	It has already partly happened. This is a risk to the return, not to the thesis

Exhibit 18. **AUTHOR FRAMEWORK** with cited evidence. **Takeaway:** the last row is the one that has actually bitten investors in 2026. Every operating figure in Exhibit 4 improved during a period in which most of these securities fell from their highs.

13.2 The depreciation clock

One constraint binds all of this together and is worth stating explicitly. Hyperscalers generally depreciate servers and accelerators over four to six years, and the assumption is contested — with arguments that the effective replacement cycle is closer to two or three years, and counterarguments from manufacturers that observed utilisation supports the longer lives.^[35] **THIRD-PARTY ESTIMATE**

This report takes no view on which is right. It only observes the consequence. If installed silicon has an economic life measured in a small number of years, and the infrastructure to energise it has a delivery time measured in a similar number of years, then **construction delay consumes economic life directly**. Hardware that waits eighteen months for a transformer has spent a meaningful fraction of its useful life earning nothing. That is why time to energization is not merely an operational inconvenience. It is the mechanism through which a schedule becomes a return.

14. Conclusion

The trade began by bypassing the grid, because the utility calendar was the only thing standing between capital and revenue. It broadened into building the electrical room, because generation energises nothing on its own and the transformer turned out to be scarcer than the turbine. It then passed through the stage every industrial theme passes through, in which forecasts became orders and orders became revenue and margin — a conversion that, on the evidence assembled here, is real and is not in doubt.

What is now being tested is harder, and it is a question rather than a theme. Not how many gigawatts have been announced. Not how large the backlog is. But whether a given order book can be turned into an operating, revenue-generating campus while the hardware inside it still has economic life — and whether the company that owns the bottleneck can price it, or merely suffers it.

Show me the backlog that becomes an energised campus before the silicon gets old.

That is the standard the market has started applying, unevenly and violently, over the course of 2026. It rewards purity of exposure, disclosed conversion, expanding margin and a delivery date inside the horizon over which AI capital expenditure must be justified. It discounts ceilings, frameworks, letters of intent and queue positions — and it discounts them regardless of how genuine the underlying constraint is. Physical scarcity was the story of the last eighteen months. Who captures its rent is the story of the next.

WHAT THIS REPORT DOES NOT CLAIM

It does not claim that the constraint is permanent. Roughly \$1.8 billion of North American transformer capacity is already committed and will arrive; lead times that were set by a shortage will fall when the shortage ends. It does not claim that the companies in Exhibit 6 are attractively priced — that is a separate question, it depends on the price paid, and this report has deliberately excluded it. It does not claim that small modular reactors will fail; it observes only that a delivery date in 2028 or beyond is being discounted today, which is a statement about the discount rate and not about the physics.

And it does not claim to know how much of the announced demand is real. ERCOT's own audit, which reports on 10 December 2026, exists precisely because nobody does. What the report does claim is narrower and, we think, more useful: that the useful question has changed. For a year the question was how much power AI would need. From here it is how quickly, by whom, and at whose margin.

APPENDICES

Appendix A • Rule of 40 assumption register

Every input used in Exhibits 7, 8 and 9. Growth is reported year-on-year revenue growth for the stated period unless noted. The profitability measure is not identical across companies, because not every company publishes the same one; the exact measure is named in each row. This is the principal weakness of the comparison and is stated rather than smoothed.

Company	Period	Growth	Organic	Margin	Profitability measure used	Score	Notes
Bloom Energy	Q2 2026	+165.5%	n/d	17.1%	GAAP operating margin (\$182.2m / \$1,065.0m)	182.6	No material acquisitions in the period; organic not separately disclosed
Comfort Systems	Q2 2026	+50.3%	+44.0%	17.1%	GAAP operating margin (\$558.0m / \$3,265.7m)	67.4	Same-store growth stated on the earnings call; Hunt Electric acquired 1 May 2026
Quanta Services	Q2 2026	+41.1%	n/d	7.3%	GAAP operating margin (\$694.8m / \$9,557m)	48.4	Electric Power segment margin was 11.5%; consolidated used for comparability
Eaton	Q2 2026	+21.4%	+14.0%	23.1%	Total segment operating margin — Eaton publishes no operating-profit line	44.5	Income before taxes fell 3.5% on interest from the Boyd Thermal acquisition
Vertiv	Q2 2026	+24.1%	+18.0%	19.5%	GAAP operating margin (\$637.9m / \$3,274.3m)	43.6	Adjusted operating margin was 22.6%; GAAP used for consistency
Hubbell	Q2 2026	+15.0%	+10.0%	20.4%	GAAP operating margin	35.4	Adjusted operating margin was 23.9%, down 50bp year on year
Schneider Electric	H1 2026	+14.0%	+14.0%	19.3%	Adjusted EBITA margin	33.3	Half-year rather than quarter; the only such case. Q2 organic growth was 17%
GE Vernova	Q2 2026	+21.9%	+12.0%	11.3%	Adjusted EBITDA margin — the release publishes no operating-income line	33.2	EBITDA flatters relative to the operating margins used elsewhere; Electrification segment EBITDA margin alone was 18.4%
Siemens Energy	Q3 FY2026	+18.5%	+18.5%	14.2%	Profit before special items (€1,623m / €11.4bn)	32.7	Growth is the company's comparable measure; reported in euros
EMCOR	Q2 2026	+19.8%	+19.6%	10.6%	GAAP operating margin	30.4	Organic adjusts for acquisitions and the disposal of UK operations
Powell Industries	Q3 FY2026	+8.9%	+8.9%	20.6%	GAAP operating margin (\$64.1m / \$311.7m)	29.5	No acquisitions; operating margin fell from 21.0% a year earlier
Curtiss-Wright	Q2 2026	+5.0%	n/d	19.3%	GAAP operating margin	24.3	Adjusted operating margin 19.4%, up 110bp

Excluded. Oklo and NuScale Power are omitted from Exhibits 7 to 9. Both have negligible revenue and deeply negative margins, so a growth-plus-margin score is not meaningful: Oklo reported \$1.2 million of revenue in the quarter and NuScale's revenue fell sharply as an engineering phase completed. ^{[30][38]} Their exclusion is a limitation of the metric, not a judgement, and it is worth stating that a metric which cannot score the two most speculative names in a sector is not a complete screen.

Appendix B • Company evidence register

Every company referenced in this report, with the status of the claim used and — the more important column — what that claim does not establish.

Company	Claim used in this report	Status	What it does not establish
Bloom Energy	Q2 2026 revenue \$1,065m, +165.5%; GAAP gross margin 33.4%; operating income \$182.2m; about 1.5 GW deployed across 1,200+ installations at October 2025	COMPANY-REPORTED	Forward visibility. No backlog is disclosed, so the durability of the revenue cannot be assessed from the outside
Bloom / Oracle	Master services agreement for up to 2.8 GW, of which 1.2 GW contracted; one system delivered in 55 days	COMPANY-REPORTED	That the remaining 1.6 GW will be drawn. A ceiling is an option held by the customer
Brookfield / Bloom	\$25bn framework to finance projects, raised from \$5bn in October 2025	ANNOUNCED TARGET	Any revenue at all. This is investment capacity, not an order
GE Vernova	Q2 2026 orders \$24.2bn (+88% organic); RPO \$176bn; 53 GW gas backlog and 63 GW slot reservations; data-centre orders above \$5bn year to date	COMPANY-REPORTED	Conversion of the 63 GW of reservations. The company discloses the rate, which is why this is the sector's most useful reporting
Vertiv	Q2 2026 net sales \$3,274m, +24%; GAAP operating margin 19.5%; adjusted 22.6%	COMPANY-REPORTED	Order momentum. Neither orders nor backlog has been published since Q4 2025
Powell Industries	Q3 FY2026 orders \$934m (+158%); backlog \$2.4bn; a data-centre order above \$400m for a behind-the-meter on-site generation design	COMPANY-REPORTED	Backlog composition or concentration. One award is a large share of a \$2.4bn book
Eaton	Q2 2026 sales \$8.5bn, +21% (+14% organic); segment margin 23.1%; Electrical Americas orders +41% organic on twelve months	COMPANY-REPORTED	How much is data centres. The disclosure is at segment level, not end market
Hubbell	Q2 2026 sales \$1,712m, +15% (+10% organic); data-centre sales up about 65%, guided to about +50% for the year	COMPANY-REPORTED	That data centres are material to the whole. Utility Solutions grew 6% organically over the same period
Schneider Electric	H1 2026 revenue €21.2bn, +14% organic; adjusted EBITA margin 19.3%; data centres and semiconductors described as triple-digit demand growth in Q2	COMPANY-REPORTED	The size of that growth in revenue terms. "Demand growth" is not a disclosed revenue figure
Siemens Energy	Q3 FY2026 orders €17.9bn; backlog €162bn; Grid Technologies backlog €51bn, book-to-bill 1.48; transformer and switchgear capacity expansion not arriving until 2030	COMPANY-REPORTED	Grid segment figures are taken from reporting of the results rather than from the release itself, and are labelled accordingly
Quanta Services	Q2 2026 revenue \$9.56bn, +41%; backlog \$53.4bn against \$35.8bn; operating margin 7.3% against 5.5%	COMPANY-REPORTED	Data-centre share. Quanta reports by segment, not by end market, and part of the growth is acquired
Comfort Systems	Q2 2026 revenue \$3.27bn, +50%; operating margin 17.1% against 13.8%; backlog \$14.06bn; technology 58% of first-half revenue; modular capacity toward 5m sq ft by summer 2027	COMPANY-REPORTED	How much of the technology exposure is AI specifically, and what the fixed-price risk in the backlog is
EMCOR Group	Q2 2026 revenue \$5.15bn, +19.8%; RPO \$17.14bn, +43.9%; operating margin 10.6%	COMPANY-REPORTED	Data-centre revenue. Growth is attributed to a "network and communications" market sector, which is broader
Flex	Board-approved plan to spin off the Cloud and Power Infrastructure segment, targeted to close in Q1 calendar 2027	ANNOUNCED TARGET	That it will complete, or on what terms. It had not completed at the research cut-off
Curtiss-Wright	Q2 2026 sales \$924m, +5%; backlog \$4.5bn; book-to-bill 1.16x; operating margin 19.3%	COMPANY-REPORTED	Any AI-specific revenue. Most of the business is naval and conventional industrial
Oklo	Q2 2026 revenue \$1.2m; year-to-date net loss \$81.6m; cash and securities \$3.0bn; Aurora-INL targeted for 2028; Meta relationship described as a long-term commitment	COMPANY-REPORTED	Any contracted power sale. No power purchase agreement is disclosed
NuScale Power	Q2 2026 revenue down sharply as the RoPower engineering phase completed; \$1.9bn of cash and investments; partner still working toward a definitive power purchase agreement	COMPANY-REPORTED	A deployment date. No binding order is disclosed
Cameco	Included in Exhibit 6 for its price history only	OBSERVED DATA	Nothing operational. No Cameco operating claim is made anywhere in this report

Appendix C • Exhibit register

#	Exhibit	Type	Evidence status	Section
1	The buyers: 2026 capital expenditure guidance	Chart	Company-reported	2
2	Time from decision to power available on site, by route	Chart	Third-party estimate and observed data	3
3	The campus power stack, with lead times	Diagram	Third-party estimate and company-reported	4
4	The 2026 record: orders, backlog, revenue and margin	Table	Company-reported	5
5	The backlog-quality ladder	Chart	Company-reported; ordering is an author framework	5
6	The sorting: return against distance below the 52-week high	Chart	Author calculation from a single price source	6
7	Growth against margin, with the 40 line	Chart	Author calculation from company-reported figures	7
8	The Rule of 40 score, ranked and decomposed	Chart	Author calculation from company-reported figures	7

#	Exhibit	Type	Evidence status	Section
9	Rule of 40 score against 2026 price return	Chart	Author calculation	7
10	Severity of the bottleneck against ability to capture the rent	Chart	Author framework	8
11	Requested capacity against delivered capacity	Chart	Observed data	8
12	Model 1: delay as a percentage of hardware economic life	Chart	Author calculation on published assumptions	9
13	The specific forms integration capacity takes	Table	Author framework	10
14	The investment opportunity map	Table	Author framework with cited evidence	11
15	Risk map: likelihood against severity	Chart	Author framework	12
16	Company-specific risks	Table	Author framework with cited evidence	12
17	Investor dashboard: twelve leading indicators	Table	Author framework with cited figures	13
18	Counterargument register	Table	Author framework with cited evidence	13

Appendix D • Limitations of this report

Stated plainly, so that a reader can weigh the argument against what it does not cover.

Limitation	What it means	How it could be resolved
No valuation	The report identifies where operating value is created and deliberately excludes multiples, target prices and expected returns. In 2026 the entry price determined outcomes more often than the operating result did	A separate valuation exercise, which would require assumptions about the durability of 2026 growth rates that the evidence here cannot support
A single reporting period	Exhibits 7 to 9 rest on one quarter for each company. Capital-goods results are lumpy, and a single quarter can be flattered by delivery timing	Recomputing the scores on trailing twelve-month figures once four comparable quarters of the current cycle are available
Inconsistent margin measures	Not every company publishes a GAAP operating margin, so the Rule of 40 mixes operating margin, segment margin, adjusted EBITDA and profit before special items	Rebuilding each margin from the filed financial statements rather than the results release. Appendix A names every substitution
A selected universe	The thirteen companies were chosen because they appear in the evidence, not by any screen. They are not a representative sample of the sector and contain a survivorship bias toward companies that have already performed	A defined universe with published inclusion rules, at the cost of including companies with no disclosure worth analysing
Price returns, not total returns	Exhibits 6 and 9 exclude dividends, which understates the return of the five dividend-paying names in the group	Total-return data, which would change the ordering slightly and none of the conclusions
No private market	Much of the value in this theme is captured privately — by developers holding queue positions, by land owners, by unlisted engineering firms. None of it is visible here	Nothing available to a public-market investor. This is a genuine and permanent limitation of the exercise
Demand is asserted, not modelled	The report takes hyperscaler capital expenditure guidance as given and analyses the supply chain beneath it. It does not test whether that spending earns a return	A separate analysis of AI revenue against AI capital expenditure — a different report, and the one that would matter most if the answer were negative

The last row is the one to take most seriously. Every conclusion in this report is conditional on demand that four companies have announced and can withdraw. The report analyses who benefits if the money is spent. It does not claim the money will be spent, and it does not claim the spending will prove wise.

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